

Public Document Pack



To: Councillor McLellan, Convener; Councillor Yuill, Vice-Convener; and Councillors Al-Samarai, Blake, Cooke, Farquhar, Grant, Greig, Houghton, Hutchison, Macdonald, Nicoll and Radley.

Town House,
ABERDEEN 15 September 2022

CITY GROWTH AND RESOURCES COMMITTEE

The Members of the **CITY GROWTH AND RESOURCES COMMITTEE** are requested to meet in **Council Chamber - Town House** on **WEDNESDAY, 21 SEPTEMBER 2022 at 10.00am**. This is a hybrid meeting and Members may also attend remotely.

The meeting will be webcast and a live stream can be viewed on the Council's website. <https://aberdeen.public-i.tv/core/portal/home>

VIKKI CUTHBERT
INTERIM CHIEF OFFICER - GOVERNANCE

BUSINESS

NOTIFICATION OF URGENT BUSINESS

- 1.1. Notification of Urgent Business

DETERMINATION OF EXEMPT BUSINESS

- 2.1. Determination of Exempt Business

DECLARATIONS OF INTEREST AND TRANSPARENCY STATEMENTS

- 3.1. Declarations of Interest and Transparency Statements

DEPUTATIONS

- 4.1. Deputations

MINUTE OF PREVIOUS MEETING

- 5.1. Minute of Previous Meeting of 3 August 2022 - For Approval (Pages 5 - 14)

COMMITTEE PLANNER

- 6.1. Committee Planner (Pages 15 - 26)

NOTICES OF MOTION

- 7.1. Notice of Motion by Councillor Tissera - Foodbanks/Food Poverty (Pages 27 - 28)

- 7.2. Notice of Motion by Councillor Macdonald - Supported Bus Service for Footdee (Pages 29 - 30)

REFERRALS FROM COUNCIL, COMMITTEES AND SUB COMMITTEES

- 8.1. Referrals from Council, Committees or Sub Committees

BUDGETS

- 9.1. Fleet Replacement Programme - OPE/22/202 (Pages 31 - 52)
- 9.2. Berryden Corridor Active Travel Connections - RES/22/177 (Pages 53 - 690)
- 9.3. Aberdeen City's Affordable Housing Delivery Programme - COM/22/197 (Pages 691 - 698)
- 9.4. Aberdeen City's Strategic Housing Investment Plan 2023/24 – 2027/2028 - COM/22/198 (Pages 699 - 730)
- 9.5. Place Based Investment Programme - COM/22/205 (Pages 731 - 742)
- 9.6. Torry Heat Network - Fourth Progress Report - RES/22/204 (Pages 743 - 750)

There are exempt appendices contained within the Exempt Appendices section of this agenda below.

- 9.7. Aberdeen - A Real Living Wage City - COM/22/218 (to follow)

SERVICE DELIVERY

- 10.1. Performance Management Framework Report – City Growth and Resources Functions - CUS/22/203 (Pages 751 - 786)
- 10.2. A92 (Bridge of Don to Bridge of Dee) Multi-Modal Transport Corridor Study - COM/22/200 (Pages 787 - 800)
- 10.3. A947 Multi Modal Transport Corridor Study - COM/22/199 (Pages 801 - 938)

CITY GROWTH AND STRATEGIC PLACE PLANNING

- 11.1. No reports under this section

PROPERTY AND ESTATES

- 12.1. Condition and Suitability 3 Year Programme - RES/22/207 (Pages 939 - 1000)

There are exempt appendices contained within the Exempt Appendices section of this agenda below.

EXEMPT / CONFIDENTIAL BUSINESS

- 13.1. Proposed Disposal of Surplus Site at Oscar Road, Torry - RES/22/201 (Pages 1001 - 1008)
- 13.2. Proposed Disposal of Units 1 - 8, Woodlands Road, Dyce - RES/22/185 (Pages 1009 - 1016)
- 13.3. Request for Bank and Pension Fund Guarantees - RES/21/212 (to follow)
- 13.4. Wallace Tower - RES/22/206 (to follow)

An appendix containing the summary of representations from the consultation for Common Good will be circulated after the consultation closes on 20 September 2022.

EXEMPT APPENDICES

- 14.1. Torry Heat Network - Fourth Progress Report - Exempt Appendices (Pages 1017 - 1168)
- 14.2. Condition and Suitability 3 Year Programme - Exempt Appendices (Pages 1169 - 1204)

EHRIAs related to reports on this agenda can be viewed [here](#)

To access the Service Updates for this Committee please click [here](#)

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CITY GROWTH AND RESOURCES COMMITTEE

ABERDEEN, 3 August 2022. Minute of Meeting of the CITY GROWTH AND RESOURCES COMMITTEE. Present:- Councillor McLellan, Convener; Councillor Yuill, Vice-Convener; and Councillors Al-Samarai, Blake, Bouse (as substitute for Councillor Greig), Cooke, Fairfull (as substitute for Councillor Nicoll), Farquhar, Grant, Hutchison, Kuznir (as substitute for Councillor Houghton), Macdonald and Radley.

The agenda and reports associated with this minute can be found [here](#).

Please note that if any changes are made to this minute at the point of approval, these will be outlined in the subsequent minute and this document will not be retrospectively altered.

NOTIFICATION OF URGENT BUSINESS

1. The Convener advised that he had been made aware of an urgent Notice of Motion submitted by Councillor Tissera in terms of Standing Order 12.9, however he considered that the motion was not urgent, therefore he decided not to accept it onto the agenda for today's meeting. He intimated that the matter could be moved as an amendment to item 8.1 (Council Financial Performance – Quarter 1, 2022/23) if deemed appropriate.

The Committee resolved:-

to note the position.

DECLARATIONS OF INTEREST AND TRANSPARENCY STATEMENTS

2. Members were requested to intimate any declarations of interest or transparency statements in respect of the items on today's agenda, thereafter the following were intimated:-

- (1) Councillor Grant advised that he had a connection in relation to item 8.1 (Council Financial Performance – Quarter 1, 2022/23), specifically in relation to Riverbank School, by virtue of his wife being a member of the Riverbank School Parent Council and three of his children also attend the same school, however having applied the objective test, he did not consider that he had an interest and would not be withdrawing from the meeting; and
- (2) Councillor Kuznir advised that he had a connection in relation to item 8.1 (Council Financial Performance – Quarter 1, 2022/23), specifically in relation to St Peter's RC School, by virtue of his employer acting for a large number Catholic Charities and that he had recently met with one of their trustees, however having applied the objective test, he did not consider that he had an interest and would not be withdrawing from the meeting.

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MINUTES OF PREVIOUS MEETING OF 21 JUNE 2022

3. The Committee had before it the minute of its previous meeting of 21 June 2022.

The Committee resolved:-

to approve the minute.

COMMITTEE PLANNER

4. The Committee had before it the Committee Business Planner prepared by the Chief Officer - Governance.

The Committee resolved:-

- (i) to remove item 7 (Review of School Estate) from the planner for the reasons intimated by the Director of Resources at the meeting;
- (ii) to note the reason for the reporting delay in relation to item 13 (Sustainable Drainage System (SUDS) Section) and that a Service Update be circulated in this regard; and
- (iii) to otherwise note the content of the Committee Planner.

ABERDEEN MELA-ONE WORLD DAY EVENT - NOTICE OF MOTION BY COUNCILLOR MACDONALD

5. The Committee had before it a Notice of Motion by Councillor Macdonald in the following terms:-

“to agree that Aberdeen City Council congratulate Aberdeen Mela-One World Day Event team on securing funding to hold a Mela event in Aberdeen this year, including £15,000 from the Council’s Common Good Fund. Melas are traditionally an Asian celebration of culture and community through music, dance, theatre, song and stories as well as food and fashion. As well as forging closer cultural understandings, there are also opportunities to promote stronger community, health and environmental benefits. The Aberdeen Mela will take place on Sunday 21st August 2022 from 12 Noon to 7pm at Westburn Park.”

The Committee resolved:-

to adopt the motion.

APPOINTMENT OF MEMBERS TO SUB COMMITTEES - COM/22/148

6. The Committee had before it a report by the Director of Commissioning which sought approval to re-establish the Business Rates Appeals Sub Committee and the

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Community Asset Transfer Review Sub Committee and thereafter determine compositions and make appointments to the sub committees under the Committee's remit.

The report recommended:-

that the Committee –

- (a) agree to re-establish the Business Rates Appeals Sub Committee and Community Asset Transfer Review Sub Committee; and
- (b) agree the composition and appoint five members to each of the sub committees.

The Committee resolved:-

to approve the recommendations, with the composition of members being:- 2 SNP, 1 Liberal Democrat, 1 Labour and 1 Conservative.

COUNCIL FINANCIAL PERFORMANCE - QUARTER 1, 2022/23 - RES/22/152

7. The Committee had before it a report by the Director of Resources which provided details of the financial position of the Council as at Quarter 1 (30 June 2022) and the full year forecast position for the financial year 2022/23, including:-

- General Fund and Housing Revenue Account (HRA) and capital accounts; and associated Balance Sheet; and
- Common Good revenue account and Balance Sheet

The report also provided information on the outcome of the reprofiling of the Capital Programmes, as instructed by the Committee at its meeting on 21 June 2022.

The report recommended:-

that the Committee –

- (a) note the positive cash position that has been achieved for the General Fund and HRA to the end of Quarter 1 as detailed in Appendix 1;
- (b) note the Common Good financial performance to the end of Quarter 1 as detailed in Appendix 3, specifically the £2m reduction in cash balances due to investment volatility;
- (c) note that the General Fund full year forecast position, as detailed in Appendix 2, is expected to show a balanced position overall for 2022/23, based on the assumption that the Scottish Government will fund any increase to the current pay offer made by Cosla and through the other mitigations contained within the report, including the use of one-off funding streams;
- (d) note the initial information provided in the report about the fire at Altens East Waste and Recycling Centre and instruct the Chief Officer – Operations and Protective Services to report back to the next meeting of the Committee with details of the contractual, financial, and operational implications, including assurance about how the council has mitigated financial exposure;

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- (e) note that the HRA full year forecast position, as detailed in Appendix 2, is on target to achieve the approved budget, making a contribution to HRA reserves for 2022/23;
- (f) note that the Council relies on the Integration Joint Board (IJB) achieving a balanced budget, and that it retains reserves in the event of unplanned additional costs arising during the year;
- (g) note that the forecast for General Fund capital expenditure is that there will be lower spend than had been budgeted in 2022/23, and for Housing, capital expenditure will be in line with 11% slippage on the programme, as described in Appendix 2;
- (h) note that officers have completed the work required to reprofile the capital programmes, following instruction by the Committee on 21 June 2022 (Appendix 5), and that this has led to the following recommendations:-
 - (h1) note that almost all capital projects can be paused, delayed or ultimately cancelled though there would be implications related to such decisions;
 - (h2) note that for reprofiling purposes there are projects/programmes within the approved Capital Programmes which have been excluded;
 - (h3) note the legal status of the contracts involved in delivery of the projects as this to an extent dictates the level of flexibility that the Council has in terms of reprofiling, pausing or cancelling projects;
 - (h4) note the General Fund Capital funded projects/programmes recommended for reprofiling are shown in Appendix 5 – Table 1, which shows the current budget profile;
 - (h5) instruct the Chief Officer – Finance to remove the Early Learning & Childcare - St Josephs and Garthdee Link Road projects from the General Fund Capital Programme;
 - (h6) approve the reprofiled General Fund Capital funded projects/programmes as shown in Appendix 5 – Table 2. Noting the use of the existing contingency in the programme;
 - (h7) in light of the best value consideration referred to in the report, instruct the Chief Officer – Capital to retender the 3-stream Tillydrone Primary School project, and report back to the next appropriate City Growth and Resources Committee;
 - (h8) in light of the best value consideration referred to in the report, instruct Chief Officer – Capital to pause the four Housing Capital Council-led new build projects as recommended in Appendix 5, to evaluate the actions to be taken, assess best value and where appropriate retender work packages. The outcome of this exercise will be reported to the next appropriate meeting of City Growth and Resource Committee; and
 - (h9) approve the inclusion of additional budgets to the Housing Capital Programme for improvements to void properties, in support of displaced Ukrainians, subject to funding being confirmed by the Scottish Government.

The Convener, seconded by Councillor Bouse moved:-
that the Committee –

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- (1) approve the recommendations contained within the report with the exception of recommendation (h9);
- (2) agree to instruct the Chief Officer – Corporate Landlord to enter in discussions with the Scottish Government to acquire the land at Wellington Road (per the attached plan) and to report back the outcome of those discussions at the next City Growth and Resources Committee;
- (3) agree to instruct the Director of Resources to bring back an Outline Business Case for Queen Street to a future City Growth and Resources Committee meeting, which includes design proposals for an Urban Park which includes an option that incorporates the demolition of the former Police Scotland building; and
- (4) agree that Aberdeen City has gone above and beyond and should be proud to have welcomed more than 1,000 Ukrainian citizens to the city since the outbreak of the War in Ukraine. Approve the inclusion of additional budgets to the Housing Capital Programme for improvements to void properties, in support of displaced Ukrainians, subject to funding being confirmed by the Scottish Government. In light of the longer term proposals to accommodate these citizens, instruct the Chief Officer – Early Empowerment & Community Empowerment to prepare a report on the wider supply of critical services and opportunity for Ukrainian citizens to ensure that sufficient supply is available and Ukrainian citizens have access to good quality living and access to opportunity.

Councillor Kusznr, seconded by Councillor Farquhar moved as an amendment:-
that the Committee –

- (1) note with concern the reprofiling of the Capital Programme, which, does not bode well for Aberdeen City moving forward and casts huge doubt into the current Administration's commitment to the City Centre and Beach Masterplan projects;
- (2) note the positive cash position that has been achieved for the General Fund and HRA to the end of Quarter 1 as detailed in Appendix 1, noting the healthy position of our Usable Reserves at £108.2 Million and Net Asset Value of £1.4 billion, notes income from Council Tax is forecast to be £1m above budget;
- (3) note with disappointment that our Operations budget net expenditure for the year is above budget mainly because of the Council not yet receiving the specific Early Learning Childcare expansion grant from the Scottish Government, understands from officers that payment is to be made on 10 August 2022, agrees that the Chief Officer – Finance provides an update to the Committee on 10 August 2022 as to whether payment has been made or not given previous delays of payment from the Scottish Government;
- (4) note the definition of Contingency as laid out by Council Officers in the 2022/23 budget, notes that officer recommendations for Contingencies within that budget was £60m Therefore, Committee has grave concerns as to why Capital Contingencies is now only £8.368M when the SNP and Liberal Democrat's budget in March 2022 recommended Contingencies of £60m;

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- (5) agree to continue with the Early Learning Campus; Childcare - St Joseph's project from the General Fund Capital Programme as agreed by Council on 10 March 2022;
- (6) note the previous administration budget agreed to spend £100 million for the building of 4 Schools, in Tillydrone, Torry, Countesswells and Milltimber;
- (7) note that despite the failure of the Administration to bring forward a School Estate plan to the last Education Operational Delivery Committee, the report highlights that the current school roll forecasts are suggesting that the current primary education provision in Tillydrone is sufficient;
- (8) agree that Tillydrone was promised a new state of the art school by Council administrations from 2007 onwards and that it would be a retrograde step for this administration to go back on that promise;
- (9) agree the previous Administration made a commitment to secure the building of 2,000 Council homes and invested £250 million for that purpose. Notes at the Council budget in March 2022 it was reported "*The Council has entered Construction Services Agreements with contractors for Kincorth delivering 212 units, Craighill delivering 99 units, and Tillydrone delivering 70 units, work has commenced on all sites with site set up and enabling works being undertaken.*" Agrees therefore that social housing is required in Aberdeen and that regeneration areas like Kincorth and Torry deserve Council houses being built in their communities and as such instructs the Chief Officer Capital to bring a report to the next City Growth and Resources Committee detailing a timeline of substantive decisions and actions to provide assurance around concerns raised by the Convener of City Growth and Resources in terms of contract awards regarding these 4 sites and how he intends to fulfil the Council's previously agreed commitment to build Council homes on the 4 Council led sites;
- (10) agree that other Councils in Scotland are facing similar challenges from world events as outlined in the report, yet none appear to be reprofiling their budgets like Aberdeen City Council; and
- (11) agree the inclusion of additional budgets to the Housing Capital Programme for improvements to void properties, in support of displaced Ukrainians, subject to funding being confirmed by the Scottish Government.

Councillor Grant, seconded by Councillor Macdonald moved a further amendment:-
that the Committee –

- (1) with the exception of recommendation (g), agrees recommendations (a) to (h4) and thanks council officers from across the council for managing the council's finances up to Q1 and commends them for doing so while working within the context of numerous unprecedented volatile factors;
- (2) note that the forecast for General Fund capital expenditure is that there will be lower spend than had been budgeted in 2022/23, and for Housing, capital expenditure will be in line with 11% slippage on the programme, as described in Appendix 2 and instruct the Chief Officer – Early Intervention & Community Empowerment to report on the introduction of a cyclical maintenance plan to

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- ensure that the council is maximising the use of its housing capital budget and report back to the next appropriate committee;
- (3) note that the approved 2022/23 budget set in March 2022 made a cost neutral provision for the Garthdee Link Road proposals to be brought forward and reported back with an outline business case which was to be reported back by the Chief Officer – Capital. Agrees to retain this project and this instruction within the General Fund Capital Programme;
 - (4) note that the approved 2022/23 budget set in March 2022 made provision of £500,000 in 2022/23 for Early Learning and Childcare provision at St Josephs RC school and a further £2.5 million to be provided in 2023/24 and 2024/25 and for a business case to be produced on this project. Agrees to retain this project within the General Fund Capital Programme and this to be funded from the Capital Programme contingency budget;
 - (5) note that by agreeing to officer recommendations to retender the 3 stream Tillydrone Primary School project will delay progressing with work to complete the project and delay the opening of the new school until at least August 2024. Note that such a delay will subsequently delay the improvement works at Riverbank Primary to make possible the relocation of St Peters RC school which is currently Category C “Poor” in its current location;
 - (6) having given due regard to the requirements for the Council to obtain best value as highlighted within the report, note that a full retender does not guarantee that costs will come back lower than the quote provided through the procurement framework mechanism. Notes the unknown risk, due to factors highlighted within the report, that quotes may be returned higher than the quote provided through the procurement framework mechanism and agrees therefore to proceed with the project at the reprofiled cost of £36.187million and progresses work in accordance with the original timescales;
 - (7) note that while in administration in 2017-2022, the previous administration had completed or had under construction a total of 3,613 council or affordable homes and calls upon the council and all political groups to reaffirm the council’s commitment to complete both all remaining developer led and council led housing developments to ensure the council can provide the best places to live for the people of Aberdeen;
 - (8) in light of the best value consideration referred to in the report, instruct Chief Officer – Capital to pause the four Housing Capital Council-led new build projects as recommended in Appendix 5, to evaluate the actions to be taken, assess best value and where appropriate retender work packages. The outcome of this exercise will, as far as possible, be reported to the September 2022 meeting of City Growth and Resources Committee;
 - (9) agree that Aberdeen City has gone above and beyond and should be proud to have welcomed more than 1,000 Ukrainian citizens to the city since the outbreak of the War in Ukraine. Approve the inclusion of additional budgets to the Housing Capital Programme for improvements to void properties, in support of displaced Ukrainians, subject to funding being confirmed by the

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Scottish Government. In light of the longer term proposals to accommodate these citizens, instruct the Chief Officer – Early Empowerment & Community Empowerment to prepare a report on the wider supply of critical services and opportunity for Ukrainian citizens to ensure that sufficient supply is available and Ukrainian citizens have access to good quality living and access to opportunity;

- (10) note that the Council submitted cost estimates (for P6/7 expansion) to the Scottish Government in October 2021 and that no response has yet been provided despite nearly 10 months passing. Agrees that in that time, it is reasonable to assume that the £11million requested in order to deliver the Scottish Government pledge may not now be sufficient to expand the school catering and dining facilities and equipment and therefore agrees to instruct the Chief Officer – Capital, to re-appraise these costs and instruct the Chief Officer Finance to submit this re-appraisal to the Scottish Government and seek clarity on when funding might be provided to deliver these improvements;
- (11) note with concern the reprofiling of the Capital Programme, which, does not bode well for Aberdeen City moving forward and casts huge doubt into the current Administration's commitment to the City Centre and Beach Masterplan projects;
- (12) note the positive cash position that has been achieved for the General Fund and HRA to the end of Quarter 1 as detailed in Appendix 1, noting the healthy position of our Usable Reserves at £108.2 Million and Net Asset Value of £1.4 billion, notes income from Council Tax is forecast to be £1m above budget;
- (13) note with disappointment that our Operations budget net expenditure for the year is above budget mainly because of the Council not yet receiving the specific Early Learning Childcare expansion grant from the Scottish Government, understands from officers that payment is to be made on 10 August 2022, agrees that the Chief Officer – Finance provides an update to the Committee on 10 August 2022 as to whether payment has been made or not given previous delays of payment from the Scottish Government;
- (14) note the definition of Contingency as laid out by Council Officers in the 2022/23 budget, notes that officer recommendations for Contingencies within that budget was £60m Therefore, Committee has grave concerns as to why Capital Contingencies is now only £8.368M when the SNP and Liberal Democrat's budget in March 2022 recommended Contingencies of £60m;
- (15) note the previous administration budget agreed to spend £100 million for the building of 4 Schools, in Tillydrone, Torry, Countesswells and Milltimber; and
- (16) note that despite the failure of the Administration to bring forward a School Estate plan to the last Education Operational Delivery Committee, the report highlights that the current school roll forecasts are suggesting that the current primary education provision in Tillydrone is sufficient

There being a motion and two amendments, the Committee first divided between the two amendments.

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On a division, there voted:- for the amendment by Councillor Kuszniir (2) - Councillors Farquhar and Kuszniir; for the amendment by Councillor Grant (3) - Councillors Blake, Grant and Macdonald; declined to vote (8) - the Convener, the Vice Convener and Councillors Al-Samarai, Bouse, Cooke, Fairfull, Hutchison and Radley.

The Committee then divided between the motion and the amendment by Councillor Grant.

On a division, there voted:- for the motion (8) – the Convener, the Vice Convener and Councillors Al-Samarai, Bouse, Cooke, Fairfull, Hutchison and Radley; for the amendment by Councillor Grant (5) – Councillors Blake, Farquhar, Grant, Kuszniir and Macdonald.

The Committee resolved:-

- (i) to adopt the motion;
- (ii) to instruct the Chief Officer – Early Intervention and Community Empowerment to circulate to members of the Committee further details in relation to free school meals;
- (iii) to instruct the Chief Officer – Corporate Landlord to provide further details to the Committee in relation to the timescales and next steps for the Clinterty site; and
- (iv) to instruct the Chief Officer – Corporate Landlord to provide further details in relation to the Council Led Sites.

In terms of Standing Order 34.1, Councillors Blake, Farquhar, Grant, Kuszniir and Macdonald requested that the matter be referred to Full Council for decision.

- **COUNCILLOR ALEX MCLELLAN, Convener**

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	A	B	C	D	E	F	G	H	I
1	CITY GROWTH AND RESOURCES COMMITTEE BUSINESS PLANNER The Business Planner details the reports which have been instructed by the Committee as well as reports which the Functions expect to be submitting for the calendar year.								
2	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	Delayed or Recommended for removal or transfer, enter either D, R, or T	Explanation if delayed, removed or transferred
3			21 September 2022						
4	Performance Management Framework Report – City Growth and Resources Functions	To inform Members of service delivery performance, commitments and priorities relating to City Growth and Resources as reflected within the Council's commissioning intentions and the Council Delivery Plan.		Alex Paterson	Chief Officer – Data and Insights	Customer	2.1.3		
5	Condition & Suitability 3 Year Programme	This report seeks approval of an updated 3-year Condition and Suitability (C&S) Programme.		Alastair Reid	Corporate Landlord	Resources	4.1		
6	Property Auction- alternative avenue of surplus asset disposal pilot project	To request committee approval to undertake a pilot project to take surplus assets to property auction for disposal.		Peter Thatcher	Corporate Landlord	Resources	4.1 & 4.4	D	This project/ report has been delayed due to unfilled posts and re-organising of priorities within the team.
7	Fleet Replacement Programme	To present the current position of the programme for Fleet Vehicles and Assets		John Weir	Operations and Protective Services	Operations	1.1.5		
8	A92 (Bridge of Don to Bridge of Dee) Multi-Modal Transport Corridor Study	To inform members of the results of the initial STAG based option appraisal and to seek authority to proceed to the detailed STAG appraisal phase.		Tony Maric	Strategic Place Planning	Commissioning	2.2.1 & 2.2.2		
9	A947 Multi Modal Transport Corridor Study	To inform members of the results of the STAG based detailed appraisal and to seek authority to proceed to the detailed design and OBC stage. Also seeking authority to proceed with 'quick win' options identified in detailed appraisal report.		Tony Maric	Strategic Place Planning	Commissioning	2.1.1 & 2.1.2		
10	Proposed Disposal of Units 1 – 8, Woodlands Road, Dyce, Aberdeen	To advise the committee of the outcome of the closing date for the sale of the surplus property comprising Units 1 – 8, Woodlands Road, Dyce, Aberdeen		Peter Ward	Corporate Landlord	Resources	4.1 & 4.4		

	A	B	C	D	E	F	G	H	I
	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	Delayed or Recommended for removal or transfer, enter either D, R, or T	Explanation if delayed, removed or transferred
2									
11	Berryden Corridor Active Travel Connections	To provide an update on project progress and to seek approval of the outline business case.		Katherine Duncan	Strategic Place Planning/Capital	Resources	1.1.4, 1.1.6		
12	Proposed Disposal of Oscar Road Site	To advise the committee of the results of the recent closing date to receive offers for the disposal of the site		Peter Thatcher	Strategic Place Planning	Resources	4.1 & 4.4		
13	Aberdeen City's Strategic Housing Investment Plan 2023/24 – 2027/2028 (ANNUAL REPORT)	Seek approval of the Strategic Housing Investment Plan (SHIP)		Mel Booth	Strategic Place Planning	Commissioning	1.1.7		
14	Aberdeen City's Affordable Housing Delivery Programme (ANNUAL REPORT)	Provide an update on the Aberdeen City affordable housing delivery programme.		Mel Booth	Strategic Place Planning	Commissioning	1.1.7		
15	Place Based Investment Programme	To seek approval of funding to projects from the Place Based Investment Programme.		Stuart Bews	City Growth	Commissioning	1.1.7		
16	Wallace Tower	To advise committee of the outcome of the consultation regarding the proposed disposal of this Common Good property following receipt of an asset transfer request to purchase Wallace Tower by the Tillydrone Community Development Trust, and progress the submission of a petition to the court to receive authority to dispose of this Common Good Property under the Land Disposal (Scotland) Regulations 2010		Cate Armstrong	Corporate Landlord	Resources	4.1 & 4.4		
17	Torry Heat Network - Fourth Progress Report	This report updates the Committee on the progress made with the Torry Heat Network project and seeks approval of a number of recommendations		Bill Watson	Capital	Resources	1.1.2, 1.1.7, 2.1.1 & 4.1		

	A	B	C	D	E	F	G	H	I
	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	Delayed or Recommended for removal or transfer, enter either D, R, or T	Explanation if delayed, removed or transferred
2									
18	Altens East Waste and Recycling Centre	Council on 24/8/22 agreed to note the initial information provided in the report about the fire at Altens East Waste and Recycling Centre and instruct the Chief Officer - Operations and Protective Services to report back to the next meeting of the City Growth and Resources Committee with details of the contractual, financial, and operational implications, including assurance about how the council has mitigated financial exposure		Mark Reilly	Operations and Protective Services	Operations		D	Due to the ongoing nature of the various workstreams at Altens East Waste and Recycling Centre, it is not yet possible to provide a comprehensive report to the Committee, a report will be brought to the Finance & Resources Committee at the earliest possible opportunity. Details of known financial implications will be included in the Council Financial Performance report for Quarter 2
19	Request for Bank and Pension Fund Guarantees	The purpose of this report is to consider the requests for financial guarantees from external organisations with which the Council currently has a financial relationship and to amend the financial terms where necessary.		Jonathan Belford	Finance	Resources	1.1.10 & 1.1.12		
20	Aberdeen - A Real Living Wage City	Seek endorsement from the members to support the development and implementation of an action plan to enable Aberdeen to be a Real Living Wage City and appoint an elected member as the champion for this endeavour.		Jim Johnstone	City Growth	Commissioning	3.2		
21			02 November 2022 (Special Meeting)						
22	Council Financial Performance, Quarter 2 2022/23	To present the Council's financial position for the quarter.		Lesley Fullerton	Finance	Resources	1.1		
23	Climate Change Report 2021-22	To approve and sign the annual ACC Climate Change Report 2021-22, before submission of the report to the Scottish Government to meet statutory requirements.		Jenny Jindra	Strategic Place Planning	Commissioning	2.1.3 & 2.1.6	T	To be transferred to Net Zero, Environment and Transport Committee as a result of the Terms of Reference.
24			07 December 2022						

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	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	Delayed or Recommended for removal or transfer, enter either D, R, or T	Explanation if delayed, removed or transferred
2									
25	Proposals for Investment for Works at Riverbank School to Accommodate the Relocation of St. Peter's School	<p>Council on 3 March 2020 agreed to instruct the Chief Officer Corporate Landlord to take forward the proposals for investment for works at Riverbank School to accommodate the relocation of St. Peter's School once Riverbank School relocates to the City Growth and Resources Committee on 28 October 2020 with an indicative programme.</p> <p>Council on 10 March 2021 agreed to note that also included within the General Fund Capital Programme is £500,000 for the relocation of St Peters RC School to the current Riverbank School site is added to the Capital Plan and instruct the Chief Officer - Corporate Landlord to take forward design development to allow the full business case and construction costs to be reported to the City Growth and Resources Committee in advance of the 2023 budget process.</p> <p>Education Operational Delivery Committee on 8th September 2022 agreed to instruct the Chief Officer Capital to submit the refurbishment of the Riverbank School building project as a priority project for LEIP phase 3 funding and to report back to the Education and Children's Services Committee with an update on the outcomes of the funding bid and recommendations on next steps"</p>		Andrew Jones/Maria Thies	Corporate Landlord	Resources	4.1	D	Given the decision at EODC on 8/9/22 (see column B) a report will be submitted in January 2023
26	Performance Management Framework Report – City Growth and Resources Functions	To inform Members of service delivery performance, commitments and priorities relating to City Growth and Resources as reflected within the Council's commissioning intentions and the Council Delivery Plan.		Alex Paterson	Chief Officer – Data and Insights	Customer	2.1.3		
27	Procurement Workplan and Business Cases - Capital	The purpose of this report is to present procurement workplans for each Function to Committee for review and to seek approval of the total estimated capital expenditure for the proposed contracts as required by ACC Procurement Regulations 2021.	There may not be a need to present a report for each meeting, this would be dependant on submission of business cases required.	Mel Mackenzie	Head of Commercial and Procurement	Commissioning	1.1.6		
28	Bus Partnership Fund Grants	The CG&R Committee on 3 February 2022 agreed to instruct the Chief Officer - Strategic Place Planning, given the long term nature of the project, to bring back update reports on a quarterly basis.		Nicky Laird	Strategic Place Planning	Commissioning	3.2		
29	A96 Multi-Modal Study	The CG&R Committee on 21/6/22 agreed to instruct the Chief Officer - Strategic Place Planning to report back to this Committee with the Outline Business Case and next steps by December 2023.		Ken Neil	Strategic Place Planning	Commissioning	3.2 & 3.3		

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2									
30	Aberdeen Hydrogen Hub - Site Selection	The CG&R Committee on 3/2/22 agreed to note in principle the proposed sites in Appendix E (together with the associated planning risks) for the solar park array and the hydrogen production and refuelling facility and instructs the Chief Officer City Growth, in consultation with the Chief Officer Corporate Landlord to provide an update on Site Selection and any associated commercial terms at the next meeting of this Committee	The CG&R Committee on 21/6/22 noted - The joint venture with BP has been established and the JV team are currently reviewing site options with a view to a proposal going to the JV board for decision at some point in this financial year. Will likely be reported at the meeting in December 2022.	Richard Sweetnam/Jim Johnstone	Corporate Landlord / City Growth	Resources			
31	Public Art Guidance and Panel	Approval of new corporate guidance for public art commissioning and caretaking, including the establishment of a Public Art Panel to support and coordinate delivery processes.		Elsbeth Winram	City Growth	Commissioning	2.1.2		
32	Wellington Road	Council on 24/8/22 agreed to instruct the Chief Officer - Corporate Landlord to enter in discussions with the Scottish Government to acquire the land at Wellington Road and to report back the outcome of those discussions at the next City Growth and Resources Committee		Stephen Booth	Corporate Landlord	Resources			
33			2023						
34	Aberdeen Community Wealth Building	The CG&R Committee on 10/11/21 agreed to instruct the Chief Officer - City Growth to present to the February meeting of the committee details in respect of an Aberdeen Community Wealth Building approach to maximising local economic impact and an integrated approach by the Council to supporting businesses and the delivery of investment opportunities The Committee on 3/2/22 agreed to defer this. At the city region level, stakeholders are discussing a refresh of the 2015 Regional Economic Strategy. In light of this work, and its focus	The CG&R Committee on 21/6/22 noted - The development of the CWB action plan requires further consultation both internally but also with the Scottish Government as it moves forward with its commitment to pass a CWB act during this parliament. Given this, the CWB action plan will be presented to committee by February 2023.	Jim Johnstone	City Growth	Commissioning	2.1.1 & 3.3		

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2									
41	Impact on Aberdeen of Scottish Government Funding	Council on 5/3/18 agreed as part of our commitment to Civic Leadership and Urban Governance instruct the Chief Executive to bring a report to the City Growth and Resources Committee working with partners to include our ALEOs, Aberdeen and Grampian Chamber of Commerce, Aberdeen Burgesses Federation of Small Businesses, Opportunity North East, and Scottish Enterprise to assess the impact on Aberdeen of Scottish Government funding in comparison to the funding received by other local authorities and identify how the council can encourage the Scottish Government to provide a better financial settlement for Aberdeen.		Richard Sweetnam	City Growth	Commissioning	1.1 & 3.2		
42	Marywell to A956 Wellington Road – Cycle Path (RCD5394) 19/20	The CG&R Committee on 6 June 2019 agreed to instruct the Chief Officer – Capital and Chief Officer – Strategic Place Planning to undertake detailed design and cost estimates of the Preferred Route and connections, and to report back to this Committee for approval to construct in due course.	As of 01/09/21 - Sustrans Places for Everyone fund is currently closed to new applications until spring 2022 at the earliest, with funding for 20/21 and 21/22 having been diverted to support Spaces for People initiatives to aid physical distancing, encourage walking and cycling and support Covid recovery. Officers will engage with Sustrans as soon as funding streams open again for new bids.	Alan McKay	Capital	Resources	3.2		
43	Transport Delivery Programme	The CG&R Committee on 5 December 2019 agreed to instruct the Chief Officer – Strategic Place Planning and Chief Officer – Capital, to develop a prioritised delivery programme of transport interventions (to encompass larger-scale interventions recommended in the SUMP and the City Centre Masterplan, as well as projects arising from the recent Roads Hierarchy review and the ongoing Low Emission Zone development process) to inform the Capital budget process and report this programme back to Committee in due course.		Will Hekelaar/ Joanna Murray	Strategic Place Planning	Commissioning	3.2 & 3.3		
44	Living Wall	The CG&R Committee on 3/2/2021 agreed to instruct the Chief Officer – City Growth, to investigate alternative ways to deliver a living wall in the city centre and to report back to the May meeting of the Committee. The CG&R Committee on 11/5/2021 agreed to retain this item on the planner for the timebeing.	A report will be brought back to Committee by officers if and when funding streams become available	Stuart Bews	City Growth	Commissioning			

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2									
45	Infrastructure Improvements to support increased numbers of Electric Vehicles within the council fleet	The CG&R Committee on 11/5/21 agreed to instruct Chief Officer - Corporate Landlord in consultation with Chief Officer - Operations and Protective Services and Chief Officer - Strategic Place Planning to report to a future meeting of this committee with a programme of infrastructure improvements to support increased numbers of electric vehicles within the council fleet		Stephen Booth	Corporate Landlord	Resources			
46	External Transportation Links to Aberdeen South Harbour	The CG&R Committee on 25/8/21 agreed that subject to approval by the UK and Scottish Governments, instruct the Chief Officer - Capital to progress the next stages of project delivery, including but not limited to, surveys and investigations, design development, obtaining all necessary approvals, permissions, licences, agreements and consents required to develop the design and an Outline Business Case for the project and to report back to this Committee and the City Region Deal Joint Committee upon completion in 2024, and to provide an update if not completed by that time.		John Wilson	Capital	Resources			
47	Energy Transition Zone Training and Jobs Plan	Full Council on 3/3/20 agreed to instruct the Chief Officer City Growth to evaluate the Energy Transition Zone Training and Jobs Plan and report back to the Council's City Growth and Resources Committee on 28 October 2020 on the extent to which local people are accessing training or job opportunities that are generated if any development occurs.	A key element of the overall business case for the ETZ, being led by Opportunity North East, is that Aberdeen Harbour is the location of choice for developers and suppliers to the ScotWind East Region Sites. In response, Skills Development Scotland, supported by NESCOL is leading a workstream that will focus on development of an energy transition skills programme, that will also involve the Council and the universities so that local people in the city are able to access new training and jobs opportunities in offshore wind, carbon capture, utilization and storage (CCUS) and Hydrogen. It is also intended to promote and stimulate broader 'green skills' that will also be in demand as the city responds to the net zero vision and the Council's own Route Map.	Angela Taylor	City Growth	Commissioning	3.2		

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2									
51	Developer Obligations - Asset Plans	<p>The CG&R Committee on 26/09/19 agreed to note that the Chief Officer – Strategic Place Planning would undertake the consultation on the draft Asset Plan template as outlined within this report and report the outcomes to a future meeting of this committee.</p> <p>Council on 10/03/21 agreed that given the significant impact on the development industry in the last 12 months, to instruct the Chief Officer - Strategic Place Planning to report to the City Growth and Resources Committee by the end of 2021 on the legally binding developer obligations that have been signed with the Council</p> <p>The CG&R Committee on 3/2/22 agreed to defer this. The recent publication of the Draft National Planning Framework 4 (NPF4) and draft Development Plan Regulations, building on the provisions of the Planning (Scotland) Act 2019, and associated proposed infrastructure levy, may now have superseded the proposals to develop asset plans. In the absence of a clear route forward it is recommended to provide a service update when more information is known on the Scottish Governments position on the current consultations and the possible introduction of an infrastructure levy.</p>		David Dunne/David Berry	Strategic Place Planning	Commissioning	3.2		
52	Net Zero Aberdeen Routemap & Aberdeen Adapts	The Council on 28/2/22 agreed to instruct the Chief Officer - Strategic Place Planning to report back to the City Growth and Resources Committee on an annual basis on progress towards the objectives of both Net Zero Aberdeen Routemap and Aberdeen Adapts and to revise them at least every five years, and sooner as may be necessary		David Dunne	Strategic Place Planning				
53	City Centre Multi Storey Blocks - Option Appraisal	<p>Council on 10/03/21 agreed (1) to approve £250,000 from the Housing Capital Programme to undertake a full option appraisal on the city centre multi storey blocks to consider future development and investment opportunities; and (2) to instruct the Chief Officer - Corporate Landlord to report back the outcome from the option appraisal of (1) above to the City Growth and Resources Committee no later than March 2022</p> <p>The CG&R Committee on 3/2/22 agreed to defer this whilst further consideration of the outcome of the Council's appeal regarding the listing of these blocks is undertaken. The report will be submitted (likely June 2022) once a way forward has been established.</p>	The CG&R Committee on 21/6/22 noted - The report had been delayed due to resourcing issues. Issues are being addressed and report will be brought back to the next appropriate committee.	Ian Perry/Bill Watson	Corporate Landlord	Resources	4.1		

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That the Committee:-

- (1) note that many Aberdeen citizens, like citizens from other cities, towns and villages in Scotland are reliant on foodbanks;
- (2) note the good work that is done by many community leaders and volunteers within Aberdeen, who offer foodbank facilities within their communities, thus helping those most in need;
- (3) note that falling incomes and inflation has left many food banks struggling to survive, however, thanks to the prudent financial management of the last Administration the Council achieved an underspend of £1.3m last year and therefore additional funds are available to the Council that hadn't been anticipated when the budget was set for 2022/23 and has not been allocated as part of the Quarter 1 Financial Performance Report. In addition, over £35m of cashable reserves are retained within the Common Good. All in all, cash is available to help struggling food banks if the political will is there;
- (4) agree that with many citizens being unable to feed their families sufficiently and properly due to the high cost of food and with food banks in the city complaining that they are running out of food to help the most needy and vulnerable in Aberdeen, the time has come for the Council to stop counting the interest on its money and put some of that money into helping the most vulnerable in our city;
- (5) agree therefore to allocate £500,000 from the General Fund 2022/23 contingency budget to be distributed to the various food bank charities within the city to allow them to help protect our most needy and vulnerable citizens;
- (6) agree to delegate authority to the Chief Officer - Early Intervention and Community Empowerment, following consultation with the Chief Officer - Finance, to make appropriate arrangements for the urgent distribution of £500,000 from General Fund contingencies for the mitigation of food poverty across Aberdeen; and
- (7) appoint a Food Champion to focus on this crucial and complex issue in the immediate and longer term for the benefit of all Aberdeen citizens.

Councillor Deena Tissera

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Notice of Motion to City Growth and Resources Committee: Supported Bus Services

That the Committee:-

- (1) Instruct the Chief Officer – Operations and Protective Services to procure a local bus service between the City Centre and Footdee as soon as possible. This service would be for the remainder of the financial year 2022/23 in recognition of the exceptional circumstances impacting on those residents living in Footdee; and
- (2) Approve a one-off budget of up to £30,000 to pay for the bus service, which will be funded from the 2022/23 General Fund contingencies budget.

Councillor Sandra Macdonald

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ABERDEEN CITY COUNCIL

COMMITTEE	City Growth and Resources
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Fleet Replacement Programme
REPORT NUMBER	OPE/22/202
DIRECTOR	Rob Polkinghorne/Steve Whyte
CHIEF OFFICER	Mark Reilly
REPORT AUTHOR	John Weir
TERMS OF REFERENCE	1.1.5.

1. PURPOSE OF REPORT

- 1.1 This report provides Committee with the current position of the programme for Fleet Vehicles and Assets and presents the Fleet Asset Management Plan (Appendix A) which identifies age and replacement plans for all vehicles and plant to provide assurance on effective identification of assets to populate the Phase 3 Fleet Replacement Programme Projected Spend for 2022/23 (Appendix B) and future Fleet Replacement requests.

2. RECOMMENDATION(S)

That the Committee: -

- 2.1 Notes the refreshed Fleet Asset Management Plan and supports use of the Plan to identify future replacement requests;
- 2.2 Notes that a detailed infrastructure plan is being developed by the Chief Officer - Corporate Landlord working with Fleet as per [Recommendation \(b\) of Article 6 – Fleet Replacement Programme from the Committee meeting of 11 May 2021](#), to inform future Fleet Replacement Programme requests to support an increased number of alternative fuel vehicles and plant;
- 2.3 Approves the phase 3 Fleet Replacement Programme for 2022/23 (as detailed in Appendix B) and notes non-carbon fuelling technologies will be prioritised where these options exist; and
- 2.4 Delegates authority to the Chief Officer – Operations & Protective Services, following consultation with the Head of Commercial and Procurement Shared Services (CPSS) and Chief Officer – Finance, to consider and approve procurement business cases for vehicles and plant for the purposes of Procurement Regulation 4.1.1.2; then consult with the Convener and Vice Convener, City Growth and Resources and thereafter to procure appropriate works, supplies and services, and enter into any contracts necessary for the vehicles and plant without the need for further approval from any other Committee of the Council, within the current Capital budget.

3. BACKGROUND

- 3.1 The phase 1 Fleet Replacement Programme for 2021/22 was presented to Committee on 11 May 2021, the Phase 2 Fleet Replacement Programme for 2021/2022 and 2022/2023 was presented to Committee on 10 November 2021.
- 3.2 Since these dates, the market place has encountered a fair degree of instability including increased costs, reduced material and resource availability whilst continuing to develop to a more carbon friendly environment. These impacts have increased uncertainty of product specification and availability and whilst Fleet continue to engage with the market place and strive to reach Net Zero figures, there has been lower procurement activity than forecast.
- 3.3 As previously reported, the purpose of the Fleet Replacement Programme is to ensure the Council maintains an optimum operating age profile of the Fleet to a maximum 7-year profile for HGV and vans to 5-year profile. The programme also provides for the replacement of an assortment of other vehicles, mobile plant and small hand-held plant which is generally 3-years. This ongoing practice aims to minimise expensive repair costs and give an enhanced residual value of the asset on replacement.
- 3.4 The Fleet Asset Management Plan (FAMP) continues to be refreshed to better identify the replacement programme and includes carbon use data to reflect the Council's Net Zero ambition to work towards de-carbonising its in-house Fleet and introduce new vehicles with the latest technology with reduced emissions.
- 3.5 As highlighted above, whilst the FAMP reflects current asset type, the market availability and continuing development are such that like-for-like replacement may not be the default position should better options be identified. The Fleet Manager is actively scanning industry opportunities to identify best value and best asset replacement. As such Appendix B may require changes to the pricing options; which will be captured in appropriate business cases.
- 3.6 To maximise development of a greener fleet, all new purchases will be focused on hydrogen/electric power as the fuel of choice with alternative considerations of dual fuel and diesel as the current market and infrastructure permits. Existing vehicles which are not due for replacement will be considered for conversion to dual fuel. This strategy links into the [Local Outcome Improvement Plan 2016-26](#), the [Local Strategy Plan 2016-2021](#) and the [Nestrans Regional Transport Strategy 2013-35](#) for clean transport for the city and presents an improved on-the-road image to the citizens of Aberdeen.
- 3.7 Whilst alternative refuelling infrastructure is not sufficiently developed, but is planned, Fleet is working with manufacturers and developers to allow for dual fuel (a vehicle that can operate on both diesel / hydrogen, or diesel / electric) capability so that the fleet age and environmental footprint remains optimised, with the associated benefits, and the ability to move the fleet onto alternative fuels is maximised.

- 3.8 The inclusion of these vehicles will increase our zero-emission fleet as we progress on our journey away from carbon fuel. The renewable energy vehicle market is being explored to identify latest innovation and development to adapt current vehicle procurement options towards the Council's greener ambitions.
- 3.9 Fleet is working in collaboration with Finance and other services to maximise the volume of alternative fuel powered vehicles and plant using the current capital budgets and is actively sourcing additional external grant funding. The Service is exploring alternative ways of funding fuel vehicle replacements.
- 3.10 The Fleet Replacement Programme continues to have a major dependency on a developed infrastructure to fully deliver non carbon fuels and is participating in the development of the infrastructure plan as directed by Committee on 11 May 2021. This does require to be reinforced to ensure a successful infrastructure and replacement plan is achieved.
- 3.11 Currently the Council is considering EV recharging facilities and capacity for future council fleet replacements, which follows from the report to this committee on 3 February 2021 "Electric Vehicle Framework for Aberdeen" COM/21/019. This work will need to be carried out and charging points strategically placed to align with the Estate footprint to ensure that all vehicles can be recharged prior to commencement of daily operational activities.
- 3.12 It is intended that any report submitted to a future meeting of this committee for further fleet replacements (for 2022/23 and beyond) in conjunction with options for the roll out of a strategical placed EV recharging infrastructure for the council fleet will utilise the Fleet Asset Management Plan along with known infrastructure developments and intentions. The Fleet Replacement Programme will be produced in collaboration with service users across the Council.
- 3.13 In addition to Fleet Asset Replacement, Fleet are actively engaging with all Services to attempt reduction of all hire vehicle use, particularly long-term hires with a focus on consideration of procurement versus hire. Aligned to the Net Zero Plans this will see continued understanding and justification of all hire requests submitted to Fleet.
- 3.14 Current procurement processes are being actively supported by the Commercial and Procurement Shared Services (CPSS) team, to allow engagement with potential suppliers and negotiate procurement efficiencies where possible. The introduction of new fuel technologies is manifesting in the market as a wider range of purchase options, including variations of traditional contract hire / lease models. Fleet is actively reviewing these options in conjunction with Finance and CPSS with a view to identifying cost saving opportunities for the Council.

4. FINANCIAL IMPLICATIONS

4.1 The proposed programme can be funded from within the budget profile for the Fleet Replacement Programme for financial years 2022/23 - 2025/26 approved by Council on 7 March 2022.

4.2 The longer vehicles are operated beyond their expected operating life the greater the risk of defects arising in these vehicles. If these vehicles continue to be operated beyond this point, they will likely require additional maintenance which in turn will increase vehicle downtime and revenue costs

5. LEGAL IMPLICATIONS

5.1 The Council holds an Operator's Licence for the Council's fleet which is a Statutory Requirement. Vans and LGV vehicles have a limited optimum life. All vehicles have a planned replacement date. The longer vehicles are operated beyond this date the greater the risk of defects arising in these vehicles. If these vehicles continue to be operated, they will require additional maintenance which in turn will increase vehicle downtime and increase revenue costs. This may impact on the Council's Operator's Licence.

6. ENVIRONMENTAL IMPLICATIONS

6.1 The recommendations of this report will lead to a reduction in carbon emissions of the existing Fleet assets by adoption of low / zero carbon Fuels.

7. RISK

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
Strategic Risk	None			
Compliance	Failure to deliver the programme resulting in a failure to balance the budget Robust governance arrangements and programme of	Failure to deliver the programme resulting in a failure to balance the budget Robust governance arrangements and programme of work are in place to ensure delivery of the transformation programme.	L	Yes

	work are in place to ensure delivery of the transformation programme.			
Operational	Failure to deliver the replacement programme will increase the age of the Fleet and may impact on service delivery.	Robust measures in place to ensure timely replacement of vehicles.	L	Yes
Financial	Not putting in place the necessary investment to enable the savings to be realised This will be progressed in line with council budget requirements as confirmed within the MTFS	Not putting in place the necessary investment to enable delivery of the programme and its necessary infrastructure to be realised This will be progressed in line with council budget disbursement.	M	Yes
Reputational	An ageing fleet that impacts on service delivery may expose the Council to reputational damage.	Robust measures in place to ensure timely replacement of vehicles.	M	Yes
Environment / Climate	Failure to deliver the programme resulting in a failure to meet Council Climate requirements.	Climate risks will be embedded into service planning and decision making	M	Yes

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
Impact of Report	
Aberdeen City Council Policy Statement	<p>The proposals within this report support the delivery of:</p> <p>Policy Statement 1 – Build up our existing strength in hydrogen technology.</p> <p>Policy Statement 14. Work with both governments in order to unleash the non-oil and gas economic potential of the City.</p>
Aberdeen City Local Outcome Improvement Plan	
Prosperous Economy Stretch Outcomes	The proposals within this report support the delivery of Stretch Outcomes 2 and 3. Investments in vehicles and equipment asset management will ensure fit for purpose council services, which benefit the wider economy of Aberdeen.
Prosperous People Stretch Outcomes Whilst	Whilst this report has no direct impact on the Prosperous People section of the LOIP, investment in vehicles and equipment will enhance staff experiences, with improvements in technical training for employees and productive time for services.
Prosperous Place Stretch Outcomes	<p>The Proposals within this report support the delivery of LOIP Stretch Outcome 14 – Addressing climate change by reducing Aberdeen’s carbon emissions by 42.5% by 2026 and adapting to the impacts of our changing climate.</p> <p>Aberdeen City Council is committed to reducing carbon emissions both within its operations and across the city as part of Net Zero Aberdeen. Reducing emissions from transport remains a challenge as it involves the need for behaviour change either in relation to changing method of transport or moving to the use of new and unfamiliar vehicle technology such as electric or hydrogen vehicles.</p> <p>Continued learning from Telematics data will result in a better understanding of Fleet usage and result in reductions on spend on fuel, tyres, wear and tear and increase utilisation of fleet vehicles. The introduction of the replacement Fleet Management system is assisting a better understanding of</p>

	<p>efficiencies within the Fleet Workshop which will result in providing improved information to all service users of vehicles and plant.</p>
<p>Regional and City Strategies</p>	<p>The proposals within this report support the Regional Economic Strategy & Action Plan, Energy Transition Vision, Strategic Infrastructure Plan, draft Regional Transport Strategy 2020, Local Transport Strategy, Hydrogen Strategy & Action Plan and Air Quality Action Plan by proposing procurement of appropriate net zero emission vehicles.</p> <p>The proposals within this report support the Regional Economic Strategy & Action Plan, Energy Transition Vision, Strategic Infrastructure Plan, draft Regional Transport Strategy 2020, Local Transport Strategy, Hydrogen Strategy & Action Plan and Air Quality Action Plan by proposing procurement of appropriate net zero emission vehicles.</p>
<p>UK and Scottish Legislative and Policy Programmes</p>	<p>The recommendations in this report contribute to the City's response to the Intergovernmental Panel on Climate Change set under the Paris Agreement and the UK Governments ambition to have Net Zero emission by 2045. The report also sets out the City's plans to meet the Scottish Government's Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.</p> <p>The recommendations in this report contribute to the City's response to the Intergovernmental Panel on Climate Change set under the Paris Agreement and the UK Governments ambition to have Net Zero emission by 2045. The report also set out the City's plans to meet the Scottish Government's Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.</p>

8. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	Full EHRIA not required
Data Protection Impact Assessment	Not required

9. BACKGROUND PAPERS

10. APPENDICES (if applicable)

Appendix A: Fleet Asset Management Plan (FAMP)

Appendix B: Phase 3 Fleet Replacement Programme Projected Spend for 2022/23

11. REPORT AUTHOR CONTACT DETAILS

John Weir

Fleet Manager

jweir@aberdeencity.gov.uk

01224 489312

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Tractor Large (Tractor)	01/04/2002	21	3950	New Holland TL70 TRACTOR	Fleet	Diesel				
Line Painter > 3500kg (Commercial > 3500kg)	30/03/2005	18	4434	DAF Trucks FA LF45.150 FA LF 45.150 DAY	Roads Maintenance	Diesel	0	0	0	0
Specially Fitted Vehicle < 3500kg (Commercial < 3500kg)	10/01/2006	17	4448	Olympia OLYMPIA ICE SCRAPING MACHINE	ALEOs	LPG				
Dropside > 3500kg (Commercial > 3500kg)	08/05/2006	17	4483	DAF Trucks FA CF75.250 FA CF 75.250 DAY	Roads Maintenance	Diesel	0	0	0	0
Specially Fitted Vehicle > 3500kg (Commercial > 3500kg)	15/05/2006	17	4446	DAF Trucks FA LF55.220 FA LF 55.220 DAY	Roads Maintenance	Diesel	0	0	0	0
Specially Fitted Vehicle > 3500kg (Commercial > 3500kg)	06/09/2006	16	4502	IVECO EUROCARGO ML100E18S DAY		Diesel	0	0	0	0
Minibus 13-16 Seats (Minibus)	15/05/2007	16	3030	PEUGEOT BOXER 335 L3H2 LWB SHR	Bucksburn Academy	Diesel	0	0	0	0
Tractor Large (Tractor)	21/05/2007	16	4547	MASSEY FERGUSON/HARRIS ALL MODELS ALL VARIANTS	Tree Squad	Diesel	0	0	0	0
Specially Fitted Vehicle > 3500kg (Commercial > 3500kg)	01/06/2007	16	4555	DAF LF FA55.220 18T DAY E4	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	18/10/2007	15	4543	IVECO EUROCARGO ML120E18S DAY	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	27/09/2008	14	4687	Ford TRANSIT 85 T280M FWD 280 LR	Fleet	Diesel	0	0	0	0
Tipper < 3500kg (Commercial < 3500kg)	27/09/2008	14	4690	Ford TRANSIT 100 T350L D/C RWD 350 DRW	Unpaid Work Team	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	20/11/2008	14	7004	FORD TRANSIT 430 EF H/R JUMBO DRW DAY 100	Orchard Brae School	Diesel	1.2	6	1.2	6
Tractor Large (Tractor)	09/01/2009	14	4697	Massey Ferguson 5425 TRACTOR	Roads Maintenance	Diesel	0	0	0	0
Tar Sprayer (Commercial > 3500kg)	01/03/2009	14	4707	DAF LF FA55.220 18T DAY E4	Roads Maintenance	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	20/03/2009	14	4714	Ford TRANSIT 115 T430 17S RWD 430 SHR BUS 17 STR	Fleet Hire	Diesel	4.41	22.06	4.41	22.06
Minibus 17+ Seats (Minibus)	23/03/2009	14	4715	Ford TRANSIT 115 T430 17S RWD 430 SHR BUS 17 STR	Fleet Hire	Diesel	4.34	21.73	4.34	21.73
Tipper > 3500kg (Commercial > 3500kg)	01/04/2009	14	4727	DAF LF FA55.220 18T DAY E4 TPR	Roads Maintenance	Diesel				
Van < 3500kg (Commercial < 3500kg)	02/04/2009	14	4717	Ford TRANSIT CONN T200 L75 T200 L SWB 75 TDCI	Fleet Hire	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/05/2009	14	4734	DAF LF FA55.220 18T DAY E4 TPR	Roads Maintenance	Diesel				
Minibus T/Lift 17+ Seats (Minibus)	07/09/2009	13	7123	FORD TRANSIT 430 H/R BUS 17 STR	Aberdeen Grammar School	Diesel				
Van < 3500kg (Commercial < 3500kg)	29/01/2010	13	4762	Ford TRANSIT CONNECT 75 T200 T200 LR	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	16/03/2010	13	4779	Ford TRANSIT CONNECT 75 T200 T200 LR	Library Property and Admin	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	13/05/2010	13	342	FORD TRANSIT 430 SHR BUS 17 STR		Diesel				
Pick-Up < 3500kg (Commercial < 3500kg)	01/07/2010	13	4790	Ford RANGER XL 4X4 TDCI XL 4X4 S/C TDCI	Countryside Rangers	Diesel	0	0	0	0
Car (Car)	14/07/2010	13	4794	Ford FOCUS STYLE TDCI STYLE TDCI	Car Parks	Diesel	1.21	6.06	1.21	6.06
Car (Car)	19/07/2010	13	4796	Ford FOCUS STYLE TDCI STYLE TDCI	Car Parks	Diesel	1.53	7.66	1.53	7.66
RCV 3 Axle (Commercial > 3500kg)	08/03/2011	12	4807	MERCEDES ECONIC 2629LLNLA	Other Waste Collection	Diesel				
Car (Car)	11/07/2011	12	4811	Renault GRAND SCENIC EXPRESSION DCI EXPRESSION DCI	Unpaid Work Team	Diesel				
Van < 3500kg (Commercial < 3500kg)	17/02/2012	11	4826	Ford TRANSIT 115 T350L RWD 350 SHR	Roads Maintenance	Diesel	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	21/02/2012	11	4830	Ford TRANSIT 115 T350L RWD 350 E/F DRW	Fleet	Diesel	0	0	0	0
Pick-Up < 3500kg (Commercial < 3500kg)	21/02/2012	11	4831	Isuzu TF RODEO DENVERMAX TD D/C TD RODEO DENVER MAX DCB	Grounds Maintenance	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	21/02/2012	12	4836	NUFFIELD / BMC / LEYLAND ALL MODELS ALL VARIANTS	Fleet Hire	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	07/03/2012	11	4840	Ford TRANSIT 135 T430 RWD 430 SHR BUS 17 STR	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	07/03/2012	11	4841	Ford TRANSIT 135 T430 RWD 430 SHR BUS 17 STR	Public Transport Unit Drivers	Diesel	0	0	0	0
Tipper < 3500kg (Commercial < 3500kg)	13/03/2012	11	4859	Ford TRANSIT 115 T350L D/C RWD 350 DRW	Education Man Systems	Diesel				
Van < 3500kg (Commercial < 3500kg)	14/03/2012	11	4862	Ford TRANSIT 115 T350L RWD 350 EL H/R	Unpaid Work Team	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	27/03/2012	11	4843	Ford TRANSIT 135 T430 RWD 430 SHR BUS 17 STR	Craigielea Residential Unit	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	30/03/2012	11	4871	Renault KANGOO ML19 DCI 75 ML19 DCI		Diesel				
Van < 3500kg (Commercial < 3500kg)	30/03/2012	11	4873	Renault KANGOO ML19 DCI 75 ML19 DCI	Roads Development Team	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	30/03/2012	11	4875	Renault KANGOO ML19 DCI 75 ML19 DCI	Fleet	Diesel				
Van < 3500kg (Commercial < 3500kg)	30/03/2012	11	4876	Renault KANGOO ML19 DCI 75 ML19 DCI	Fleet Hire	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	30/03/2012	11	4879	Renault KANGOO ML19 DCI 75 ML19 DCI	Fleet Hire	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	04/04/2012	11	5014	Green Machine ELECTRIC SWEEPER	Street Sweeping Operations	Electric				
Minibus T/Lift 13-16 Seats (Minibus)	24/07/2012	11	5000	MERCEDES SPRINTER 516 CDI C/C LWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	24/07/2012	11	5001	MERCEDES SPRINTER 513 CDI C/C LWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	24/07/2012	11	5003	MELLOR MINIBUS ALL VARIANTS	Public Transport Unit Drivers	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	31/07/2012	11	4904	MERCEDES ECONIC 2629LLNLA	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	31/07/2012	11	4905	MERCEDES ECONIC 2629LLNLA	Fleet Hire	Diesel				
Van T/Lift < 3500kg (Commercial < 3500kg)	31/07/2012	11	4908	IVECO DAILY 35S13V	Art Gallery	Diesel				
RCV 3 Axle (Commercial > 3500kg)	31/07/2012	11	4915	MERCEDES ECONIC 2629LLNLA	Fleet Hire	Diesel				
RCV 3 Axle (Commercial > 3500kg)	31/07/2012	11	4916	MERCEDES ECONIC 2629LLNLA	Fleet Hire	Diesel				
RCV 3 Axle (Commercial > 3500kg)	01/08/2012	11	4902	MERCEDES ECONIC 2629LLNLA	Fleet	Diesel				
RCV 3 Axle (Commercial > 3500kg)	01/08/2012	11	4903	MERCEDES ECONIC 2629LLNLA	Other Waste Collection	Diesel				
Tipper > 3500kg (Commercial > 3500kg)	01/09/2012	10	4900	DAF CF FAT 85.410	Roads Maintenance	Diesel	0	0	0	0
Minibus T/Lift 13-16 Seats (Minibus)	01/12/2012	10	5006	Iris.Bus DAILY 50C17 50C17 CCW	Public Transport Unit Drivers	Diesel				

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Minibus T/Lift 13-16 Seats (Minibus)	16/01/2013	10	5007	Iris.Bus DAILY 50C17 50C17 CCW	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	16/01/2013	10	5008	Iris.Bus DAILY 50C17 50C17 CCW	Public Transport Unit Drivers	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	31/01/2013	10	5037	DAF LF FA 45.220	Roads Maintenance	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	23/05/2013	10	5114	FORD TRANSIT 460	Orchard Brae School	Diesel	0	0	0	0
Gritter 2 Axle (Commercial > 3500kg)	23/07/2013	12	5128	VOLVO FL FLH240 4X2 L1H1	Roads Maintenance	Diesel	0	0	0	0
Gritter 2 Axle (Commercial > 3500kg)	23/07/2013	12	5129	VOLVO FL FLH240 4X2 L1H1	Roads Maintenance	Diesel	0	0	0	0
Gritter 4 Axle (Commercial > 3500kg)	29/08/2013	13	5149	MERCEDES ATEGO 2633B DAY	Roads Maintenance	Diesel	0	0	0	0
Tower Wagon (Commercial > 3500kg)	13/09/2013	9	5151	Iveco DAILY 50C15 50C15V	Street Lighting	Diesel				
Tower Wagon (Commercial > 3500kg)	19/09/2013	9	5152	Iveco DAILY 50C15 50C15V	Street Lighting	Diesel	0	0	0	0
Gritter 2 Axle (Commercial > 3500kg)	11/10/2013	12	5163	VOLVO FL FL814T 4X2 DAY	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	16/10/2013	9	5164	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Dog Warden Service	Diesel	1.95	9.75	1.95	9.75
Van < 3500kg (Commercial < 3500kg)	16/10/2013	9	5165	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Dog Warden Service	Diesel	2.53	12.64	2.53	12.64
Van < 3500kg (Commercial < 3500kg)	16/10/2013	9	5166	RENAULT KANGOO ML19 DCI	Fleet	Diesel				
Van < 3500kg (Commercial < 3500kg)	16/10/2013	9	5169	Renault KANGOO ML19 DCI ML19 DCI	Roads Maintenance	Diesel	2.82	14.13	2.82	14.13
Lift Truck > 3500kg (Commercial > 3500kg)	22/10/2013	11	5171	COMBILIFT FORKLIFT COMBILIFT FORKLIFT	Building Services	Bi Fuel	0	0	0	0
Flat Lorry (Commercial > 3500kg)	01/11/2013	9	5180	DAF LF FA 55.250 TIPPER	Roads Maintenance	Diesel	0	0	0	0
Flat Lorry (Commercial > 3500kg)	01/11/2013	9	5181	DAF LF FA 55.250 TIPPER	Roads Maintenance	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	10/12/2013	9	5193	DAF LF FA 45.220		Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	20/12/2013	9	5192	DAF LF FA 45.220		Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	27/12/2013	9	5200	MERCEDES ECONIC 1824LL	Other Waste Collection	Diesel				
RCV 2 Axle (Commercial > 3500kg)	27/12/2013	9	5201	MERCEDES ECONIC 1824LL	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	17/01/2014	9	5228	MERCEDES ECONIC 2629LLNLA	Other Waste Collection	Diesel				
Minibus T/Lift 17+ Seats (Minibus)	01/02/2014	9	5251	IRIS.BUS DAILY 50C17 CCW	Public Transport Unit Drivers	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	06/02/2014	9	5264	DAF LF FA 55.250 TIPPER	Roads Maintenance	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	07/02/2014	9	5257	Ford TRANSIT 135 T430 RWD 430 SHR BUS 17 STR	Lochside Academy	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	03/03/2014	9	5273	Renault KANGOO ML19 DCI ML19 DCI	Roads Maintenance	Diesel	1.1	5.48	1.1	5.48
Van < 3500kg (Commercial < 3500kg)	03/03/2014	9	5274	Renault KANGOO ML19 DCI ML19 DCI	Roads Maintenance	Diesel	1.53	7.65	1.53	7.65
Van < 3500kg (Commercial < 3500kg)	03/03/2014	9	5275	Renault KANGOO ML19 DCI ML19 DCI	Kingsfield Residential Unit	Diesel	1.26	6.31	1.26	6.31
Van < 3500kg (Commercial < 3500kg)	05/03/2014	9	5246	Ford TRANSIT 100 T280 FWD 280	Fleet	Diesel	2.32	11.58	2.32	11.58
Minibus 17+ Seats (Minibus)	05/03/2014	9	5258	Iveco DAILY 50C17CC 50C17CC	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	05/03/2014	9	5259	Iveco DAILY 50C17CC 50C17CC	Public Transport Unit Drivers	Diesel	0	0	0	0
Van T/Lift < 3500kg Sgl Axle (Commercial < 3500kg)	07/03/2014	9	5371	FORD TRANSIT 350 HR	Beach Ballroom	Diesel	0.77	3.86	0.77	3.86
Loading Shovel (Tractor)	13/03/2014	9	5286	Kubota M110GX	Grounds Maintenance	Diesel	0	0	0	0
Loading Shovel (Tractor)	13/03/2014	9	5287	Kubota M110GX	Grounds Maintenance	Diesel	0	0	0	0
Loading Shovel (Tractor)	13/03/2014	9	5288	Kubota M110GX	Grounds Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	19/03/2014	9	5282	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Building Services	Diesel	1.52	7.6	1.52	7.6
Tipper < 3500kg (Commercial < 3500kg)	10/04/2014	9	5301	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	3.09	15.44	3.09	15.44
Tipper < 3500kg (Commercial < 3500kg)	10/04/2014	9	5302	Ford TRANSIT 100 T350 RWD 350 DRW	Fleet	Diesel	2.12	10.58	2.12	10.58
Loading Shovel (Tractor)	15/04/2014	9	5369	JCB LOADER	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	18/04/2014	9	5247	Ford TRANSIT 100 T280 FWD 280	Building Services	Diesel	1.44	7.21	1.44	7.21
Crash Cushion - > 3500kg- Rear Steer (Commercial > 3500kg)	06/05/2014	9	5373	MERCEDES ECONIC 2629LLNLA	Roads Maintenance	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	09/05/2014	9	5378	PEDESTRIAN SWEEPER PEDESTRIAN SWEEPER	Street Sweeping Operations	Gasoil				
Street Cleansing < 3500kg (Commercial < 3500kg)	09/05/2014	9	5379	PEDESTRIAN SWEEPER PEDESTRIAN SWEEPER	Street Sweeping Operations	Gasoil				
Crash Cushion - > 3500kg- Rear Steer (Commercial > 3500kg)	12/05/2014	9	5374	MERCEDES ECONIC 2629LLNLA	Roads Maintenance	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	27/05/2014	9	5390	MERCEDES ECONIC 1824LL	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	18/06/2014	9	5260	FORD TRANSIT 350 H/R H	Fleet	Diesel				
Dropside < 3500kg (Commercial < 3500kg)	02/07/2014	9	5395	Ford TRANSIT 100 T350 RWD 350 DRW		Diesel				
Dropside < 3500kg (Commercial < 3500kg)	02/07/2014	9	5396	Ford TRANSIT 100 T350 RWD 350 DRW	Building Services	Diesel	2.5	12.49	2.5	12.49
Dropside < 3500kg (Commercial < 3500kg)	02/07/2014	9	5397	Ford TRANSIT 100 T350 RWD 350 DRW	Building Services	Diesel				
Dropside < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	02/07/2014	9	5398	FORD TRANSIT 350 DRW	Building Services	Diesel	2.93	14.64	2.93	14.64
Dropside < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	02/07/2014	9	5399	FORD TRANSIT 350 DRW	Building Services	Diesel	2.24	11.19	2.24	11.19
Tractor Large (Tractor)	19/08/2014	9	5437	MULTIHOG ALL MODELS ALL VARIANTS	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/09/2014	8	5457	Renault KANGOO ML19 DCI ML19 DCI	Grounds Maintenance	Diesel	1.21	6.03	1.21	6.03
Van < 3500kg (Commercial < 3500kg)	09/09/2014	8	5458	Renault KANGOO ML19 DCI ML19 DCI	Grounds Maintenance	Diesel	1.18	5.92	1.18	5.92
Van < 3500kg (Commercial < 3500kg)	11/09/2014	8	5461	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Library Property and Admin	Diesel				
Tipper < 3500kg (Commercial < 3500kg)	13/10/2014	8	5484	Iveco DAILY 35C13 LWB 35C13	Tree Squad	Diesel	1.59	7.95	1.59	7.95

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Tipper < 3500kg (Commercial < 3500kg)	13/10/2014	8	5485	Iveco DAILY 35C13 LWB 35C13	Tree Squad	Diesel	1.77	8.88	1.77	8.88
Gritter 4 Axle (Commercial > 3500kg)	21/10/2014	10	5481	MERCEDES AXOR 3243K DAY	Roads Maintenance	Diesel	0	0	0	0
Gritter 2 Axle (Commercial > 3500kg)	22/10/2014	11	5482	VOLVO FL FLH240 4X2 L1H1	Roads Maintenance	Diesel	0	0	0	0
Gritter 2 Axle (Commercial > 3500kg)	23/10/2014	11	5483	VOLVO FL FLH240 4X2 L1H1	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	28/10/2014	8	5462	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Building Services	Diesel	0.84	4.21	0.84	4.21
Minibus T/Lift 17+ Seats (Minibus)	12/11/2014	9	5252	IRIS.BUS DAILY 50C17 CCW	Public Transport Unit Drivers	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	17/11/2014	8	5465	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI	Fleet	Diesel				
Tipper < 3500kg (Commercial < 3500kg)	01/12/2014	8	5500	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	1.4	7.03	1.4	7.03
Tipper < 3500kg (Commercial < 3500kg)	01/12/2014	8	5501	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	1.98	9.9	1.98	9.9
Tipper < 3500kg (Commercial < 3500kg)	01/12/2014	8	5502	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	1.63	8.17	1.63	8.17
Tipper < 3500kg (Commercial < 3500kg)	01/12/2014	8	5509	Ford TRANSIT 125 T350 RWD 350 DRW	Grounds Maintenance	Diesel	1.54	7.7	1.54	7.7
Tipper < 3500kg (Commercial < 3500kg)	04/12/2014	8	5503	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	4.31	21.57	4.31	21.57
Tipper < 3500kg (Commercial < 3500kg)	04/12/2014	8	5504	Ford TRANSIT 100 T350 RWD 350 DRW	Roads Maintenance	Diesel	3.89	19.48	3.89	19.48
Dropside < 3500kg (Commercial < 3500kg)	04/12/2014	8	5512	Ford TRANSIT 100 T350 RWD 350 DRW	Building Services	Diesel				
Tipper < 3500kg (Commercial < 3500kg)	09/12/2014	8	5499	Ford TRANSIT 100 T350 RWD 350 DRW	Unpaid Work Team	Diesel	1.4	7	1.4	7
Van T/Lift < 3500kg Dble Axle (Commercial < 3500kg)	09/12/2014	8	5505	Ford TRANSIT 350 350 CC DRW	Other Waste Collection	Diesel	4.07	20.36	4.07	20.36
Tipper < 3500kg (Commercial < 3500kg)	09/12/2014	8	5510	Ford TRANSIT 100 T350 RWD 350 DRW	Grounds Maintenance	Diesel				
Tipper < 3500kg (Commercial < 3500kg)	09/12/2014	8	5511	Ford TRANSIT 100 T350 RWD 350 DRW	Grounds Maintenance	Diesel	2.09	10.46	2.09	10.46
Van < 3500kg (Commercial < 3500kg)	17/12/2014	8	5537	Renault KANGOO MAXI LL21 CORE DCI LL21 CORE DCI W/V	Other Waste Collection	Diesel	1.01	5.04	1.01	5.04
Loading Shovel (Tractor)	01/02/2015	8	5376	MULTIONE LOADER MULTIONE LOADER	Tree Squad	Diesel				
RCV 2 Axle (Commercial > 3500kg)	15/04/2015	8	5545	ISUZU FORWARD N75.190 L	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	22/04/2015	8	5572	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	22/04/2015	8	5573	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	24/04/2015	8	5574	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel				
Van < 3500kg (Commercial < 3500kg)	30/04/2015	8	5467	Renault KANGOO MAXI LL21 ZE LL21 ZE	Fleet	Electric				
Van < 3500kg (Commercial < 3500kg)	30/04/2015	8	5468	Renault KANGOO MAXI LL21 ZE LL21 ZE	Fleet	Electric				
RCV 2 Axle (Commercial > 3500kg)	08/05/2015	8	5569	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel				
RCV 2 Axle (Commercial > 3500kg)	08/05/2015	8	5570	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	08/05/2015	8	5571	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel				
RCV 2 Axle (Commercial > 3500kg)	19/05/2015	8	5575	DAF TRUCKS LF LF 220 FA 12T		Diesel				
RCV 2 Axle (Commercial > 3500kg)	19/05/2015	8	5576	DAF TRUCKS LF LF 220 FA 12T	Other Waste Collection	Diesel	0	0	0	0
Flat Lorry (Commercial > 3500kg)	09/07/2015	8	5684	DAF LF 250 4X2	Roads Maintenance	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	13/10/2015	7	5764	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	15/10/2015	7	5765	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel				
Minibus T/Lift 17+ Seats (Minibus)	16/10/2015	7	5766	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	22/10/2015	7	5769	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Loading Shovel (Tractor)	22/10/2015	7	5770	Kubota M110GX	Grounds Maintenance	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	03/11/2015	7	5782	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 17+ Seats (Minibus)	04/11/2015	7	5783	Mercedes-Benz SPRINTER 513 CDI 513 CDI C/C MWB	Public Transport Unit Drivers	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	12/01/2016	7	5801	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	12/01/2016	7	5802	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	12/01/2016	7	5803	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	13/01/2016	7	5804	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	19/01/2016	7	5795	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	19/01/2016	7	5796	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel				
RCV 3 Axle (Commercial > 3500kg)	19/01/2016	7	5800	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	22/01/2016	7	5806	MERCEDES ECONIC 1830L	Fleet Hire	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	25/01/2016	7	5805	MERCEDES ECONIC 1830L	Fleet Hire	Diesel				
Minibus T/Lift 13-16 Seats (Minibus)	25/01/2016	7	5811	PEUGEOT BOXER HDI 435 L4H2 P/V	Bucksburn Academy	Diesel	1.91	9.55	1.91	9.55
RCV 3 Axle (Commercial > 3500kg)	26/01/2016	7	5797	MERCEDES ECONIC 2630L		Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	29/01/2016	7	5798	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/02/2016	7	5813	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/02/2016	7	5814	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/02/2016	7	5815	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	05/02/2016	7	5799	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
Gritter 3 Axle (Commercial > 3500kg)	01/03/2016	7	5820	DAF TRUCKS CF 400 FAT	Roads Maintenance	Diesel	0	0	0	0

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Van < 3500kg (Commercial < 3500kg)	18/03/2016	7	5821	Citroen DISPATCH 1200 L2H1 HDI 1200 L2H1 HDI	Building Services	Diesel	1.33	6.65	1.33	6.65
Van < 3500kg (Commercial < 3500kg)	18/03/2016	7	5822	Citroen DISPATCH 1200 L2H1 HDI 1200 L2H1 HDI	Building Services	Diesel	2.35	11.74	2.35	11.74
Van < 3500kg (Commercial < 3500kg)	18/03/2016	7	5823	Citroen DISPATCH 1200 L2H1 HDI 1200 L2H1 HDI	Building Services	Diesel	2.08	10.4	2.08	10.4
Van < 3500kg (Commercial < 3500kg)	18/03/2016	7	5825	Citroen DISPATCH 1200 L2H1 HDI 1200 L2H1 HDI	Building Services	Diesel	1.75	8.74	1.75	8.74
Van < 3500kg (Commercial < 3500kg)	18/03/2016	7	5826	Citroen DISPATCH 1200 L2H1 HDI 1200 L2H1 HDI	Building Services	Diesel	1.75	8.73	1.75	8.73
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5897	CITROEN BERLINGO 750 LX L2 HDI	Building Services	Diesel				
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5898	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.42	7.11	1.42	7.11
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5899	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.53	7.66	1.53	7.66
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5900	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.03	5.16	1.03	5.16
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5901	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.32	6.6	1.32	6.6
Van < 3500kg (Commercial < 3500kg)	24/03/2016	7	5902	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.54	7.72	1.54	7.72
Car (Car)	29/03/2016	7	6182	Hyundai IX35 FUEL CELL AUTO FUEL CELL	Fleet	Electric				
Car (Car)	29/03/2016	7	6183	Hyundai IX35 FUEL CELL AUTO FUEL CELL	Fleet	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	06/04/2016	7	5903	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.13	5.63	1.13	5.63
Van < 3500kg (Commercial < 3500kg)	06/04/2016	7	5904	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	2.8	13.99	2.8	13.99
Van < 3500kg (Commercial < 3500kg)	06/04/2016	7	5905	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.27	6.33	1.27	6.33
Van < 3500kg (Commercial < 3500kg)	06/04/2016	7	5906	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	0.89	4.43	0.89	4.43
Van < 3500kg (Commercial < 3500kg)	06/04/2016	7	5907	Citroen BERLINGO 750 LX HDI 750 LX L2 HDI	Building Services	Diesel	1.35	6.76	1.35	6.76
Van < 3500kg (Commercial < 3500kg)	07/04/2016	7	5888	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.52	7.61	1.52	7.61
Van < 3500kg (Commercial < 3500kg)	07/04/2016	7	5890	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.2	5.99	1.2	5.99
Van < 3500kg (Commercial < 3500kg)	07/04/2016	7	5891	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.2	6.02	1.2	6.02
Van < 3500kg (Commercial < 3500kg)	07/04/2016	7	5892	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	2.49	12.45	2.49	12.45
Van < 3500kg (Commercial < 3500kg)	07/04/2016	7	5896	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.94	9.7	1.94	9.7
Van < 3500kg (Commercial < 3500kg)	08/04/2016	7	5889	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.95	9.75	1.95	9.75
Van < 3500kg (Commercial < 3500kg)	08/04/2016	7	5893	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.89	9.44	1.89	9.44
Van < 3500kg (Commercial < 3500kg)	08/04/2016	7	5894	Citroen RELAY 35 L2H2 HDI 35 L2H2 HDI	Building Services	Diesel	1.86	9.32	1.86	9.32
Street Cleansing < 3500kg (Commercial < 3500kg)	03/05/2016	7	5945	JOHNSTON SWEEPERS ALL MODELS ALL VARIANTS	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	05/05/2016	7	5941	JOHNSTON SWEEPERS ALL MODELS ALL VARIANTS	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	05/05/2016	7	5942	JOHNSTON SWEEPERS ALL MODELS ALL VARIANTS	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	05/05/2016	7	5943	JOHNSTON SWEEPERS ALL MODELS ALL VARIANTS	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	05/05/2016	7	5944	JOHNSTON SWEEPERS ALL MODELS ALL VARIANTS	Street Sweeping Operations	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	12/05/2016	7	5997	Mercedes-Benz VITO 109 CDI 109 CDI	Pest Control Expenses	Diesel	3.69	18.45	3.69	18.45
Van < 3500kg (Commercial < 3500kg)	26/05/2016	7	6005	Citroen RELAY 35 L3H2 HDI 35 L3H2 HDI	Grounds Maintenance	Diesel	2.65	13.26	2.65	13.26
Van < 3500kg (Commercial < 3500kg)	26/05/2016	7	6006	Citroen RELAY 35 L3H2 HDI 35 L3H2 HDI	Grounds Maintenance	Diesel	2.38	11.9	2.38	11.9
Van < 3500kg (Commercial < 3500kg)	27/05/2016	7	6002	Mercedes-Benz SPRINTER 316 CDI 316 CDI LWB	Fleet	Diesel	1.82	9.12	1.82	9.12
Minibus T/Lift 17+ Seats (Minibus)	27/05/2016	7	6011	Mercedes-Benz SPRINTER 516 CDI 516 CDI D/C LWB	Public Transport Unit Drivers	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	31/05/2016	7	6023	Mercedes-Benz VITO 109 CDI 109 CDI	Pest Control Expenses	Diesel	3.03	15.16	3.03	15.16
Tipper > 3500kg (Commercial > 3500kg)	01/06/2016	7	6007	DAF TRUCKS LF LF 220 FA 14T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/06/2016	7	6008	DAF TRUCKS LF LF 220 FA 12T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/06/2016	7	6009	DAF TRUCKS LF LF 220 FA 12T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	15/06/2016	7	5818	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	15/06/2016	7	5819	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	05/07/2016	7	6045	Mercedes-Benz VITO 109 CDI 109 CDI	Home Check Scheme	Diesel	1.99	9.97	1.99	9.97
Tipper > 3500kg (Commercial > 3500kg)	07/07/2016	7	5817	DAF TRUCKS LF LF 250 FA 18T CONSTRUCT	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	04/08/2016	7	6067	Mercedes-Benz VITO 109 CDI 109 CDI	Pest Control Expenses	Diesel	1.37	6.87	1.37	6.87
Van < 3500kg (Commercial < 3500kg)	11/08/2016	7	6046	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1	5	1	5
Van < 3500kg (Commercial < 3500kg)	11/08/2016	7	6050	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.43	7.17	1.43	7.17
Van < 3500kg (Commercial < 3500kg)	11/08/2016	7	6051	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.3	6.52	1.3	6.52
Van < 3500kg (Commercial < 3500kg)	11/08/2016	7	6054	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.83	9.16	1.83	9.16
Van < 3500kg (Commercial < 3500kg)	12/08/2016	7	6047	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel				
Van < 3500kg (Commercial < 3500kg)	12/08/2016	7	6048	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.65	8.23	1.65	8.23
Van < 3500kg (Commercial < 3500kg)	12/08/2016	7	6049	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.1	5.51	1.1	5.51
Van < 3500kg (Commercial < 3500kg)	12/08/2016	7	6052	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.81	9.06	1.81	9.06
Van < 3500kg (Commercial < 3500kg)	15/08/2016	7	6053	Citroen RELAY 35 L2H2 BLUEHDI 35 L2H2 BLUEHDI	Building Services	Diesel	1.82	9.11	1.82	9.11
Van < 3500kg (Commercial < 3500kg)	24/08/2016	7	6061	Citroen BERLINGO 750 LX BLUEHDI 750 LX L2 BLUEHDI	Distribution Services	Diesel	1.78	8.91	1.78	8.91
Minibus 17+ Seats (Minibus)	08/09/2016	6	6075	Ford TRANSIT 460 ECONETIC TECH 460 H/R BUS 18 STR	Fleet	Diesel	0	0	0	0

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Street Cleansing > 3500kg (Commercial > 3500kg)	03/10/2016	6	6079	DAF TRUCKS LF LF 220 FA 15T SWEEPER	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	03/10/2016	6	6080	DAF Trucks FT CF85.430 FT CF 85.430 DAY	Street Sweeping Operations	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	03/10/2016	6	6081	DAF TRUCKS LF LF 220 FA 15T SWEEPER	Street Sweeping Operations	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	19/10/2016	6	6084	Ford TRANSIT 460 ECONETIC TECH 460 H/R BUS 18 STR	Unpaid Work Team	Diesel	0	0	0	0
Minibus 9-12 Seats (Minibus)	21/12/2016	6	6092	Ford TRANSIT 350 ECONETIC TECH 350 BUS 12 STR	Public Transport Unit Drivers	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	12/01/2017	6	6094	Mercedes-Benz SPRINTER 316 CDI 316 CDI MWB	Other Waste Collection	Diesel	3.25	16.23	3.25	16.23
Van < 3500kg (Commercial < 3500kg)	12/01/2017	6	6095	Mercedes-Benz SPRINTER 316 CDI 316 CDI MWB	Other Waste Collection	Diesel	2.62	13.11	2.62	13.11
Minibus 17+ Seats (Minibus)	07/02/2017	6	6096	Ford TRANSIT 460 TREND ECONETICTECH 460 TREND H/R BUS 18 STR	Mile End School	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	07/02/2017	6	6097	Ford TRANSIT 460 TREND ECONETICTECH 460 TREND H/R BUS 18 STR	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus 17+ Seats (Minibus)	07/02/2017	6	6098	Ford TRANSIT 460 TREND ECONETICTECH 460 TREND H/R BUS 18 STR	Public Transport Unit Drivers	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	16/02/2017	6	6104	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	16/02/2017	6	6106	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	20/02/2017	6	6099	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	20/02/2017	6	6100	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	20/02/2017	6	6101	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	20/02/2017	6	6105	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	28/02/2017	6	6102	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	28/02/2017	6	6103	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
Car (Car)	29/06/2017	6	6174	Vauxhall ASTRA TECH LINE CDTI EFLEX S/S TECH LINE CDTI ECOFLEX S/S	HRA - ASBIT	Diesel				
Car (Car)	29/06/2017	6	6175	Vauxhall ASTRA TECH LINE CDTI EFLEX S/S TECH LINE CDTI ECOFLEX S/S	HRA - ASBIT	Diesel				
Street Cleansing < 3500kg (Commercial < 3500kg)	18/07/2017	6	6172	Green Machine ELECTRIC SWEEPER	Street Sweeping Operations	Electric				
Street Cleansing < 3500kg (Commercial < 3500kg)	18/07/2017	6	6178	Green Machine ELECTRIC SWEEPER	Street Sweeping Operations	Electric				
Street Cleansing < 3500kg (Commercial < 3500kg)	18/07/2017	6	6179	Green Machine ELECTRIC SWEEPER	Street Sweeping Operations	Electric				
Street Cleansing < 3500kg (Commercial < 3500kg)	18/07/2017	6	6180	Green Machine ELECTRIC SWEEPER	Street Sweeping Operations	Electric				
Street Cleansing < 3500kg (Commercial < 3500kg)	31/07/2017	6	6184	Nilfisk NILFISK CITY RANGER	Street Sweeping Operations	Diesel				
Van < 3500kg (Commercial < 3500kg)	01/09/2017	5	6743	RENAULT KANGOO MAXI I LL21 ZE BUSINESS		Electric				
Minibus T/Lift 17+ Seats (Minibus)	28/11/2017	5	6623	MERCEDES SPRINTER 514CDI	Public Transport Unit Drivers	Diesel				
Minibus T/Lift 13-16 Seats (Minibus)	13/12/2017	5	6315	FIAT DUCATO 35 CRC H/R MULTIJET II	Orchard Brae School	Diesel	1.11	5.57	1.11	5.57
Line Painter > 3500kg (Commercial > 3500kg)	03/01/2018	5	6205	DAF TRUCKS LF 250 FA 14T	Roads Maintenance	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	26/03/2018	5	6209	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	27/03/2018	5	6216	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	27/03/2018	5	6217	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	27/03/2018	5	6218	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	28/03/2018	5	6210	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	28/03/2018	5	6214	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	28/03/2018	5	6215	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	27/04/2018	5	6219	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	02/05/2018	5	6211	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	02/05/2018	5	6212	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	02/05/2018	5	6213	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	02/05/2018	5	6220	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	24/10/2018	4	7129	RENAULT KANGOO MAXI I LL21 ZE BUSINESS	Fleet	Electric				
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6410	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.79	8.95	1.79	8.95
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6411	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.65	8.26	1.65	8.26
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6412	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.78	8.88	1.78	8.88
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6413	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1	4.99	1	4.99
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6414	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	0.96	4.81	0.96	4.81
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6415	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.1	10.52	2.1	10.52
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6416	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.2	6.01	1.2	6.01
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6417	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.9	9.5	1.9	9.5
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6418	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.39	6.97	1.39	6.97
Van < 3500kg (Commercial < 3500kg)	08/02/2019	4	6419	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.78	8.89	1.78	8.89
Van < 3500kg (Commercial < 3500kg)	21/02/2019	4	6442	RENAULT MASTER LHL35 BUSINESS DCI	Building Services	Diesel	2.13	10.67	2.13	10.67
Van < 3500kg (Commercial < 3500kg)	21/02/2019	4	6443	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.43	12.16	2.43	12.16
Van < 3500kg (Commercial < 3500kg)	21/02/2019	4	6444	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.68	8.38	1.68	8.38
Van < 3500kg (Commercial < 3500kg)	21/02/2019	4	6445	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	8.59	42.99	8.59	42.99

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Van < 3500kg (Commercial < 3500kg)	21/02/2019	4	6446	RENAULT MASTER LHL35 BUSINESS DCI	Building Services	Diesel	2.09	10.44	2.09	10.44
Van < 3500kg (Commercial < 3500kg)	22/02/2019	4	6449	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.81	9.05	1.81	9.05
Van < 3500kg (Commercial < 3500kg)	22/02/2019	4	6450	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.59	7.94	1.59	7.94
Van < 3500kg (Commercial < 3500kg)	22/02/2019	4	6452	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	5.17	25.84	5.17	25.84
Van < 3500kg (Commercial < 3500kg)	28/02/2019	4	6455	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.55	12.73	2.55	12.73
Van < 3500kg (Commercial < 3500kg)	28/02/2019	4	6457	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.17	5.87	1.17	5.87
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6448	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel				
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6451	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.28	6.41	1.28	6.41
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6453	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.33	6.65	1.33	6.65
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6454	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.83	9.18	1.83	9.18
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6456	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.33	6.67	1.33	6.67
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6458	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.26	6.33	1.26	6.33
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6459	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.06	10.31	2.06	10.31
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6460	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	0.81	4.08	0.81	4.08
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6461	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.7	8.53	1.7	8.53
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6462	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.51	7.54	1.51	7.54
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6463	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.97	9.86	1.97	9.86
Van < 3500kg (Commercial < 3500kg)	01/03/2019	4	6464	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	3.87	19.37	3.87	19.37
Van < 3500kg (Commercial < 3500kg)	06/03/2019	4	6447	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.16	10.83	2.16	10.83
Van < 3500kg (Commercial < 3500kg)	06/03/2019	4	6465	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.2	5.99	1.2	5.99
Van < 3500kg (Commercial < 3500kg)	06/03/2019	4	6466	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	3.15	15.76	3.15	15.76
Van < 3500kg (Commercial < 3500kg)	06/03/2019	4	6467	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	0.92	4.6	0.92	4.6
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6468	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.31	11.58	2.31	11.58
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6469	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	3.04	15.24	3.04	15.24
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6470	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	3.15	15.77	3.15	15.77
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6471	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.08	5.42	1.08	5.42
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6472	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.25	6.24	1.25	6.24
Van < 3500kg (Commercial < 3500kg)	07/03/2019	4	6473	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.04	10.22	2.04	10.22
Van < 3500kg (Commercial < 3500kg)	08/03/2019	4	6474	RENAULT KANGOO MAXI I LL21 ZE BUSINESS	Other Waste Collection	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	08/03/2019	4	6475	RENAULT KANGOO MAXI I LL21 ZE BUSINESS	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	08/03/2019	4	6476	RENAULT KANGOO MAXI I LL21 ZE BUSINESS	Grounds Maintenance	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	08/03/2019	4	6477	RENAULT KANGOO MAXI I LL21 ZE BUSINESS	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	20/03/2019	4	6478	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.92	9.62	1.92	9.62
Van < 3500kg (Commercial < 3500kg)	20/03/2019	4	6479	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.1	5.52	1.1	5.52
Van < 3500kg (Commercial < 3500kg)	20/03/2019	4	6480	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.23	6.17	1.23	6.17
Van < 3500kg (Commercial < 3500kg)	20/03/2019	4	6481	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	4.32	21.62	4.32	21.62
Van < 3500kg (Commercial < 3500kg)	21/03/2019	4	6482	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	3	15.02	3	15.02
Van < 3500kg (Commercial < 3500kg)	21/03/2019	4	6483	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.6	8.02	1.6	8.02
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6484	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.6	7.99	1.6	7.99
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6485	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel				
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6486	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.56	7.8	1.56	7.8
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6487	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.29	6.44	1.29	6.44
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6488	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel				
Van < 3500kg (Commercial < 3500kg)	26/03/2019	4	6489	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.38	6.92	1.38	6.92
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6490	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.81	9.04	1.81	9.04
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6491	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	2.44	12.21	2.44	12.21
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6492	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.5	7.5	1.5	7.5
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6493	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.63	8.15	1.63	8.15
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6494	RENAULT MASTER LHL35 BUSINESS DCI	Building Services	Diesel	1.56	7.8	1.56	7.8
Van < 3500kg (Commercial < 3500kg)	27/03/2019	4	6495	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.08	5.42	1.08	5.42
Van < 3500kg (Commercial < 3500kg)	28/03/2019	4	6496	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	2.84	14.2	2.84	14.2
Van < 3500kg (Commercial < 3500kg)	28/03/2019	4	6497	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	1.93	9.66	1.93	9.66
Van < 3500kg (Commercial < 3500kg)	28/03/2019	4	6498	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	4.29	21.46	4.29	21.46
Van < 3500kg (Commercial < 3500kg)	28/03/2019	4	6499	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.88	9.39	1.88	9.39
Van < 3500kg (Commercial < 3500kg)	29/03/2019	4	6500	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	4.67	23.35	4.67	23.35
Van < 3500kg (Commercial < 3500kg)	29/03/2019	4	6501	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	2.22	11.11	2.22	11.11

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Van < 3500kg (Commercial < 3500kg)	29/03/2019	4	6502	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.54	7.69	1.54	7.69
Van T/Lift < 3500kg Dble Axle (Commercial < 3500kg)	01/04/2019	4	6503	DAF TRUCKS LF LF 180 FA 08T	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6505	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Fleet Hire	Diesel	0.79	3.95	0.79	3.95
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6506	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	1.82	9.09	1.82	9.09
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6507	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel				
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6508	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel				
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6509	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	0.85	4.27	0.85	4.27
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6510	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	0.9	4.48	0.9	4.48
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6511	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	2.09	10.46	2.09	10.46
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6512	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	2.1	10.53	2.1	10.53
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6513	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Grounds Maintenance	Diesel	0.82	4.13	0.82	4.13
Van < 3500kg (Commercial < 3500kg)	16/04/2019	4	6514	RENAULT MASTER MML35 BUSINESS DCI	Building Services	Diesel	1.53	7.65	1.53	7.65
Van < 3500kg (Commercial < 3500kg)	22/04/2019	4	6515	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Operations (ICT)	Diesel	0.24	1.23	0.24	1.23
Van < 3500kg (Commercial < 3500kg)	22/04/2019	4	6516	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Operations (ICT)	Diesel	0.16	0.81	0.16	0.81
Van < 3500kg (Commercial < 3500kg)	22/04/2019	4	6517	RENAULT KANGOO ML19 BUSINESS ENERGY DCI	Operations (ICT)	Diesel	0.25	1.25	0.25	1.25
Van < 3500kg (Commercial < 3500kg)	24/04/2019	4	6522	RENAULT MASTER LHL35 BUSINESS DCI	Building Services	Diesel	1.48	7.42	1.48	7.42
Van < 3500kg (Commercial < 3500kg)	25/04/2019	4	6518	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.09	5.45	1.09	5.45
Van < 3500kg (Commercial < 3500kg)	25/04/2019	4	6519	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.3	6.51	1.3	6.51
Van < 3500kg (Commercial < 3500kg)	25/04/2019	4	6520	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.72	13.59	2.72	13.59
Van < 3500kg (Commercial < 3500kg)	25/04/2019	4	6521	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.77	8.84	1.77	8.84
Van < 3500kg (Commercial < 3500kg)	25/04/2019	4	6523	RENAULT TRAFIC LL29 BUSINESS DCI CREW	Other Waste Collection	Diesel	0.77	3.84	0.77	3.84
Van < 3500kg (Commercial < 3500kg)	29/04/2019	4	6524	RENAULT TRAFIC LL29 BUSINESS DCI	Operations (ICT)	Diesel	0.35	1.75	0.35	1.75
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6525	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.43	2.13	0.43	2.13
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6526	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.63	3.14	0.63	3.14
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6527	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.77	3.84	0.77	3.84
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6528	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.55	2.77	0.55	2.77
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6529	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	0.93	4.68	0.93	4.68
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6530	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	2.14	10.71	2.14	10.71
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6531	RENAULT MASTER LL35 BUSINESS DCI DROPSIDE	Building Services	Diesel	3.52	17.59	3.52	17.59
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6532	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.39	6.94	1.39	6.94
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6533	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.59	2.96	0.59	2.96
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6534	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.63	8.14	1.63	8.14
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6535	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.56	7.81	1.56	7.81
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6536	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.54	2.68	0.54	2.68
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6537	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	1.07	5.34	1.07	5.34
Van < 3500kg (Commercial < 3500kg)	30/04/2019	4	6538	RENAULT TRAFIC LL29 BUSINESS DCI	Trading Standards	Diesel	0.45	2.27	0.45	2.27
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6539	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	0.87	4.37	0.87	4.37
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6540	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.62	8.09	1.62	8.09
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6541	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.39	6.95	1.39	6.95
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6542	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.31	11.54	2.31	11.54
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6543	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.86	14.32	2.86	14.32
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6544	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.34	6.7	1.34	6.7
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6545	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	3.49	17.44	3.49	17.44
Van < 3500kg (Commercial < 3500kg)	07/05/2019	4	6549	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.83	9.14	1.83	9.14
Van < 3500kg (Commercial < 3500kg)	09/05/2019	4	6546	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	4.07	20.38	4.07	20.38
Van < 3500kg (Commercial < 3500kg)	09/05/2019	4	6547	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.27	6.36	1.27	6.36
Van < 3500kg (Commercial < 3500kg)	09/05/2019	4	6548	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.89	9.47	1.89	9.47
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6550	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.78	8.91	1.78	8.91
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6551	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	0.86	4.3	0.86	4.3
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6552	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.86	14.31	2.86	14.31
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6553	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.07	5.34	1.07	5.34
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6554	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.27	6.37	1.27	6.37
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6555	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.62	13.13	2.62	13.13
Minibus 9-12 Seats (Minibus)	17/05/2019	4	6556	RENAULT TRAFIC LL29 BUSINESS DCI	Other Waste Collection	Diesel	1.25	8.78	1.25	8.78
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6557	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.18	10.92	2.18	10.92
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6558	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.23	6.17	1.23	6.17

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6560	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Harlaw Road Playing Fields	Diesel	0.87	4.35	0.87	4.35
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6561	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Architecture Team	Diesel				
Van < 3500kg (Commercial < 3500kg)	17/05/2019	4	6563	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Fleet Hire	Diesel	0.9	4.52	0.9	4.52
RCV 2 Axle (Commercial > 3500kg)	01/06/2019	4	6559	DAF TRUCKS LF LF 250 FA 16T	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	01/06/2019	4	6591	DAF TRUCKS LF LF 250 FA 16T	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	06/06/2019	4	6564	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	2.35	11.75	2.35	11.75
Van < 3500kg (Commercial < 3500kg)	06/06/2019	4	6565	RENAULT TRAFIC LL29 BUSINESS DCI	Building Services	Diesel	1.41	7.06	1.41	7.06
Van < 3500kg (Commercial < 3500kg)	07/06/2019	4	6566	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	1.4	7.03	1.4	7.03
Van < 3500kg (Commercial < 3500kg)	07/06/2019	4	6567	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	1.74	8.72	1.74	8.72
Van < 3500kg (Commercial < 3500kg)	07/06/2019	4	6568	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	1.46	7.3	1.46	7.3
Van < 3500kg (Commercial < 3500kg)	07/06/2019	4	6569	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	3.09	15.47	3.09	15.47
Van < 3500kg (Commercial < 3500kg)	11/06/2019	4	6570	RENAULT KANGOO ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	2.08	10.39	2.08	10.39
Van < 3500kg (Commercial < 3500kg)	11/06/2019	4	6571	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	1.3	6.53	1.3	6.53
Van < 3500kg (Commercial < 3500kg)	11/06/2019	4	6572	RENAULT KANGOO ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.87	4.36	0.87	4.36
Van < 3500kg (Commercial < 3500kg)	12/06/2019	4	6573	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.11	0.57	0.11	0.57
Van < 3500kg (Commercial < 3500kg)	13/06/2019	4	6574	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	2.4	12.01	2.4	12.01
Van < 3500kg (Commercial < 3500kg)	13/06/2019	4	6575	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	1.08	5.39	1.08	5.39
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6576	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	1.82	9.1	1.82	9.1
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6577	RENAULT TRAFIC LL29 BUSINESS DCI	Roads Maintenance - Structures	Diesel	0.03	0.15	0.03	0.15
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6578	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.58	2.89	0.58	2.89
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6579	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.64	3.22	0.64	3.22
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6580	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Fleet Hire	Diesel	0.55	2.74	0.55	2.74
Van < 3500kg (Commercial < 3500kg)	14/06/2019	4	6581	RENAULT KANGOO I ML20 BUSINESS	Car Parks	Electric	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	14/06/2019	4	6582	DAF TRUCKS LF LF 180 FA 08T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	14/06/2019	4	6583	DAF TRUCKS LF LF 210 FA 12T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	14/06/2019	4	6584	DAF TRUCKS LF LF 210 FA 12T	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	17/06/2019	4	6586	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	1.9	9.49	1.9	9.49
Van < 3500kg (Commercial < 3500kg)	18/06/2019	4	6588	RENAULT MASTER ML35 BUSINESS ENERGY DCI DROPSIDE	Building Services	Diesel	2.1	10.5	2.1	10.5
Van < 3500kg (Commercial < 3500kg)	19/06/2019	4	6587	Renault KANGOO ML19 BUSINESS ENERGYDCI ML19 BUSINESS ENERGY DCI	Fleet	Diesel				
Van < 3500kg (Commercial < 3500kg)	19/06/2019	4	6589	RENAULT KANGOO ML19 BUSINESS ENERGY DCI	Roads Maintenance	Diesel	0.55	2.74	0.55	2.74
Van < 3500kg (Commercial < 3500kg)	20/06/2019	4	6590	RENAULT KANGOO I ML20 BUSINESS	Car Parks	Electric	0	0	0	0
Car (Car)	28/06/2019	4	3919	BMW 7 SERIES 730LD	Civic Support	Diesel	0.58	2.9	0.58	2.9
Van < 3500kg - Twin Rear (Commercial < 3500kg)	01/07/2019	4	6593	RENAULT MASTER LHL35TW BUSINESS ENERGY DCI	Fleet	Diesel	0.56	2.82	0.56	2.82
Van < 3500kg (Commercial < 3500kg)	01/07/2019	4	6594	RENAULT MASTER LHL35TW BUSINESS ENERGY DCI	Fleet	Diesel	0.59	2.96	0.59	2.96
Van < 3500kg (Commercial < 3500kg)	01/07/2019	4	6595	RENAULT KANGOO I ML20 BUSINESS	Car Parks	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	05/07/2019	4	6597	RENAULT MASTER LHL35 BUSINESS DCI	Grounds Maintenance	Diesel	1.52	7.63	1.52	7.63
Van < 3500kg (Commercial < 3500kg)	05/07/2019	4	6598	RENAULT MASTER LHL35 BUSINESS DCI	Grounds Maintenance	Diesel	0.92	4.59	0.92	4.59
Van < 3500kg (Commercial < 3500kg)	09/07/2019	4	6599	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Tree Squad	Diesel	1.63	8.18	1.63	8.18
Van < 3500kg - Twin Rear (Commercial < 3500kg)	09/07/2019	4	6600	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Tree Squad	Diesel	1.82	9.12	1.82	9.12
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	16/07/2019	4	6601	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.23	6.14	1.23	6.14
Tipper < 3500kg (Commercial < 3500kg)	17/07/2019	4	6602	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.97	9.88	1.97	9.88
Tipper < 3500kg (Commercial < 3500kg)	17/07/2019	4	6603	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.88	9.43	1.88	9.43
Van < 3500kg (Commercial < 3500kg)	17/07/2019	4	6604	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.12	10.61	2.12	10.61
Van < 3500kg (Commercial < 3500kg)	17/07/2019	4	6605	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.01	10.07	2.01	10.07
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	23/07/2019	4	6616	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.6	7.99	1.6	7.99
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	23/07/2019	4	6617	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.42	7.1	1.42	7.1
Dropside < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	23/07/2019	4	6618	RENAULT MASTER LLL35TW BUSINESS DCI DROPSIDE	Roads Maintenance	Diesel	2.38	11.93	2.38	11.93
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	29/07/2019	4	6606	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.27	11.36	2.27	11.36
Van < 3500kg (Commercial < 3500kg)	29/07/2019	4	6621	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.18	5.89	1.18	5.89
Van < 3500kg (Commercial < 3500kg)	29/07/2019	4	6622	RENAULT MASTER MML35 BUSINESS DCI	Roads Maintenance	Diesel	0.97	4.87	0.97	4.87
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	30/07/2019	4	6607	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.62	13.1	2.62	13.1
Dropside < 3500kg (Commercial < 3500kg)	30/07/2019	4	6619	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Grounds Maintenance	Diesel	3.21	16.08	3.21	16.08
Dropside < 3500kg (Commercial < 3500kg)	30/07/2019	4	6620	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Street Sweeping Operations	Diesel	2.12	10.61	2.12	10.61
Van < 3500kg (Commercial < 3500kg)	12/08/2019	4	6608	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.04	10.19	2.04	10.19
Van < 3500kg (Commercial < 3500kg)	12/08/2019	4	6609	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.34	6.71	1.34	6.71
Tipper < 3500kg (Commercial < 3500kg)	14/08/2019	4	6625	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Street Sweeping Operations	Diesel	2.07	10.38	2.07	10.38

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
Tipper < 3500kg (Commercial < 3500kg)	14/08/2019	4	6626	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Street Sweeping Operations	Diesel	3.1	15.5	3.1	15.5
Dropside < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	19/08/2019	4	6610	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.58	7.91	1.58	7.91
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	19/08/2019	4	6611	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.36	11.79	2.36	11.79
Van < 3500kg (Commercial < 3500kg)	20/08/2019	3	6612	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.75	8.76	1.75	8.76
Van < 3500kg (Commercial < 3500kg)	20/08/2019	3	6613	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	3.46	17.32	3.46	17.32
Van < 3500kg (Commercial < 3500kg)	28/08/2019	3	6614	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.3	11.49	2.3	11.49
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	28/08/2019	3	6615	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.59	7.97	1.59	7.97
Van < 3500kg (Commercial < 3500kg)	29/08/2019	3	6628	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.65	13.25	2.65	13.25
Van < 3500kg (Commercial < 3500kg)	30/08/2019	3	6629	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.35	6.75	1.35	6.75
Van < 3500kg (Commercial < 3500kg)	30/08/2019	3	6630	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.73	8.65	1.73	8.65
Van < 3500kg (Commercial < 3500kg)	30/08/2019	3	6652	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.43	7.17	1.43	7.17
Van < 3500kg (Commercial < 3500kg)	30/08/2019	3	6653	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	0.93	4.66	0.93	4.66
Van < 3500kg (Commercial < 3500kg)	30/08/2019	3	6655	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.44	7.23	1.44	7.23
Van < 3500kg (Commercial < 3500kg)	03/09/2019	3	6631	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.48	12.42	2.48	12.42
Van < 3500kg (Commercial < 3500kg)	03/09/2019	3	6632	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.7	8.52	1.7	8.52
Tipper < 3500 kg Dble Axle Twin Tyre (Commercial < 3500kg)	04/09/2019	3	6633	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.81	9.07	1.81	9.07
Tipper < 3500kg (Commercial < 3500kg)	04/09/2019	3	6656	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Street Sweeping Operations	Diesel	2.98	14.93	2.98	14.93
Tipper < 3500kg (Commercial < 3500kg)	04/09/2019	3	6657	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Street Sweeping Operations	Diesel	2.68	13.4	2.68	13.4
Van < 3500kg (Commercial < 3500kg)	09/09/2019	3	6634	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.2	11.02	2.2	11.02
Van < 3500kg - Twin Rear (Commercial < 3500kg)	09/09/2019	3	6658	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	0.97	4.88	0.97	4.88
Tipper < 3500kg (Commercial < 3500kg)	11/09/2019	3	6635	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.66	8.29	1.66	8.29
Tipper < 3500kg (Commercial < 3500kg)	11/09/2019	3	6636	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.75	8.77	1.75	8.77
Van < 3500kg (Commercial < 3500kg)	16/09/2019	3	6637	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.55	7.74	1.55	7.74
Tipper < 3500kg (Commercial < 3500kg)	16/09/2019	3	6638	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.87	14.38	2.87	14.38
Van < 3500kg (Commercial < 3500kg)	16/09/2019	3	6639	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.09	10.45	2.09	10.45
Tipper < 3500kg (Commercial < 3500kg)	16/09/2019	3	6663	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	2.35	11.78	2.35	11.78
Van < 3500kg (Commercial < 3500kg)	19/09/2019	3	6640	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.47	12.37	2.47	12.37
Van < 3500kg (Commercial < 3500kg)	19/09/2019	3	6641	Renault MASTER MLL35TW DCI MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.84	9.21	1.84	9.21
Van < 3500kg (Commercial < 3500kg)	19/09/2019	3	6642	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.28	6.38	1.28	6.38
Tipper < 3500kg (Commercial < 3500kg)	20/09/2019	3	6643	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.49	7.48	1.49	7.48
Van < 3500kg (Commercial < 3500kg)	20/09/2019	3	6644	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.81	9.04	1.81	9.04
Van < 3500kg (Commercial < 3500kg)	23/09/2019	3	6645	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.77	8.86	1.77	8.86
Tipper < 3500kg (Commercial < 3500kg)	23/09/2019	3	6646	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.98	14.92	2.98	14.92
Van < 3500kg (Commercial < 3500kg)	26/09/2019	3	6647	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.64	13.22	2.64	13.22
Tipper < 3500kg (Commercial < 3500kg)	26/09/2019	3	6648	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.65	8.25	1.65	8.25
Van < 3500kg (Commercial < 3500kg)	26/09/2019	3	6649	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	1.54	7.71	1.54	7.71
Tipper < 3500kg (Commercial < 3500kg)	27/09/2019	3	6664	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Grounds Maintenance	Diesel				
Tipper < 3500kg (Commercial < 3500kg)	30/09/2019	3	6665	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Grounds Maintenance	Diesel	2.11	10.55	2.11	10.55
Van < 3500kg (Commercial < 3500kg)	30/09/2019	3	6669	Renault MASTER MLL35TW DCI MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.42	7.11	1.42	7.11
Van < 3500kg (Commercial < 3500kg)	30/09/2019	3	6670	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	1.17	5.84	1.17	5.84
Van < 3500kg (Commercial < 3500kg)	07/10/2019	3	6650	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2.28	11.43	2.28	11.43
Tipper < 3500kg (Commercial < 3500kg)	07/10/2019	3	6671	RENAULT MASTER MLL35TW DCI TIPPER	Roads Maintenance	Diesel	3.86	19.33	3.86	19.33
Van < 3500kg (Commercial < 3500kg)	07/10/2019	3	6672	Renault MASTER MLL35TW DCI MLL35TW DCI TIPPER	Roads Maintenance	Diesel	3.31	16.59	3.31	16.59
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6673	NISSAN NV200 E ACENTA	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6674	NISSAN NV200 E ACENTA	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6675	NISSAN NV200 E ACENTA	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6676	NISSAN NV200 E ACENTA	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6677	NISSAN NV200 E ACENTA	Roads Maintenance	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	09/10/2019	3	6678	NISSAN NV200 E ACENTA	Countryside Rangers	Electric	0	0	0	0
Tractor Large (Tractor)	09/10/2019	3	6679	Valtra Model 34A MR18	Tree Squad	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	16/10/2019	3	6682	RENAULT MASTER MLL35TW DCI TIPPER	Grounds Maintenance	Diesel	2	10	2	10
Minibus T/Lift 13-16 Seats (Minibus)	18/11/2020	5	6705	MERCEDES SPRINTER 514CDI	Public Transport Unit Drivers	Diesel	0	0	0	0
Minibus T/Lift 13-16 Seats (Minibus)	03/01/2020	3	6711	MERCEDES SPRINTER 514 CDI	Public Transport Unit Drivers	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	06/01/2020	3	6709	RENAULT MASTER LHL35 BUSINESS DCI	Other Waste Collection	Diesel	2.42	12.09	2.42	12.09
Van < 3500kg (Commercial < 3500kg)	27/02/2020	3	6744	RENAULT MASTER LLL35TW BUSINESS ENERGY DCI C/C	Grounds Maintenance	Diesel	4.52	22.61	4.52	22.61
RCV 3 Axle (Commercial > 3500kg)	03/03/2020	3	6745	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
RCV 3 Axle (Commercial > 3500kg)	03/03/2020	3	6746	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	03/03/2020	3	6747	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	03/03/2020	3	6748	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
Car (Car)	05/03/2020	3	6739	BMW I3 I3 120AH		Electric				
Car (Car)	05/03/2020	3	6740	BMW I3 I3 120AH		Electric				
Car (Car)	05/03/2020	3	6741	BMW I3 I3 120AH		Electric				
Car (Car)	05/03/2020	3	6742	BMW I3 I3 120AH		Electric				
RCV 3 Axle (Commercial > 3500kg)	11/03/2020	3	6749	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	11/03/2020	3	6750	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	11/03/2020	3	6751	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	25/03/2020	3	6786	RENAULT MASTER I SL31 BUSINESS	Grounds Maintenance	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	25/03/2020	3	6787	RENAULT MASTER I SL31 BUSINESS	Building Services	Electric	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/04/2020	3	6758	DAF TRUCKS LF LF 280 FA 18T	Roads Maintenance	Diesel	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/04/2020	3	6759	DAF TRUCKS LF LF 280 FA 18T	Roads Maintenance	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	11/05/2020	4	6768	DAF TRUCKS LF LF 250 FA 16T	Street Sweeping Operations	Diesel	0	0	0	0
Tractor Large (Tractor)	03/07/2020	3	6833	Massey Ferguson Model 4708	Grounds Maintenance	Diesel	0	0	0	0
Tractor Large (Tractor)	03/07/2020	3	6834	Massey Ferguson Model 4708	Grounds Maintenance	Diesel	0	0	0	0
Tractor Large (Tractor)	03/07/2020	3	6854	Massey Ferguson Model 4708	Grounds Maintenance	Diesel	0	0	0	0
Car (Car)	07/07/2020	3	6835	HYUNDAI NEXO PREMIUM SE	Civic Support	Electric				
Car (Car)	07/07/2020	3	6836	HYUNDAI NEXO PREMIUM SE		Electric				
Car (Car)	07/07/2020	3	6837	HYUNDAI NEXO PREMIUM SE		Electric				
Car (Car)	07/07/2020	3	6838	HYUNDAI NEXO PREMIUM SE		Electric				
Tractor Large (Tractor)	02/09/2020	3	6871	Massey Ferguson Model 4708	Grounds Maintenance	Diesel	0	0	0	0
Tractor Large (Tractor)	02/09/2020	3	6872	Massey Ferguson Model 4708	Grounds Maintenance	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	01/10/2020	2	6897	DAF TRUCKS LF LF 250 FA 16T	Roads Maintenance	Diesel	0	0	0	0
Loading Shovel (Tractor)	02/10/2020	2	6899	JCB 3CX 14MFWM 3CX 14MFWM	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	19/11/2020	2	6930	FORD TRANSIT 350 TREND P/V ECOBLUE		Diesel	464.64	2324.15	464.64	2324.15
Specially Fitted Vehicle > 3500kg (Commercial > 3500kg)	23/11/2020	2	6915	DAF TRUCKS CF 410 FAT	Roads Maintenance	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	23/11/2020	2	6918	RENAULT MASTER LL35 BUSINESS DCI	Art Gallery	Diesel	0.51	2.53	0.51	2.53
Van < 3500kg (Commercial < 3500kg)	25/11/2020	2	6919	RENAULT ZOE I ICONIC	Car Parks	Electric				
Van < 3500kg (Commercial < 3500kg)	25/11/2020	2	6920	RENAULT ZOE I ICONIC	Car Parks	Electric	0	0	0	0
Car (Car)	12/01/2021	2	6924	MITSUBISHI OUTLANDER PHEV DESIGN	Gilbert Road Residential Unit	Electric	0.71	3.55	0.71	3.55
Car (Car)	12/01/2021	2	6925	MITSUBISHI OUTLANDER PHEV DESIGN	Marchburn Children's Home	Electric				
Line Painter > 3500kg (Commercial > 3500kg)	15/01/2021	2	6929	RM1100 RM1100	Roads Maintenance	Diesel				
Car (Car)	09/02/2021	2	6944	MITSUBISHI OUTLANDER PHEV DESIGN	Marchburn Children's Home	Electric	0.85	4.28	0.85	4.28
Van < 3500kg (Commercial < 3500kg)	31/03/2021	2	7031	RENAULT KANGOO I ML20 BUSINESS	Grounds Maintenance	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	31/03/2021	2	7032	RENAULT KANGOO I ML20 BUSINESS	Fleet	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	31/03/2021	2	7033	RENAULT KANGOO I ML20 BUSINESS	Roads Maintenance	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	31/03/2021	2	7034	RENAULT KANGOO I ML20 BUSINESS	Building Services	Electric	0	0	0	0
Tipper > 3500kg (Commercial > 3500kg)	01/04/2021	2	6997	DAF TRUCKS CF 410 FAT CONSTRUCTION	Roads Maintenance	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	01/04/2021	2	7030	DAF TRUCKS LF LF 250 FA 16T	Other Waste Collection	Diesel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	01/04/2021	2	7035	RENAULT KANGOO I ML20 BUSINESS	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	01/04/2021	2	7036	RENAULT KANGOO I ML20 BUSINESS	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	01/04/2021	2	7037	RENAULT KANGOO I ML20 BUSINESS	Building Services	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	01/04/2021	2	7038	RENAULT KANGOO I ML20 BUSINESS	Building Services	Electric	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	12/04/2021	3	7039	Mercedes EMOSS 2620	For Disposal	Electric	0	0	0	0
Minibus T/Lift 13-16 Seats (Minibus)	26/05/2021	2	7064	Fiat DUCATO 42 MAXI MULTIJET POWER 42 MAXI C/C MULTIJET POWER	Public Transport Unit Drivers	Electric	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7042	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7043	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7044	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7045	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7046	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7047	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7048	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7049	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7050	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0

Asset Type Name	Date In Service	Vehicle Age in Years	Fleet Number	Make Model Derivative	Current Allocation.Organisation Structure	Fuel Type	Annual Distance Carbon Footprint	Life Distance Carbon Footprint	Projected Annual Distance Carbon Footprint	Projected Life Distance Carbon Footprint
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7051	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7052	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 3 Axle (Commercial > 3500kg)	06/07/2021	2	7053	MERCEDES ECONIC 2630L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	06/07/2021	2	7054	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	06/07/2021	2	7055	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	06/07/2021	2	7056	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	06/07/2021	2	7057	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	06/07/2021	2	7058	MERCEDES ECONIC 1830L	Other Waste Collection	Diesel	0	0	0	0
Van T/Lift < 3500kg Dble Axle (Commercial < 3500kg)	12/07/2021	2	7074	RENAULT MASTER I MM35 BUSINESS	Library Property and Admin	Electric	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	20/07/2021	2	7059	DAF TRUCKS LF LF 250 FA 12T	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	20/07/2021	2	7060	DAF TRUCKS LF LF 250 FA 12T	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	20/07/2021	2	7061	DAF TRUCKS LF LF 250 FA 12T	Other Waste Collection	Diesel	0	0	0	0
RCV 2 Axle (Commercial > 3500kg)	20/07/2021	2	7062	DAF TRUCKS LF LF 250 FA 12T	Other Waste Collection	Diesel	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	02/08/2021	2	7072	DAF TRUCKS LF LF 250 FA 18T	Roads Maintenance	Diesel	0	0	0	0
Street Cleansing < 3500kg (Commercial < 3500kg)	03/08/2021	2	7073	BUCHER V20E Electric Compact Sweeper	Street Sweeping Operations	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	23/08/2021	6	7099	NISSAN NV200 E ACENTA RAPID PLUS	Other Waste Collection	Electric	0	0	0	0
Street Cleansing > 3500kg (Commercial > 3500kg)	01/09/2021	14	7100	VOLVO FE FE240 4X2 L1H1 DAY	Roads Maintenance	Diesel				
Street Cleansing > 3500kg (Commercial > 3500kg)	05/10/2021	4	7122	DAF TRUCKS LF LF 250 FA 18T	Roads Maintenance	Diesel	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	08/10/2021	1	7124	RENAULT MASTER I ML35 BUSINESS	Building Services	Electric	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	08/10/2021	1	7125	RENAULT MASTER I ML35 BUSINESS	Building Services	Electric	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	08/10/2021	1	7126	RENAULT MASTER I ML35 BUSINESS	Building Services	Electric				
RCV 3 Axle (Commercial > 3500kg)	09/02/2022	5	7153	Mercedes Econic 2		Diesel				
RCV 3 Axle (Commercial > 3500kg)	11/02/2022	1	7152	MERCEDES ECONIC 2627L	Other Waste Collection	Irogen Fuel	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	15/03/2022	1	7166	RENAULT MASTER I MM35 BUSINESS	Fleet Hire	Electric	0	0	0	0
Van < 3500kg (Commercial < 3500kg)	15/03/2022	1	7167	RENAULT MASTER I MM35 BUSINESS	Fleet Hire	Electric				
Dropside < 3500kg (Commercial < 3500kg)	04/07/2022	1	7184	RENAULT MASTER I ML35 BUSINESS	Fleet	Electric	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	04/07/2022	1	7185	RENAULT MASTER I ML35 BUSINESS	Fleet	Electric	0	0	0	0
Dropside < 3500kg (Commercial < 3500kg)	04/07/2022	1	7186	RENAULT MASTER I ML35 BUSINESS	Fleet	Electric	0	0	0	0
Tractor Large (Tractor)		1	7137	Farmtrac Farmtrac Farmtrac	Tree Squad	Gasoil				

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Appendix B

Phase 2 Fleet Replacement Programme 2022/23

The list below is the Phase 3 Fleet Replacement Programme for 2022/2023 subject to further reviews during 2022/2023.

Asset Type to be Purchased	Number	Estimated Prices to Replace			
		H2	EV	Diesel	
Gully tankers	4	<p>These are specialised vehicles which will require competitive tendering at which stage costs and fuel options will become known.</p> <p>Options are dependent upon infrastructure and technology available. Fleet will engage with suppliers to ensure best value is achieved by the procurement route selected. Full details will be included within business cases.</p> <p>The developing technology and infrastructure is a complex evolving arena which is under constant review by Fleet in order to inform procurement options.</p> <p>It is anticipated that this procurement can be funded from the existing Fleet Replacement line within the Capital Programme.</p>			
12T Tipper	2				
14T White Liner	1				
18T Hook Lift	2				
18T Tipper	2				
Cars (assorted)	6				
26T Gritter	4				
26T Tipper	1				
Minibus (assorted)	8				
Tractors (Large – assorted including excavators)	6				
Current list price, recent procurement costs or industry estimates (2022)					
Refuse Carrying Vehicle (RCV)	10	£450,000 (£4,500,000)	£265,000 (£2,650,000)	£144,000 (£1,440,000)	
3.5T Crew Cab / Work Cab Tippers	9	Not Available*	Not Available	£40,000 (£360,000)	
3.5T Crew Cab / Work Cab Drop Side	6	Not Available*	Not Available	£40,000 (£240,000)	
3.5T Drop Side	2	Unknown*	£58,400 (£116,800)	£35,000 (£70,000)	
3.5T High Side Tippers	2	Unknown*	£61,000 £122,000)	£33,000 (£66,000)	
3.5T Panel Van	10	Unknown*	£61,000	£35,000	

			(£610,000)	(£350,000)	
4x4 Pick Up	1	Unknown*	Unknown	Unknown	
4x4 Pick Up Double Cab	1	Unknown*	Unknown	Unknown	
Luton Panel Van	4	Unknown*	£61,800 (£247,200)	£35,000 (£150,000)	
Small Van	15	Unknown*	£23,333 (£349,995)	£13,250 (£198,750)	
Tele-handler	2	Unknown*	£60,000 (£120,000)	£34,000 (£68,000)	
		Unknown* - whether this technology is available, is suitable and at what cost requires to be investigated			
Total Vehicles	98				
Total spend has not been included as this is a variable amount dependent on infrastructure and technology available					
Plant	A Competitive Tender has been completed in respect of replacement smaller plant which is estimated that upon award to the various bidders for various plant will be £135,000. Where carbon neutral power is an option this will be the default selection subject to regulatory hand/arm vibration considerations.				

ABERDEEN CITY COUNCIL

COMMITTEE	City Growth and Resources
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Berryden Corridor Active Travel Connections
REPORT NUMBER	RES/22/177
DIRECTOR	Gale Beattie
CHIEF OFFICER	David Dunne/ John Wilson
REPORT AUTHOR	Katherine Duncan
TERMS OF REFERENCE	1.1.4 & 1.1.6

1. PURPOSE OF REPORT

- 1.1 To provide an update on the Berryden Corridor Active Travel Connections Programme progress and to seek approval of the outline business case.

2. RECOMMENDATION(S)

That the Committee: -

- 2.1 notes the contents of the business case for the Ashgrove Connects project;
- 2.2 agrees the recommendations within the business case for the Ashgrove Connects project appended to this report;
- 2.3 instructs the Chief Officer – Strategic Place Planning to submit a bid to Scottish Government’s Places for Everyone scheme for funding to enable the detailed design of the Ashgrove Connects project and implementation, subject to the identification of suitable match funding;
- 2.4 notes the content of the Skene Square to City Centre route option assessment report;
- 2.5 agrees the preferred option within the Skene Square to City Centre route option assessment report and instructs the Chief Officer - Capital to progress the development of detailed design and, subject to 2.6, its implementation concurrently with the Berryden Corridor Improvement project;
- 2.6 instructs the Chief Officer - Capital as part of the detailed design to develop a detailed estimate for the Skene Square to City Centre active travel connection project (being the preferred option as described in the Skene Square to City Centre route option assessment report) and if required, refer any additional funding requirement to this year’s budget process;

- 2.7 instructs the Chief Officer - Capital to progress all necessary approvals, permissions, licenses, agreements, and consents required to develop and implement the Ashgrove Connects & Skene Square to City Centre active travel connection projects; and
- 2.8 delegates authority to the Chief Officer – Capital, following consultation with the Head of Commercial and Procurement Services, to consider and approve business cases (including estimated expenditures) for the Ashgrove Connects and Skene Square to City Centre active travel connection projects for the purposes of Procurement Regulation 4.1.1.2 and 4.1.1.4; thereafter to procure appropriate works and services, and enter into any contracts necessary for the delivery of the projects.

3. BACKGROUND

- 3.1 The existing Berryden corridor facilitates journeys between the city centre, the north of Aberdeen and beyond. The Berryden Corridor Improvement (BCI) project will provide two lanes in both directions throughout the length of the corridor, widening the existing road between Skene Square and Ashgrove Road and creating a new road between Ashgrove Road and St Machar Drive. Alongside the new carriageway there will be segregated infrastructure for pedestrians and cyclists along the majority of its length.
- 3.2 The new infrastructure delivered by the BCI project will reduce congestion, shorten journey times and improve journey time reliability. Thus, it provides much improved access to the city centre and relief on less appropriate routes through adjacent neighbourhoods. The improved standard of design will increase road user safety and the perception of safety along the corridor.
- 3.3 The BCI project will provide improved, continuous, and dedicated infrastructure for active travel modes along its length. This active travel infrastructure will provide a step change in provision, encouraging modal shift and improving perceptions of active travel safety. It will also provide a significant opportunity to further expand the provision of high-quality infrastructure on the surrounding network connecting neighbourhoods to the city centre.
- 3.4 During Public and Stakeholder consultations for the BCI project it was highlighted that for the full benefits of the new infrastructure for cycle traffic to be achieved, the proposed off-carriageway cycle infrastructure should extend further, providing continuity of provision for likely journeys, with suggested links between the NHS Foresterhill Campus and the University of Aberdeen, along with the city centre and the University of Aberdeen cited as specific examples. Cycle infrastructure provided by the BCI project is being developed to address these demands on roads covered by the project, however, much of what was identified is outwith the BCI project's scope. The Berryden Corridor Active Travel Connections Programme has, in parallel with the BCI and with funding from Nestrans, considered options for the development of connections from the BCI cycle infrastructure which would maximise active travel opportunities on the corridor, leveraging the maximum active travel benefits of the BCI project.

- 3.5 The connection routes identified as important to onward travel from the Berryden Corridor were:
- Kittybrewster Roundabout to Haudagain Roundabout (A96 Great Northern Road);
 - Kittybrewster Roundabout to Tillydrone Avenue/ Diamond Bridge (St Machar Drive);
 - Skene Square to City Centre; and
 - Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West).

An Overview Plan of the routes is shown in Appendix A of this report.

- 3.6 The Active Travel Action Plan adopted in 2019 includes actions to improve infrastructure for cycling along routes which follow these programme corridors:
- Mastrick to ARI and Tillydrone active travel improvements; and
 - Whitestripes to city centre active travel Improvements

Combinations of the routes identified in 3.5 alongside planned infrastructure on the BCI Project and that which has already been delivered as part of the completed Third Don Crossing/ Diamond Bridge project would fulfil the objectives of the Active Travel Action Plan.

PROGRESS

- 3.7 **A96 Great Northern Road** (from Kittybrewster Roundabout to Haudagain Roundabout) lies to the north of the BCI. It is included in the A96 Inverurie to Aberdeen Multi-modal transport study and therefore has not been considered as part of the Berryden Corridor Active Travel Connections Programme.
- 3.8 Consideration of additional active travel provision along the A96 north of BCI falls within the scope of the Inverurie to Aberdeen Multi-Modal corridor transport study, which commenced in 2021 as part of the programme of work funded by the Transport Scotland Bus Partnership Fund (BPF). As such the options for improvements and integration with BCI are being considered by this larger study, the outcome will be reported as part of the BPF programme.
- 3.9 **St Machar Drive** (from Berryden Corridor to Tillydrone Avenue) lies to the east of the BCI, tying into the corridor at the Kittybrewster roundabout. An initial feasibility study project has now been undertaken. This has identified that implementing a high-quality segregated facilities for cycle traffic is feasible. All the assessed options redistribute road space with some making greater use of the current carriageway than others. St Machar Drive is a key link within the road network and without traffic modelling to assess the impact of these options on network performance, a preferred option cannot be presented at this time. A major update to the Aberdeen area traffic model is currently underway. Once complete, the BPF programme plans to progress a traffic modelling assessment considering the cumulative impact of its bus priority and bus rapid transit proposals. This work will consider the operational requirements for St Machar Drive. Depended on the outcome of this assessment the progression of cycle infrastructure improvements maybe included in the scope of the A96 BPF corridor or as a standalone project.

- 3.10 **Skene Square to City Centre** (Berryden Corridor to City Centre) lies to the south of the BCI. Skene Square to City Centre route forms part of the Berryden Corridor Active Travel Connections Programme. The current BCI project finishes by tying into the existing dual carriageway section just south of the Skene Square/ Rosemount Place junction. This is where the current segregated infrastructure will also conclude and there is currently no infrastructure for cycle traffic from this junction onward to the city centre. Cycle traffic travelling to/ from the slower and less busy streets of the city centre utilising the improved Berryden Corridor would therefore need to mix with general traffic on the dual carriageway with a 30mph speed limit for this section. A high-level route option assessment has been undertaken considering possible routes and infrastructure provision, Appendix E. Due to its limited length and proximity, it is recommended that the Spa Street/ Skene Square option is the preferred choice for the northbound route, and Skene Square/ Woolmanhill roundabout route is the preferred choice for the southbound route. These options provide the most appropriate direct routes to/ from the proposed segregated cycle facilities on BCI and both provide opportunities for future connections to other routes should they be progressed. It is proposed that these options be taken forward as part of the BCI project.
- 3.11 **Ashgrove Road & Ashgrove Road West** (Berryden Corridor to Mastrick) lies to the west of the BCI. Ashgrove Road & Ashgrove Road West forms part of the Berryden Corridor Active Travel Connections Programme. The project was branded 'Ashgrove Connects' for consultation purposes and covers a length of approximately 2km. A Scheme Assessment (Appendix B) has been undertaken considering the options for active travel improvements along the route. The assessment has concluded that a number of proposals be further development during the detailed design stage. The proposals included; a reduction in speed limit from 30mph to 20mph, reduced carriageway widths, segregated cycle tracks, new controlled crossings, an increase in the number of street trees and green infrastructure areas, public realm gateway features, and enhanced bus stop facilities.
- 3.12 An outline business case, Appendix C considers the options for development and implementation of the preferred option, including a cost estimate, funding options and programme.
- 3.13 There are a number of transport projects currently ongoing on routes near to the Ashgrove Connects corridor. These projects have similar complementary aims and objectives to Ashgrove Connects. The A92 (Anderson Drive and the Parkway) Multi-modal Corridor interacts with the Ashgrove Connects project at the North Anderson Drive/ Ashgrove Road West junction. Ashgrove Connects has been progressed with due cognisance of the A92 Corridor Study and will continue to be as it progresses.

PUBLIC AND STAKEHOLDER ENGAGEMENT

- 3.14 **St Machar Drive** - Stakeholder groups such as; the emergency services, business associations, schools in the local area, the University of Aberdeen and North East Scotland College were contacted for their feedback. St Machar Academy pupils, who may be directly impacted by any changes made to St

Machar Drive, have been involved in focus groups held at the school. The focus groups were attended by pupils from 1st to 4th year. The discussions clarified how the pupils used the existing infrastructure and the main areas of concern for pupils when accessing and egressing the school. The school has stated that they would be happy to be involved as the project progresses.

- 3.15 **Skene Square to City Centre-** Consultation will be undertaken as part of BCI project statutory processes.
- 3.16 **Ashgrove Road & Ashgrove Road West** - As part of the Ashgrove Connects project, the community was approached with a blank canvas so that any design proposals could be directly influenced by those who live/ work in the area and/ or use the route. Public, school children, and other stakeholder consultations online and face to face were undertaken and asked participants for their comments on the existing infrastructure and what improvements they would like to see. Following the completion of the initial concept designs further consultations have been undertaken. The comments from both consultations were analysed and incorporated into the design where appropriate, Appendix B.

4. FINANCIAL IMPLICATIONS

- 4.1 The initial appraisal work has been funded by Nestrans. There is currently no dedicated budget for the next stages of work.
- 4.2 For the Skene Square to City Centre active travel connection project further development of the design can be progressed within the available Nestrans project budget (subject to approval), however, due to its proximity and extension of provision from the BCI project the adjustment of the current capital projects scope to include the implementation of the Skene Square & Gilcomston Steps section is the most practical approach to delivery. Following the development of a detailed estimate any identified additional funding requirement for implementation will be referred to a future budget process for approval.
- 4.3 For Ashgrove Connects, the intention is that the Council will apply to the Transport Scotland/ Sustrans, Places for Everyone fund. The aim of Places for Everyone is to create safer, more attractive, healthier, and inclusive places which are enjoyed equitably by increasing and diversifying the number of trips made by walking or cycling for everyday journeys. It is funded by the Scottish Government through Transport Scotland and is administered by Sustrans. The fund can provide up to 100% of design work costs and 70% of the construction costs. The final 30% of construction costs need to be secured through match funding. Ongoing conversations with Sustrans are being held to determine if proposed BCI project infrastructure, already funded as part of the capital plan, can be considered as the Council match funding contribution. If applications are successful, all development and implementation costs will be met from external funders.

5. LEGAL IMPLICATIONS

- 5.1 The project will be developed and implemented under Roads & Traffic Authority powers. There are no direct legal implications beyond business-as-usual support from Legal Services.
- 5.2 Any external support required for future stages of work will be undertaken in line with the Council's Procurement Regulations.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 The associated modal-shift anticipated from improvements to active travel infrastructure proposed by the Ashgrove Connects and Skene Square to City Centre active travel connection projects has significant potential to contribute positively to the Council's net zero targets and biodiversity commitments.
- 6.2 An initial Ecological Impact Assessment for Ashgrove Connects has been undertaken and is included in the Appendix D of this report.

7. RISK

- 7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement.
- 7.2 For Ashgrove Connects, further information regarding risk can be found within the outline business case which is attached to this report, Appendix C.

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls /control actions	Does Target Risk Level Match Appetite Set?
Strategic Risk	Delivery of active travel measures supports a number of the Council's strategic priorities, particularly in terms of a sustainable economy, a sustainable transport system, the continued health and prosperity of our citizens, reductions in carbon emissions	Continue to work with partners to deliver the projects	L	Yes

	and a high-quality environment. Failure to deliver active travel improvements where there is evidence of their effectiveness could undermine the Council's ability to realise these aspirations including the Local Transport Strategy and Aberdeen Active Travel Action Plan.			
Compliance	No significant risks identified	Compliance with statutory processes, grant conditions and Scheme of Governance with regular progress and spend reporting to the Transportation Programme Boards and ACC Procurement Regulations.	L	Yes
Operational	The Project will upgrade the existing infrastructure and extend the design life of existing assets. New assets will also be introduced which will require to be maintained and may put pressure on existing budgets.	On completion, the Project may increase operational budgets and/ or require reallocation of funding from other budgets.	M	Yes
Financial	No dedicated funding currently in place. Places for Everyone funding is not guaranteed. No appropriate committed project found to enable match-funding for construction phase. The Council may not be prepared to take advantage of funding opportunities for active travel projects as they arise.	Continue to work with partners to secure funding.	M	Yes
Reputational	Failure to deliver the Project could hinder implementation of the	Obtain Committee approval to progress the works.	L	Yes

	<p>Council's (and partners) strategic transport objectives and undermine the Council's commitments to improving the transport network, achieving the PLACE outcomes set out in the LOIP (Local Outcome Improvement Plan), and supporting Scotland's Climate Change Plan commitment to reduce car kilometres by 20% by 2030.</p>	<p>Continue working with partners to deliver Projects.</p>		
<p>Environment / Climate</p>	<p>ACC's net zero vision and strategic infrastructure plan – energy transition: transport emissions are a significant contributor to climate emissions so increasing sustainable travel will be necessary to achieving this sector's required reduction.</p> <p>If active travel and public transport measures are not delivered, ACC would not provide conditions which could encourage more sustainable travel movements which are likely to bring environmental improvements to the city and region.</p> <p>There may be under utilisation of the proposed BCI cycling infrastructure following opening, due to a lack of continuity of quality provision over medium to long journey lengths.</p>	<p>Continue working with partners to deliver the projects.</p>	<p>L</p>	<p>Yes</p>

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
	Impact of Report
Aberdeen City Council Policy Statement	<p>The proposals within this report support the delivery of Economy Policy Statement 2 and Place Policy Statement 3 through facilitating the promotion of active travel by delivering segregated cycling and walking infrastructure. By connecting to both existing and committed active travel infrastructure a segregated off-carriageway provision from the City Centre to Mastrick, Tillydrone and Bridge of Don including key destinations of NHS Foresterhill Health Campus and the University of Aberdeen's Foresterhill and Old Aberdeen Campuses.</p> <p>Economy Policy Statement 2 - Increase city centre footfall through delivery of the City Centre Masterplan, including the redesigned Union Terrace Gardens and Queen Street development.</p> <p>Place Policy Statement 3 - Refresh the local transport strategy, ensuring it includes the results of a city centre parking review; promotes cycle and pedestrian routes; and considers support for public transport.</p>
<u>Aberdeen City Local Outcome Improvement Plan</u>	
Prosperous Economy Stretch Outcomes	<p>The proposals within this report support the delivery of Stretch Outcomes 1 to 3 as a good transport network and infrastructure provision means anyone regardless of their social status/ economic means can choose a sustainable mode of travel for commuting. A reliable transport network supports economic growth and movement.</p> <ul style="list-style-type: none"> - Stretch Outcome 1 - No one will suffer due to poverty by 2026. - Stretch Outcome 2 - 400 unemployed Aberdeen City residents supported into Fair Work by 2026. - Stretch Outcome 3 - 500 Aberdeen City residents upskilled/ reskilled to enable them to move into, within and between economic opportunities as they arise by 2026.

<p>Prosperous People Stretch Outcomes</p>	<p>The proposals within this report support Stretch Outcomes 5 and 11, in that they seek to improve and increase opportunities for people to walk or cycle for everyday journeys, bringing personal health benefits through increased physical activity and reducing harmful emissions from road transport.</p> <ul style="list-style-type: none"> - Stretch Outcome 5 - 90% of Children and young people will report that their experiences of mental health and wellbeing have been listened to by 2026. (Key Driver 5.2 - free access to physical activity which improves mental health and wellbeing). - Stretch Outcome 11 - Healthy life expectancy (time lived in good health) is five years longer by 2026. (Key Driver 11.3 - Encouraging the adoption of healthier lifestyles).
<p>Prosperous Place Stretch Outcomes</p>	<p>The proposals within this report support the delivery of Stretch Outcomes 13 and 14 through step change improvements to active travel infrastructure along the routes. Further expansion and connection of such facilities on the surrounding network can also be enabled.</p> <ul style="list-style-type: none"> - Stretch Outcome 13 - Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate) - Stretch Outcome 14 - Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.
<p>Regional and City Strategies</p> <ul style="list-style-type: none"> • Regional Transport Strategy (2040) • Local Development Plan, • Local Transport Strategy including the Active Travel Action plan • Strategic Development Plan • Regional Economic Strategy • Net Zero Vision for Aberdeen 	<p>The proposals within this report support Regional and Local Transport Strategies and related strategies, which all aim to deliver a sustainable transport system as well as enhance the connectivity of the existing transport network.</p>

9. IMPACT ASSESSMENTS

Assessment	Outcome
Integrated Impact Assessment	IIA's have been prepared to accompany this report.
Data Protection Impact Assessment	Not required
Other	N/A

10. BACKGROUND PAPERS

- 10.1 OPE/19/089 North East Scotland Roads Hierarchy, City Growth and Resources Committee, 6 June 2019.
- 10.2 COM/22/095 A96 Multi-Modal Study, City Growth and Resources Committee, 21 June 2022.

11. APPENDICES

- 11.1 Appendix A – Berryden Corridor Active Travel Connections Overview Plan
- 11.2 Appendix B – Ashgrove Connects Final Report
- 11.3 Appendix C – Ashgrove Connects Business Case
- 11.4 Appendix D – Ashgrove Connects Constituent Reports and Drawings – As referenced in the Final Report
- 11.5 Appendix E – Skene Square to City Centre Route Option Assessment Report

12. REPORT AUTHOR CONTACT DETAILS

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Appendix A

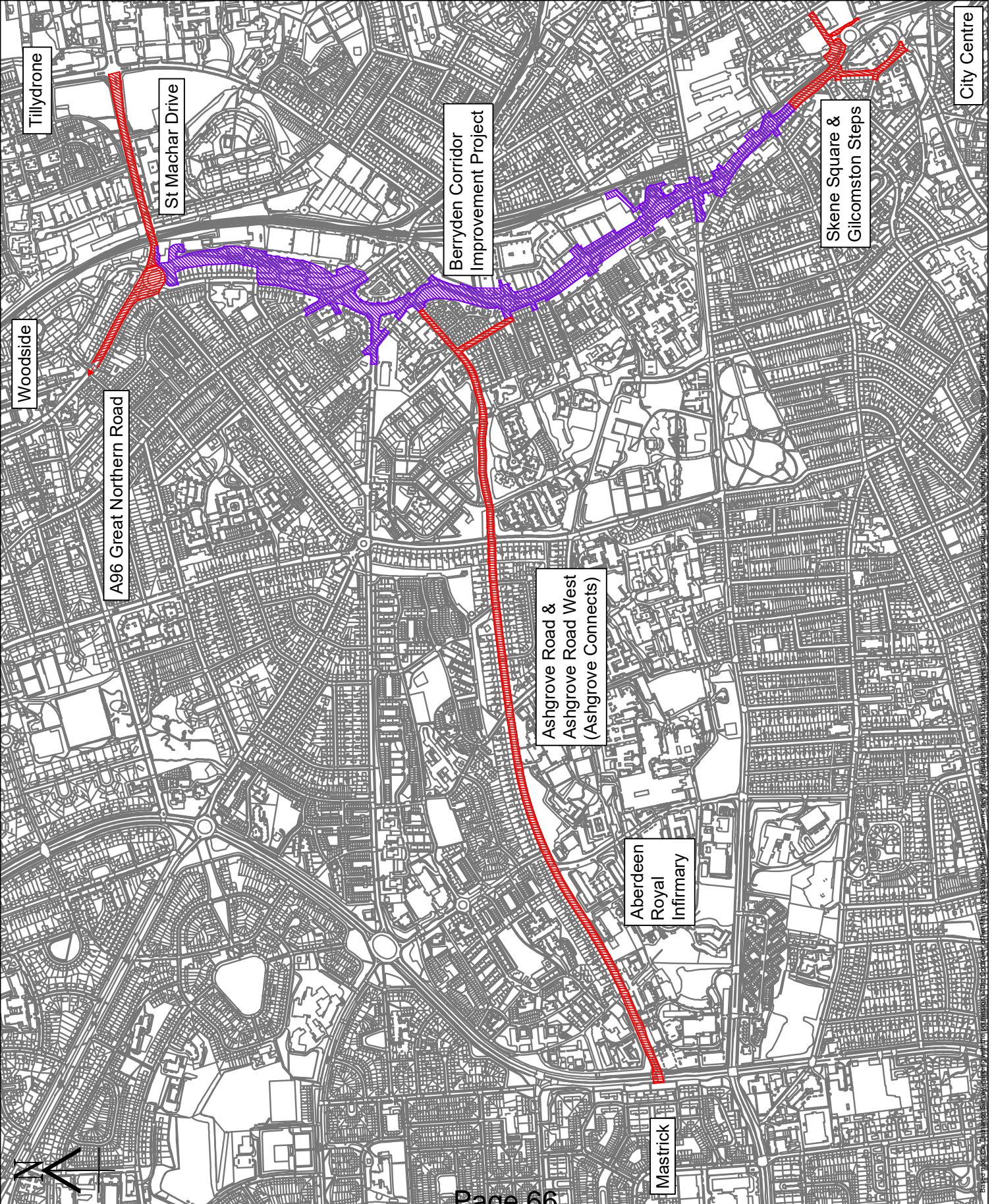
Overview Plan

NOTE:

Committed
Berryden Corridor
Improvement
Project



Berryden Corridor
Active Travel
Connections



Capital | Resources
Business Hub 4, Ground Floor North,
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Project:
Berryden Corridor Improvement Project

Title:
Berryden Plus Areas

Drawn	RE	Date	09/09/2022	Checked	KD	Date	09/09/2022
Scale	@ A4	N/A					

Drawing No.

Appendix B
Ashgrove Connects Scheme
Assessment

Ashgrove Connects

Ashgrove Connects Scheme Assessment

Aberdeen City Council

September 2022



Final Report

Based on TD 37/93 DMRB Stage 2 report layout

Notice

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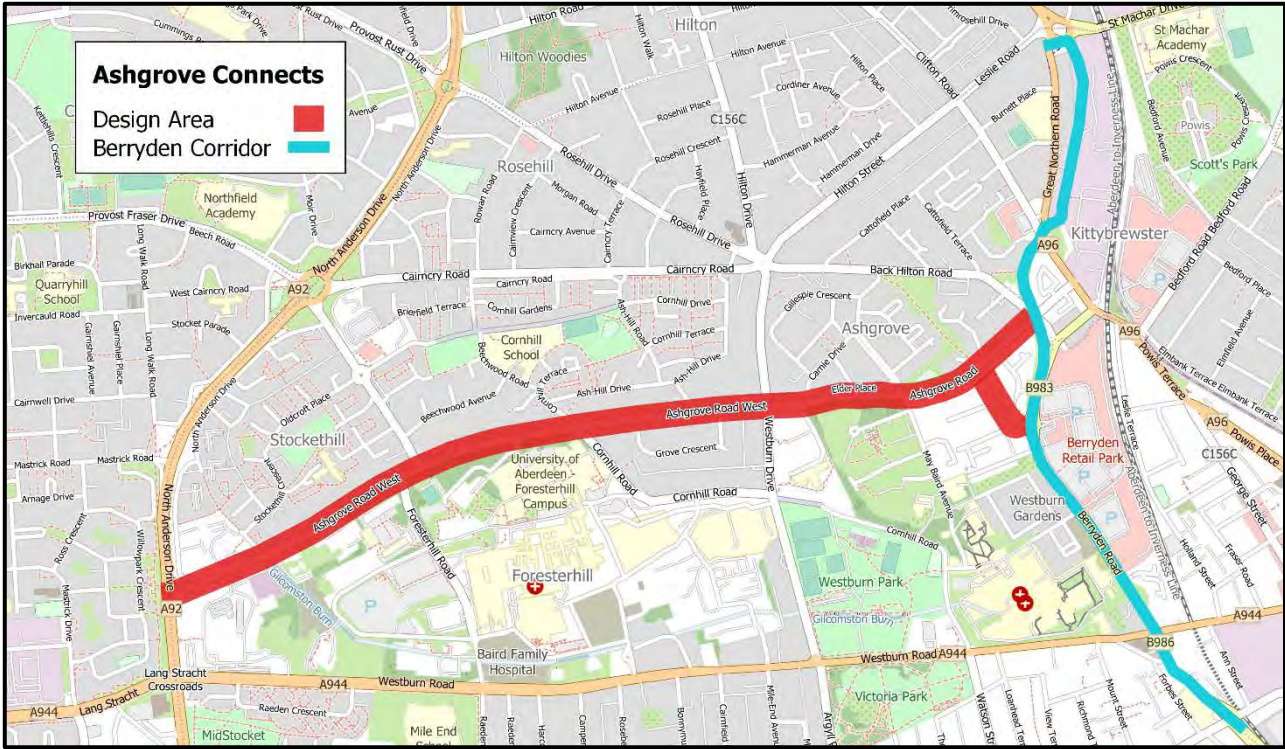
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Main Report

Executive Summary

Scheme background

Atkins has been commissioned by Aberdeen City Council (ACC) to assess options for improvements to the transport network on Ashgrove Road and Ashgrove Road West and if required Laurelwood Avenue/ Elm Place, to connect the Berryden Corridor Improvement (BCI) proposals with Mastrick at North Anderson Drive.



ACC recognises that to enable all people (regardless of age or ability) to travel by active and sustainable modes and to engage in community activities, a holistic solution for the built environment is required. That is why this project has been developed in partnership with the communities who live and work in the area.

This Report summarises the assessment of options towards a technically feasible Concept Design (to RIBA Stage 2), that can demonstrate alignment with ACC policy, network need and public demand.

The scheme development stages as explained to the public are:



Alignment with policy and strategy, network need and public demand

The scheme assessment draws on robust consideration of the current and future needs of the city, the community and the streets relevant to the study area.

Aberdeen City Council Policy and Strategy

The adopted policy framework in Aberdeen, through approved ACC commitments including the Local Outcome Improvement Plan, Local Transport Strategy, Active Travel Action Plan, Climate Change Plan, the NE Scotland Roads Hierarchy, Aberdeen City Central Locality Plan and the Regional Transport Strategy, set a clear direction towards:

- More active travel, public transportation, and improved multi-modal accessibility;
- Locking in the benefits of strategic network changes by reducing traffic volumes and providing improved networks for walking, cycling and public transport;
- Greater prioritisation of space for people and community activities rather than traffic; and
- The need to take net zero and climate mitigation opportunities in all new schemes.

Two relevant commitments in the adopted Active Travel Action Plan 2017-2021 are to:

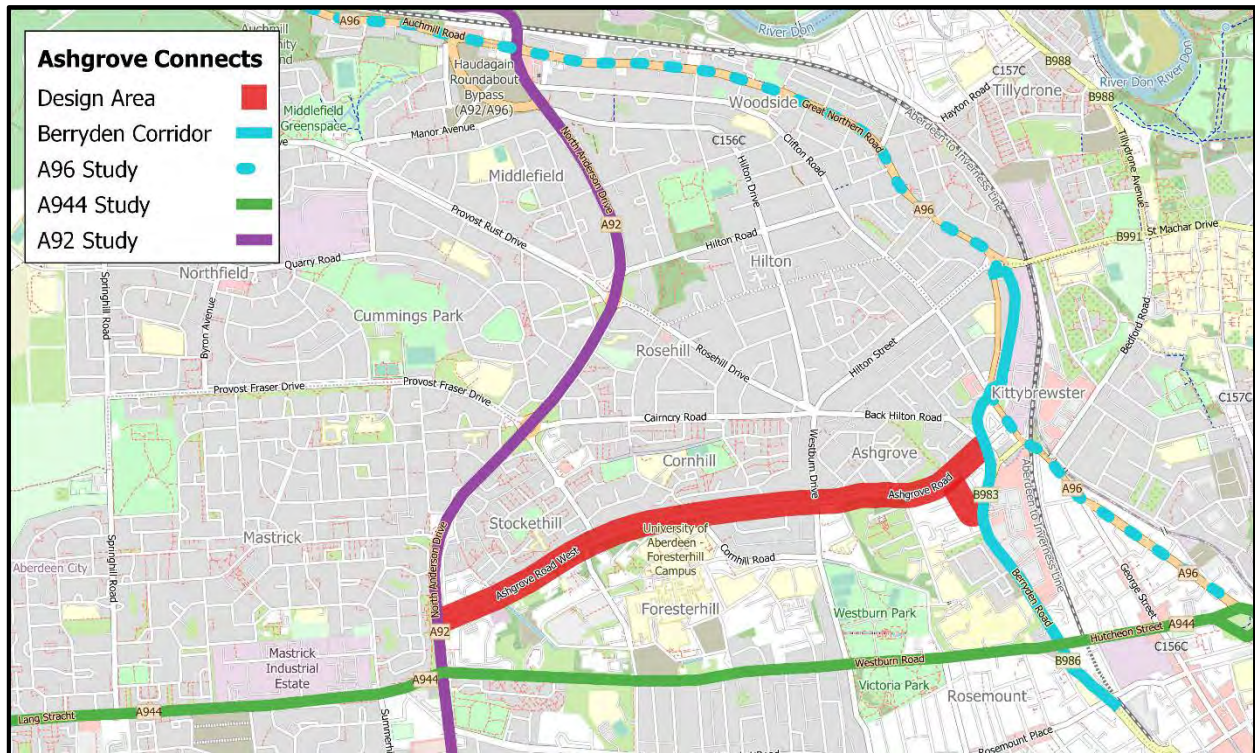
- Work towards a road network where all users are safe from the risk of being killed or seriously injured, and the injury rate is much reduced; and
- Ensure that all young people have the opportunity to travel to school by active and/or sustainable modes of transport and are equipped with the necessary knowledge, skills and infrastructure to allow them to undertake local journeys safely and independently.

Transport network

The transport network priorities in Aberdeen are changing. Key elements of this are:

- The NE Scotland Roads Hierarchy sets the context for transport planning, aims to lock in the traffic reduction benefits of the Aberdeen Western Peripheral Route (AWPR) and to ensure the successful delivery of the Local Development Plan, the Sustainable Energy Action Plan, the City Centre Masterplan (CCMP) and the emerging Local Transport Strategy;
- Particular to the study area, key complementary schemes all aim to improve bus operations and conditions for people walking, wheeling and cycling as well as keeping strategic traffic on the routes intended for it:
 - A96 Berryden Corridor Improvement (BCI),
 - A96 Inverurie to Aberdeen Multi-Modal Corridor Study;
 - A944 / A9119 Westhill to Aberdeen Multi-modal Corridor Study
 - A92 Bridge of Don to Bridge of Dee Multi-modal Corridor Study
- The A96 BCI scheme identified the need to develop strategically important cycle links along and across the road to maximise the mode shift benefits of the BCI investment as part of developing a network of connections. Delivery of these is outside the scope of the BCI project and are being developed separately by ACC. This scheme proposal is for one of these branches, and in full they are:
 - St Machar Drive (Berryden Corridor to Tillydrone Avenue)
 - **Ashgrove Road & Ashgrove Road West (Berryden Corridor - Mastrick)**
 - Skene Square & Gilcomston Steps, (Berryden Corridor - City Centre)
 - A96 Great Northern Road Berryden to Haudagain





Specifically in relation to the study area, the adopted Roads Hierarchy downgrades Ashgrove West to a tertiary or local route, that “No longer functions as a priority route. Does not provide connection with the strategic road network. Much of its place function is residential”. A tertiary route is further defined as one where traffic speed should generally be 20mph and formal bus or cycle priority infrastructure is only necessary should the volume and composition of traffic require it.

The technical assessment within this study identified three primary transport mode requirements for the study area that are currently unmet:

- For cycling to become a realistic option for most people’s everyday trips this study should provide safe and comfortable connections as part of a wider network to onward destinations;
- For the safety and comfort for people of all ages and abilities to walk and wheel to local destinations, there is a need to lower traffic speed, dissuade through traffic and enhance footways and crossings; and
- Improvements to links to and facilities at bus stops will improve the attractiveness of this mode.

Community and stakeholder demand

In order to ensure that the project responds to public need, Atkins developed an intensive engagement process that worked in parallel with the design process to ensure that proposals are understood and have the broad support of the community. The level of community engagement activity in the project so far is summarised below.









The public and stakeholders (through a Stakeholder Working Group of Council officers, local businesses, community groups, and statutory bodies) were asked to identify the key themes that needed improvement and to respond to Initial Design Ideas. The public priorities that emerged were:

- Slower and less traffic
- More crossings to reduce the severance effect of wide and heavily trafficked streets
- A network of safe infrastructure to make cycling accessible for most people
- Greater priority for pedestrians, particularly those with disabilities
- Improved place quality and access to greenspace
- A reduction in the negative impacts of parking and encourage use of off-street parking

Design Objectives

In summary of the policy, strategy and community priorities relating to this scheme, reducing the impact of through traffic, network improvements for sustainable modes, and enhancement of the residential place function is important factors for success.

Design Objectives were developed to ensure that the scheme proposals remain in line with these priorities. These were validated with the Stakeholder Working Group and have been tested through public engagement.

 <p>Traffic</p> <p>The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.</p>	 <p>Crossings and Junctions</p> <p>Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.</p>	 <p>Place Quality and Greenspace</p> <p>The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced, and an overall net gain of 'green'.</p>
 <p>Walking</p> <p>People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.</p>	 <p>Cycling</p> <p>People of all ages and abilities are able to move around by bicycle safely, comfortably and independently.</p>	 <p>Parking and loading</p> <p>Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.</p>

Concept Design Proposals

Concept Designs were developed within RIBA Stages 1 and 2:

- Stage 1 - Initial Design Ideas were presented to the public and stakeholders following options assessment against the Design Objectives; and
- Stage 2 - Concept Design proposals were prepared following community feedback and further detailed options assessment including statutory consultations and with Council officer feedback.

The key features of the proposals are:

- 20mph speed limit on Ashgrove Road and Ashgrove Road West;
- Reduced carriageway width and crossing distances;
- Continuous footways at side roads to provide design priority for pedestrians;
- One new controlled crossing of Ashgrove Road West;



- A significant net increase in the number of street trees and green infrastructure;
- Two new opportunities for public realm features as gateways into the community;
- Segregated cycle tracks on
 - Ashgrove Road West;
 - Ashgrove Road between Westburn Drive and Laurelwood Avenue; and
 - Laurelwood Avenue and Elm Place.
- Enhanced bus stop facilities and cycle bypasses of bus stops; and
- Reduction in available on street parking commensurate, prioritising residential need where required.

It is not the intention at RIBA Stage 2 of these Concept Design proposals to have resolved all operational and design challenges. The intention is to present technically feasible solutions and to highlight the deliverability opportunities and constraints that should be dealt with in detail at subsequent stages. These are presented within the Designer’s handover documents.

Benefits

The Outline Business Case developed alongside this report identifies a number of key scheme benefits.

<p>Community impacts</p>	<ul style="list-style-type: none"> • Enables walkable and cyclable neighbourhoods • Greater accessibility of amenities and services • Differential equality impacts for people on low incomes • Reduced car dependence 	<p>Amenity value and public realm</p>	<ul style="list-style-type: none"> • Improved accessibility for non-motorised users • Transport cost savings • Open space preservation • Improved quality of life
<p>Modal shift from the private car</p>	<ul style="list-style-type: none"> • Reduced carbon emissions • Reduced traffic congestion • Lower road maintenance costs • Fewer road accidents • Improved local air quality 	<p>Health impacts</p>	<ul style="list-style-type: none"> • Higher levels of physical activity • Improved health • Safer roads for all users • Fewer sick days – economic growth • Reduced costs to the NHS
<p>Journey quality benefits</p>	<ul style="list-style-type: none"> • Improved user convenience, comfort, and safety • Enjoyment and wellbeing impacts 		

Further to this, the Business case anticipates that while there are short term adaptations to be made, when considered over the medium to long term the re-allocation of road space to sustainable modes is likely to result in a neutral or reduced maintenance burden on the Council.



The total capital cost of the scheme is estimated to be in the region of £16 million (including all fees, complementary measures and optimism bias at 44%. Cost estimating at present is unpredictable due to the inflationary and supply chain pressures).

Package Appraisal and Phasing

A number of package options were appraised for alignment with policy, objectives and deliverability. The options considered ranged from do nothing (behaviour change and engagement only) to full implementation of the proposed scheme.

Full implementation offers the greatest maximisation of benefits and alignment with policy and objectives, particularly if delivered prior to or alongside the BCI.

The scheme is well aligned with Transport Scotland/ Sustrans' Places for Everyone funding which makes delivery affordable. This fund offers full design development costs and 70% of construction funding. The match funding element can be secured if the project is delivered prior to or alongside BCI implementation.

It is therefore recommended that ACC applies for funding for RIBA Stages 3-4 in October 2022 (for 2023-24) for the full scheme and to target construction commencement within the BCI construction period:

- 2023-24 Continuation of design and commencement of behaviour change interventions
- 2024-25 Commence construction in advance of or alongside the BCI.

Next steps

It is recommended that this proposal is further developed to remain in step with the BCI development and with other network improvements in the area, including the A944/A9119 and A92 multi-modal studies.

The immediate next steps are therefore to:

- Seek Council City Growth and Resources Committee approval to proceed;
- Update the community on progress; and
- Seek funding for further scheme development through RIBA Stages 3-4 (developed design and technical/ detailed design).

During RIBA Stage 3 it will be important early in the design process to:

- Invest further in community relations by continuing the depth of engagement to date;
- Address the identified gaps in response from businesses and local disability representatives;
- Work with stakeholders to plan implementation of the Behaviour Change Activation Plan;
- Plan for all monitoring and evaluation baseline data collection to be complete prior to implementation;
- At an early stage in the design process address the remaining design challenges prior to detailed design, in particular to:
 - Determine whether the final preferred options at Foresterhill/ Foresterhill Road and at Westburn Drive should be signal-controlled or roundabout junctions;
 - Finalise the balance of parking layouts and streetscape enhancements at Laurelwood Avenue and the east end of Ashgrove Road by continuing to engage in detailed discussions with residents and ACC officers;
 - Develop detailed solutions for maintenance, materials, sustainable urban drainage (including the potential for rain gardens) and for public realm and landscaping enhancements through further detailed engagement with relevant ACC officers.



1. Introduction

1.1. Background to this scheme assessment

- 1.1.1. The existing Berryden corridor facilitates journeys between the city centre, the north of Aberdeen and beyond. The Berryden Corridor Improvement (BCI) project will provide two lanes in both directions throughout the length of the corridor, widening the existing road between Skene Square and Ashgrove Road and creating a new road between Ashgrove Road and St Machar Drive. Alongside the new carriageway there will be segregated infrastructure for pedestrians and cyclists along the majority of its length. The BCI project will provide improved, continuous, and dedicated infrastructure for active travel modes along its length. This active travel infrastructure will provide a step change in provision, encouraging modal shift and improving perceptions of active travel safety. It will also provide a significant opportunity to further expand the provision of high-quality infrastructure on the surrounding network connecting neighbourhoods to the city centre.
- 1.1.2. During the consultation process for the Berryden Corridor Improvement project it was highlighted that for the full benefits of the new infrastructure for cycle traffic to be achieved, the proposed off-carriageway cycle infrastructure should extend further, providing continuity of provision for likely journeys, with a suggested link between the NHS Foresterhill Campus and the city centre cited as a specific example. Cycle infrastructure provided by the BCI project is being developed to address these demands on roads covered by the project, however, much of what was identified is outwith the BCI project's scope.
- 1.1.3. The connection routes identified as important to onward travel from the Berryden Corridor were:
- Kittybrewster Roundabout to Haudagain Roundabout (A96 Great Northern Road);
 - Kittybrewster Roundabout to Tillydrone Avenue/ Diamond Bridge (St Machar Drive);
 - Skene Square to City Centre; and
 - Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West).
- 1.1.4. The Kittybrewster Roundabout to Haudagain Roundabout (A96 Great Northern Road) and Kittybrewster Roundabout to Tillydrone Avenue/ Diamond Bridge (St Machar Drive) routes will be considered as part of the Inverurie to Aberdeen Multi-Modal corridor transport study forming a part of the programme of work funded by the Transport Scotland Bus Partnership Fund.
- 1.1.5. The Skene Square to City Centre and Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West) routes are included Berryden Corridor Active Travel Connections Programme. The Berryden Corridor Active Travel Connections Programme has, in parallel with the BCI and with funding from Nestrans, considered options for the development of connections from the BCI cycle infrastructure which would maximise active travel opportunities on the corridor, leveraging the maximum active travel benefits of the BCI project.



- 1.1.6. Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West) route is also known as Ashgrove Connects for consultation and project purposes.
- 1.1.7. In progressing this scheme, Aberdeen City Council (ACC) recognises that to improve the opportunities for all people (regardless of age or ability) to travel by active and sustainable modes and to engage in community activities, a holistic solution for the built environment may be required for those living and working adjacent to Ashgrove Road/ Ashgrove Road West.
- 1.1.8. Atkins has been commissioned by Aberdeen City Council (ACC) to assess options for improvements to the transport network on the alignment of Ashgrove Road and Ashgrove Road West and if required Laurelwood Avenue/ Elm Place, to connect the BCI proposals with Mastrick at North Anderson Drive.
- 1.1.9. This Report summarises the assessment of options towards a technically feasible Concept Design (to RIBA Stage 2), that can demonstrate alignment with ACC policy, network need and public demand with a view to applying for RIBA Stage 3-4 design funding in late 2022.
- 1.1.10. ACC recognises the importance of ensuring that the needs of stakeholders, businesses, residents, and other users of the spaces are at the heart of scheme assessment and that any proposals are both broadly understood and supported by all through public and stakeholder consultations.
- 1.1.11. The timeline for the public and stakeholder consultations are identified in Figure 1.1.

Figure 1.1 - Consultation Timeline



1.2. Overview of Report

- 1.2.1. The Atkins reporting was delivered into two main reports:
 1. Baseline Assessment (CR-K) of community and technical data collection to develop Design Objectives; and
 2. Concept design to RIBA Stage 2 and scheme assessment reporting to TD37/93 Stage 2

Baseline Assessment

- 1.2.2. The Baseline Assessment (CR-K) developed Scheme Design Objectives from community and background technical data collection. It provides the context for design development via data-gathering and fact-finding exercises to identify the potential constraints and opportunities for the scheme.



1.2.3. The Scheme Design Objectives identified are illustrated in Figure 1.2.

Figure 1.2 – Scheme Design Objectives



1.3. Scheme Assessment (this report)

- 1.3.1. The purpose of this report is to present the assessment of design options to identify a preferred Concept Design. Assessment was undertaken on the basis of alignment with Design Objectives and deliverability in relation to identified engineering, environmental and transport network opportunities and constraints.
- 1.3.2. This report details the process of identifying a preferred Concept Design Option and the potential impact of the scheme.
- 1.3.3. It has been structured in line with the layout of DMRB TD 37/93 Stage 2 Scheme Assessment reporting to remain consistent with standard ACC committee reporting. It is recognised that there is the need to develop content to satisfy the requirements of Sustrans' Places for Everyone funding applications. Therefore, the standard TD37/93 template has been adapted to ensure that the project is reported transparently.
- 1.3.4. The report is structured as follows:
- Introduction
 - Existing Conditions
 - Engagement Summary
 - Concept Design Options Assessment and Proposals
 - Proposed Concept Design
 - Engineering Assessment
 - Environmental Assessment



- Traffic Assessment
- Behavioural Change Activation
- Delivery Options Appraisal
- Economic Impact
- Summary & Recommendations

1.4. Related documents

1.4.1. Further details that complement this report are provided in the following:

- Constituent reports:
 - CR-A – Behaviour Change Activation Plan
 - CR-B – Traffic Data & Models
 - CR-C – Monitoring & Evaluation Plan
 - CR-D1 – Engagement Report (Stage 1)
 - CR-D2 – Engagement Report (Stage 2)
 - CR-E – Preliminary Ecological Appraisal
 - CR-J – Walking & Cycling Network Assessment
 - CR-K – Baseline Assessment
 - CR-L – Policy Review
- The full drawing package:
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00001: Location Plan
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00002: Anderson Road Junction to Castleton Drive
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00003: Castleton Drive to Forresterhill Road Junction
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00004: Foresterhill Road Junction (Signalised Option)
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00005: Foresterhill Road Junction (Compact Roundabout)
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00006: Cornhill Terrace/Cornhill Road Junction
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00007: Grove Crescent to Westburn Drive Junction
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00008: Westburn Drive Junction (Signalised Option)
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00009: Westburn Drive Junction (Roundabout Option)
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00010: Ashgrove East Transition to Laurelwood
 - ASH-ATK-HGN-ZZZZZ-DR-CH-00011: Ashgrove Road and Laurelwood



2. Existing Conditions

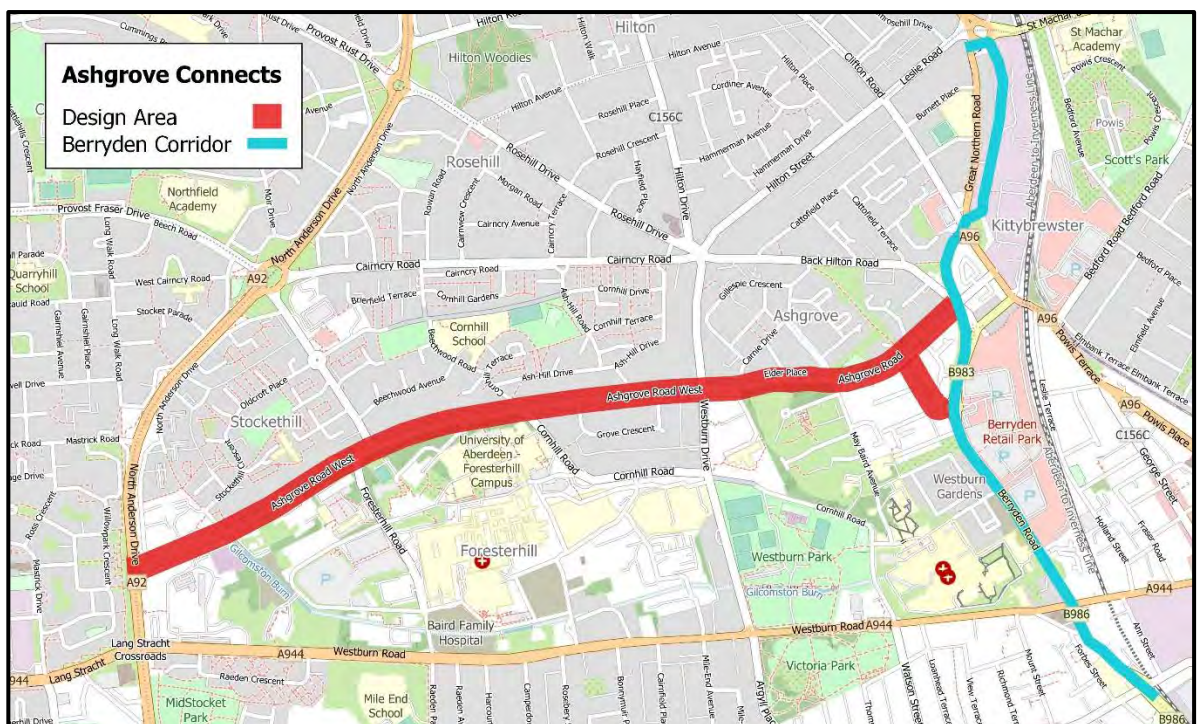
2.1. Introduction

- 2.1.1. This Chapter provides a summary of the existing engineering, environmental, and traffic conditions applicable to the Design Area. Further detail is provided in the Baseline Assessment (CR-K) to identify the opportunities and constraints within the Design Area.
- 2.1.2. Note that items not covered in this Chapter have not been identified at this stage as being significant to the scheme or have not been included in the scope of the current commission.

2.2. Design Area

- 2.2.1. The Design Area for Ashgrove Connects is presented in Figure 2.1. It covers the full length of Ashgrove Road West and Ashgrove Road (jointly referred to in this report as ‘Ashgrove Connects’), between North Anderson Drive to the west and Berryden Road to the east, and also includes Laurelwood Avenue and Elm Place.
- 2.2.2. The Berryden Corridor Improvement Project involves widening the existing road and junction improvements between Skene Square and Ashgrove Road, and constructing a new section of road between Ashgrove Road and Kittybrewster roundabout. It is a committed project and will be integrated with the design options.

Figure 2.1 – Ashgrove Connects Design Area



2.3. Road geometry and standards

Ashgrove Road West

- 2.3.1. Ashgrove Road West is a single carriageway road that varies in width between 11m-13m and runs west-east between North Anderson Drive and Westburn Drive. It is subject to a 30mph speed limit and is situated within a Controlled Parking Zone (CPZ).
- 2.3.2. The built environment along Ashgrove Road West between North Anderson Drive and Westburn Drive is a mix of residential and employment uses. The land to the north is primarily residential and features residential properties with direct driveway access onto Ashgrove Road West. The land to the south, west of Cornhill Terrace, is generally for employment use and largely comprises various healthcare and educational sites such as the Ambulance Service, NHS Foresterhill Health Campus, and University of Aberdeen Foresterhill Campus.
- 2.3.3. While the route is not intended to serve an arterial / distribution function, its proximity to key routes does make it susceptible to through-traffic. Ashgrove Road West generally presents a wide, traffic-focused boulevard, with limited appeal and accessibility for people, place, and amenity.
- 2.3.4. The corridor is recently re-classified as a C-class tertiary route (from A class) in the NE Scotland Roads Hierarchy. While it continues to serve an important role in the road network as an access to destinations such as the hospital and university it is intended to no longer serve as a major through-route for traffic.

Walking Provision

- 2.3.5. Footways are provided on both sides of the carriageway along the full route. The exception is the section northern footway between North Anderson Drive and Castleton Drive, where the footway instead follows the parallel road to the north. The footway widths on both sides of the carriageway are approximately 3m and are constrained by trees and lighting columns.
- 2.3.6. The majority of the formalised crossings are uncontrolled, except for those at the signal-controlled junctions (North Anderson Drive, Foresterhill Road, and Westburn Drive). Provision of dropped kerbs over side roads is inconsistent. Provision for vulnerable or impaired pedestrians is limited; tactile paving is provided at the Foresterhill Road and Westburn Drive junctions only.
- 2.3.7. The crossings over Cornhill Terrace and Cornhill Road are approximately 21m and 17m long respectively, which is wider than desirable and could cause issues for some users.

Cycling Provision

- 2.3.8. Cycle provision is limited to advisory 1.5m wide on-road cycle lanes on both sides of the carriageway. The cycle lanes are not continuous and are frequently interrupted by the provision of on-road parking bays.



2.3.9. The Foresterhill Road junction is provided with advanced stop-lines for cyclists on all four external approaches, although not for the 'internal' link between the two Foresterhill approaches. There are no cycle lanes leading into the advanced stop-line boxes.

Public Transport

2.3.10. There are three sets of bus stops (north and south) along Ashgrove Road West. These are served by a range of services to the north, west, and south of city, all of which also run through the city centre. The majority of these operate once or twice an hour, although the most frequent, the First 23 Sunshine service, operates five times per hour.

Parking

2.3.11. There is no cycle parking provision on Ashgrove Road West. Cycle parking is provided within the University of Aberdeen campus, the hospital, and Aberdeenshire Council's Woodhill House.

2.3.12. Ashgrove Road West is within a CPZ, and therefore all lengths of road must be covered by some form of restriction or control. Marked lengths are provided at the following locations:

- North side of carriageway:
- 25m west of Castleton Drive, westwards for approximately 90m
- South side of carriageway:
- East of Ambulance Service access (40m length)
- West of Foresterhill Road (south) (260m length)
- East of Foresterhill Road (south) (165m length)
- West of Cornhill Road (45m length)

2.3.13. Parking within these lengths is restricted to those with either a valid resident's permit, vouchers, or using the PayByPhone smartphone app.

Ashgrove Road

2.3.14. Ashgrove Road is a single-carriageway road that runs west-east between Westburn Drive and Berryden Road, and effectively acts as a continuation of Ashgrove Road West. The section between Westburn Drive and May Baird Avenue is approximately 9m wide, and it narrows to approximately 7.5m to the east of May Bard Avenue.

2.3.15. Ashgrove Road is more residential focused in its environment compared to Ashgrove Road West, with residential developments on both the north and south side of the carriageway. While there are commercial premises located here, e.g. the Royal Mail Depot and a convenience store, these are all located at the eastern end and are generate far less traffic relative to the area when compared to the hospital and university on Ashgrove Road West.

2.3.16. Ashgrove Road will link with the new Berryden Corridor Improvement dual-carriageway via a left-in / left-out priority junction, in place of its existing junction with Berryden Road.



Walking Provision

- 2.3.17. Continuous footways are provided on both sides of the carriageway, measuring approximately 3m between Westburn Drive and Laurelwood Avenue, and narrowing to 1.8-2m between Laurelwood Avenue and Berryden Road. The only signal-controlled junction in this section is at the junction of Westburn Drive with Ashgrove Road and Ashgrove Road West. Tactile paving is incorporated at all arms of the junction. All the formalised uncontrolled crossings do not currently comprise tactile paving.

Cycling Provision

- 2.3.18. Ashgrove Road does not feature any dedicated cycling facilities.

Public Transport

- 2.3.19. Ashgrove Road does not feature any public transport provision.

Parking

- 2.3.20. There is no provision for cycle parking on Ashgrove Road.
- 2.3.21. Car parking on Ashgrove Road is restricted between the junctions with Westburn Drive and May Baird Avenue, and there are a number of uncontrolled sections on the south side of the carriageway between May Baird Avenue and Berryden Road. Parking demand is largely dominated by residents, with overnight occupation observed 24 of 28 available space during parking surveys; it is however noted that two of those parking overnight did so on double yellow lines. Daytime occupation was observed to reduce to between 50-60%.

Laurelwood Avenue/ Elm Place

- 2.3.22. Laurelwood Avenue is a residential road that runs north-south between Ashgrove Road and Elm Place. It features direct drive-way access as well as on-street parking on both sides of the carriageway. Vertical traffic calming in the form of speed cushions is in place and it is subject to a 20mph speed limit. Whilst its primary function is as a residential road it is frequently used as by through traffic between Ashgrove Road and Berryden Road.
- 2.3.23. A 30m length of Elm Place between Berryden Road and Laurelwood Avenue is also part of the study area. The road carriageway width is approximately 10m, widening at the junctions. The 20mph speed limit signs are located approximately 15m from the Berryden Road junction.

Walking Provision

- 2.3.24. Footways are provided on both sides of the Laurelwood Avenue and Elm Place carriageways, measuring 2.5-3m in width, with the footway on the west side of Laurelwood Avenue constrained by trees. The north side Elm Place carriageway is over 5m in width.
- 2.3.25. All of the crossings are uncontrolled and are not consistently provided with tactile paving, although dropped kerbs are present across all junctions, including those to the north and south with



Ashgrove Road and Elm Place respectively. Whilst parked vehicles can obstruct visibility for crossing, the slow vehicle speeds, traffic calming, and frequent siting of dropped kerbs to serve driveways allows for crossing opportunities.

Cycling Provision

2.3.26. Laurelwood Avenue and Elm Place do not feature any dedicated cycling facilities.

Public Transport

2.3.27. Laurelwood Avenue and Elm Place are not on defined bus routes.

Parking

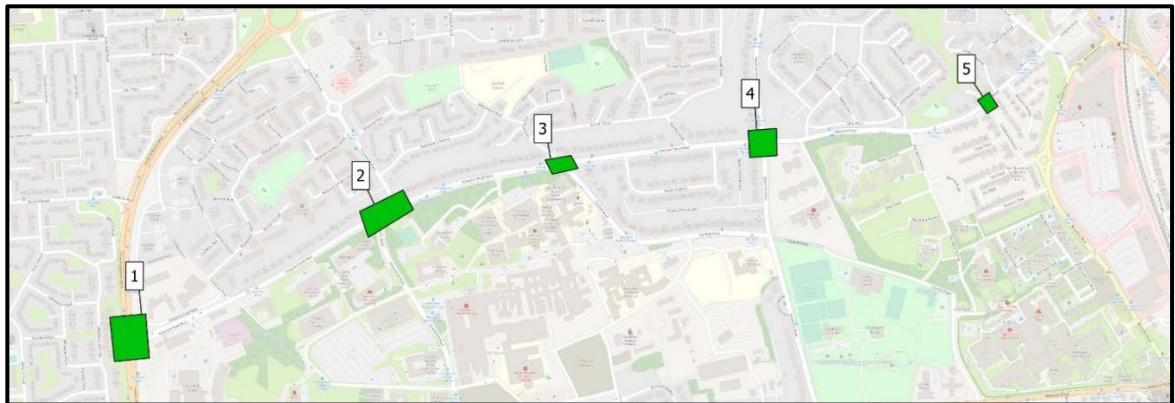
2.3.28. There is no provision for cycle parking on Laurelwood Avenue or Elm Place.

2.3.29. Parking is uncontrolled along Laurelwood Avenue, with no marked bays and no restrictions beyond 'no waiting at any time' restrictions at junctions. Elm Place features uncontrolled parking to the west of the Laurelwood Avenue junction, and has 'no waiting at any time' restrictions to the east.

Key Junctions

2.3.30. A significant number of junctions are situated along the street. These junctions are highlighted in Figure 2.2 and are identified as the more complex junctions that are subject to detailed assessment in this report.

Figure 2.2 – Key Junctions



1. North Anderson Drive – signal-controlled three-arm T-junction
2. Foresterhill Road – signal-controlled staggered crossroads
3. Cornhill Terrace – staggered priority crossroads
4. Westburn Drive – signal-controlled crossroads
5. Laurelwood Avenue – simple priority T-junction

2.3.31. In addition to the key junctions identified above, Ashgrove Road West forms priority junctions with nine side roads, plus multiple commercial / third party / unadopted / driveway accesses. Ashgrove



Road is similar, although right-turn ghost-islands are provided to serve Roxburghe House and May Baird Avenue.

2.4. Topography

2.4.1. Topographical surveys have not been undertaken at this stage and should be undertaken at RIBA Stage 3. All design and assessment work has been progressed using Ordnance Survey mapping.

2.5. Location of existing services

2.5.1. An initial utility search has been undertaken and the following utility services have been identified within the scheme:

- City Fibre;
- Street Lighting;
- Neos Network;
- Openreach (BT);
- Scottish Water;
- Vodafone;
- Scottish and Southern Electricity Network;
- Scotland Gas Network; and
- SSE Transmissions.

2.5.2. The utility search provides a list of known apparatus within the scheme extents and is summarised below:

- Between North Anderson Drive and Foresterhill an extra high voltage cable of 132kV is present in both the footway and carriageway.
- Fibre optic cables with active chambers are present throughout the scheme within the carriageway and footway. Openreach have live boxes and cables along the route, with live cabinets present at Foresterhill Road junction and Westburn Drive. A live pole is located at Grove Crescent Lane and a planned cable cross is noted at Westburn Drive junction.
- Street lighting within the scheme between North Anderson Drive and Westburn Drive consists of 'Not Live Feed' lighting columns and looped ACC – 3 core SWA cable. However, 'Live Service – Concentric' cables are present at two locations: Foresterhill Road and Westburn Drive. 'Live Feed' lighting columns are present between Westburn Drive and Berryden Road and 'Live Looped' lighting columns are at Westburn Drive and May Baird Avenue. At May Baird Avenue and Belmont Gardens, illuminated 'Warning' signs are present and an illuminated 'Regulatory' road sign is located at Berryden Road Junction.
- Scottish Water have both water distribution and wastewater pipes within the scheme. Water distribution pipes are in the carriageway and footway, and there are several hydrants also present in the footway. Wastewater pipes are in the carriageway and footway with trade



effluent chambers present between North Anderson Drive and Foresterhill, along May Baird Avenue to Berryden Road. CSO (Combined Sewer Overflow) chambers are present between Foresterhill and Cornhill, at Grove Crescent and May Baird Avenue and between May Baird Avenue and Berryden Road. At Foresterhill/Cornhill and Grove Crescent, there are several Buchan Traps.

- There are both low voltage electric and fibre optic cables running in the footway and carriageway throughout the scheme. Between May Baird Avenue and Berryden Road, a 22kV cable is present in the carriageway.
- There are both medium and low-pressure gas mains in the carriageway and the footway. The medium pressure pipe transitions into a 355 PE M/P (Polyethylene Medium Pressure) until Cornhill junction, then changes to a 315 PE with a 15in diameter thereafter. After Beattie Drive junction, a valve is located in the middle of the carriageway which the medium pressure main feeds into.

2.6. Heritage and Conservation

Character

- 2.6.1. There are clear differences in the character and identify of the western part of the study area (Ashgrove Road West) and the eastern part (Ashgrove Road to the east of Westburn Drive; Laurelwood Avenue and Elm Place).
- 2.6.2. Ashgrove Road West is a wide road designed to accommodate relatively high traffic volumes with a high priority given to through movement. By contrast Ashgrove Road is considerably narrower and has a design more suited to lower traffic volumes with a high proportion of local access movements.
- 2.6.3. Ashgrove Road, between Westburn Drive and May Baird Drive, is framed by long stretches of high stone walls, with few gaps and no frontages onto the street. There is minimal diversity of space and has little passive surveillance from adjacent properties or entrances.

Heritage and conservation

- 2.6.4. The only recorded heritage interest within the Design Area is the Rosemount and Westburn Conservation Area, which borders on a small stretch of Ashgrove Road on the south side, east of Westburn Drive.
- 2.6.5. The buildings with notable historic significance within this conservation area are situated in Rosemount to the south. Westburn has been included within the conservation area to retain the parklands of Westburn and Victoria Park.

2.7. Active Travel

- 2.7.1. An Active Travel Network Assessment (document CR-J) was undertaken to review existing conditions for walking and cycling in the area around Ashgrove Connects and identify



complementary network improvements to allow walking and cycling to be accessible as an everyday choice for all ages and abilities.

2.7.2. The key findings were:

- There is strong potential demand in areas close to the city centre due to both high sustainable transport mode share, low car ownership and a high population density. This supports the common principle of network design to focus on unlocking safe access to the city centre then building outwards
- Existing road conditions in the study area are not well suited to safe all ability access with an existing layout that includes many wide, straight roads that create a motor traffic dominated environment allowing high speeds through residential areas
- Barriers to walking and cycling in and around the scheme significantly limit the ability to get from one neighbourhood to the next or to local destinations;

2.8. Vehicular Traffic

2.8.1. Traffic flows are busiest between Foresterhill and Westburn, exceeding 10,000 vehicles per weekday, and quietest along Ashgrove Road at the east of the Design Area, at around 6,000 vehicles per weekday. Saturday flows were typically around 50-60% of the weekday flows throughout the study area.

2.8.2. HGV traffic as a percentage is higher towards the west, reaching over 8% towards North Anderson Drive as service and deliveries arrive via this major route. They are lower to the east, just over 5%, a reflection of the area as largely residential, with goods vehicles accessing the shops and Royal Mail depot but not generating much through-traffic.

2.8.3. Traffic movements at the west end of the Design Area are broadly tidal in nature as traffic is drawn from and to North Anderson Drive in the AM and PM peak hours respectively, whereas flows are generally balanced by direction in the centre and east of the area. While the daily flow profiles reflect typical weekday working patterns (i.e. observable AM / PM peak hours), there was minimal drop-off between the morning and evening peaks with traffic levels relatively steady throughout the day.

2.8.4. Average (mean) traffic speeds were observed to exceed the speed limit closer to North Anderson Drive and Westburn Drive and were lower in the centre of the Design Area in the vicinity of Foresterhill Road. It was however noted that the 85th percentile speeds observed during surveys were in excess of the 30mph limit at each of the surveyed locations.

2.8.5. The adopted North East Scotland Roads Hierarchy identifies speed limits of 30-40mph as suitable for priority and secondary routes (i.e. A-class and B-class) and that 20mph is suitable for a tertiary (C-class) route. Ashgrove Road West, Ashgrove Road, Laurelwood Avenue and Elm Place are

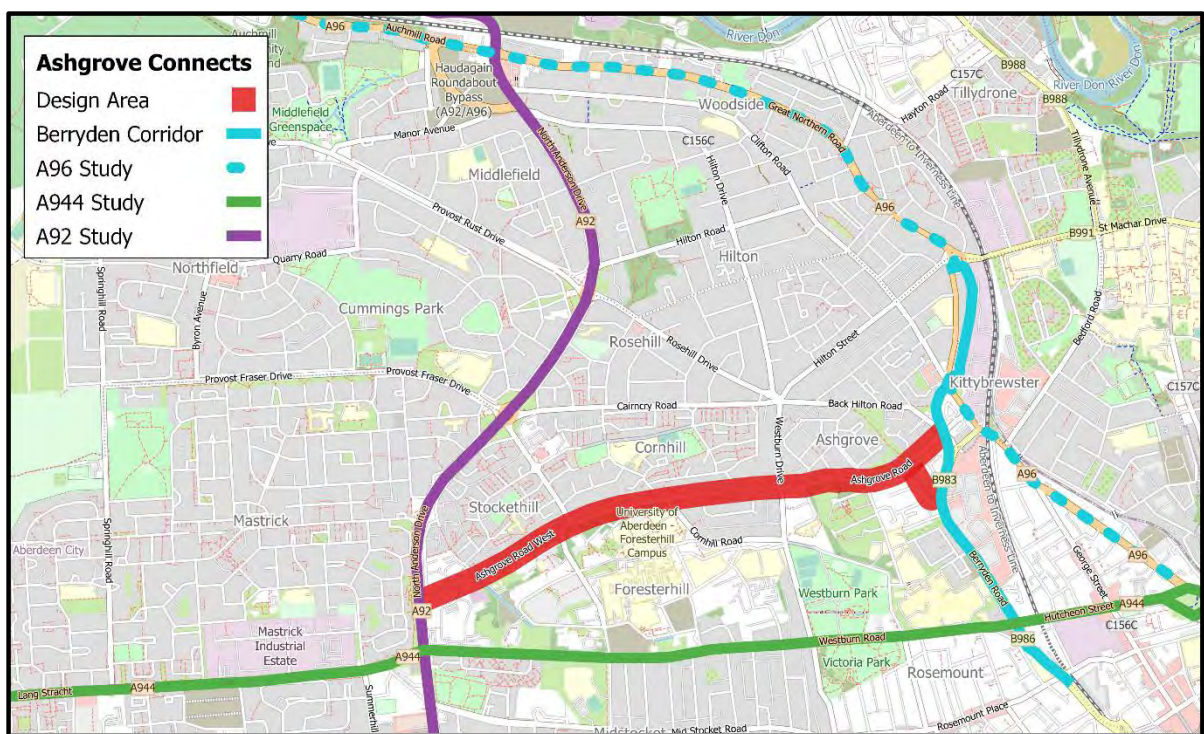


classified as C-class roads in the Roads Hierarchy and therefore a change in speed limit to 20mph would be consistent with adopted ACC policy.

2.8.6. A review of collision data within the Design Area was undertaken using records supplied by ACC, covering the five-year period between 2016-2020. The review identified two clusters of collisions: one at the west end of the Design Area at the North Anderson Drive junction, and one at the east end at the Berryden Road and Powis Terrace junctions. One other collision was identified within the Design Area, which occurred to the east of the Foresterhill Road junction. None of the collisions was recorded as fatal, four were recorded as serious (two at each cluster), ten as slight, while the Foresterhill Road collision was recorded as damage-only (i.e. no injuries).

2.9. Proposed Multi-Modal Studies impacting the study area

Figure 2.3 – Proposed Improvement Projects



Berryden Corridor Improvement Project

- 2.9.1. The Berryden Corridor Improvement Project involves widening the existing corridor between Skene Square and Ashgrove Road, along with a series of junction upgrades along the corridor. A new section of road will be constructed immediately east of Ashgrove Road to connect with Kittybrewster Roundabout.
- 2.9.2. The traffic data supplied for the Traffic Impact Assessment was extracted from the Aberdeen City Centre Paramics Model 2019, which was adapted for the traffic modelling appraisal of the Berryden Corridor. As this is considered to be a committed scheme these turning movements are considered



more reflective of the traffic context within which Ashgrove Connects will operate, as opposed to using new traffic survey data.

- 2.9.3. Where a traffic redistribution impact is anticipated in any of the Ashgrove Connects proposals, for example with a turning or movement restriction, traffic has been reassigned using first principles without any forecast change in overall traffic. Further details of any redistributive impacts are covered in Section 8.6.

A92 Multi-Modal Study

- 2.9.4. Jacobs has been commissioned by ACC to develop a Scottish Transport Appraisal Guidance (STAG)-based appraisal of options for improvements to the A92 corridor between Bridge of Don and Bridge of Dee. The study places a focus on improving bus connections and conditions for people walking, wheeling, and cycling. Its main aim is to 'lock in' the local benefits arising from the opening of the Aberdeen Western Peripheral Route by seeking to encourage more people to travel sustainably. The study is funded by Transport Scotland's Bus Partnership Fund.

- 2.9.5. The project sets out the following objectives:

- TPO 1: Reduce the severance effects caused by the A92 for journeys across the corridor, particularly for journeys by bus;
- TPO 2: Enable the A92 corridor to be a more effective connector between communities/key trip attractors for users of active modes;
- TPO 3: Reduce the environmental impact of traffic on the A92 corridor;
- TPO 4: Reduce real and perceived road safety risks for users of all modes considering travelling along or across the A92 corridor;
- TPO 5: Support the roads hierarchy by encouraging use of the most appropriate routes for local and through traffic;
- TPO 6: Improve journey times and journey time reliability for buses and emergency vehicles.

- 2.9.6. The A92 Study identifies the following options that may impact on the Ashgrove Connects Design Area:

- introduce early-release signals to provide a green signal for cyclists to allow them to move off before other traffic at A92 North Anderson Drive / Ashgrove Road West junction
- introduce bus priority measures, such as bus lanes, signal controls, and bus stop improvements at the following locations:
 - A92 North Anderson Drive between Ashgrove Road West and Haudagain Roundabout
 - Ashgrove Road West, on approach to A92 North Anderson Drive
 - Foresterhill Road between Ashgrove Road West and A92 roundabout

A944 Multi-Modal Study

- 2.9.7. Stantec have been commissioned by ACC to undertake a STAG-based appraisal of the A944 (and A9119) corridors between Westhill and Aberdeen city centre. The study builds on previous work



and aims to further develop identified options to improve transport connections along the corridor, with a focus on active travel and public transport.

2.9.8. The project sets out the following objectives:

- TPO1: Improve the quality of the pedestrian experience for all, and address the barriers which affect some groups moving around as a pedestrian
- TPO2: Improve cycle routes to ensure they are sufficiently direct and connected, while improving journey quality, times, and safety for cyclists in the corridor
- TPO3: Rebalance the city centre environment in favour of more sustainable modes
- TPO4: Reduce journey times by bus and improve service punctuality
- TPO5: Improve the quality of bus services and bus stop infrastructure in the corridor, enhancing the experience for current bus users and attracting new passengers
- TPO6: Address the cost of public transport and reduce gaps in bus connectivity along the corridor
- TPO7: Provide improved integration between sustainable travel modes
- TPO8: Increase the mode share for sustainable travel modes along the A944 and A9119 transport corridors

2.9.9. The A944 Study is located away from the Ashgrove Connects Design Area, therefore there is no direct integration or conflict with Ashgrove Connects. It does however form part of a wider opportunity along with the other ongoing infrastructure improvement projects throughout Aberdeen to contribute to a well-connected quality network for non-motorised users of all ages and abilities

A96 Multi-Modal Study

2.9.10. Stantec have been commissioned by ACC to undertake a STAG-based appraisal of the A96 corridor between Aberdeen City Centre and Inverurie. It shares a similar aim to the A944 Study; to improve transport connections along the corridor, particularly active travel and public transport connections.

2.9.11. The project sets out the following objectives

- TPO 1 - Improve the quality of the pedestrian experience, and address the barriers which affect some groups moving around as a pedestrian
- TPO 2 - Improve the quality of the cycling experience, and address the barriers which prevent many people cycling
- TPO 3 - Improve the quality of bus travel in the corridor for all users, enhancing the network and the travel experience both for current bus users and to attract new users
- TPO 4 - Reduce bus journey times and improve punctuality in the corridor, and narrow the gap between bus and car-based journey times
- TPO 5 - Improve integration with, and access to rail services in the corridor



- TPO 6 - Manage journey time for general traffic to prevent traffic re-routing in the corridor

2.9.12. It builds upon the committed Berryden Corridor and includes options to provide further improvements beyond those already committed as part of the Berryden project. Four options are identified within the vicinity of the Ashgrove Connects Design Area, covering the A96 section between Printfield Walk to the City Centre. Each of the options would provide a segregated cycle track and bus priority measures (either a bus lane or busway) on the A96 to the north of its junction with Clifton Terrace, with each option varying to the south as follows:

- Option 1 - Segregated one or two-way cycle track following the alignment of the existing A96 (i.e not following the new Berryden Corridor). Would also include bus lane provision or a busway on the A96.
- Option 2 - Segregated one or two-way cycle track following the alignment of the existing A96 (i.e not following the new Berryden Corridor). Would also include bus lane provision on the A96, supported by widening the existing A96 at Belmont Road Railway Bridge.
- Option 3 - Segregated one or two-way cycle tracks following both the existing A96 and new Berryden Corridor alignments. The full length of the Berryden Corridor would be used to provide either a bus lane or busway between Craibstone and the rail / bus station.
- Option 4 - Segregated one or two-way cycle track following the existing A96 alignment. Bus gates would be provided between Clifton Road and Kittybrewster Roundabout.

A92 / A96 Haudagain Bypass

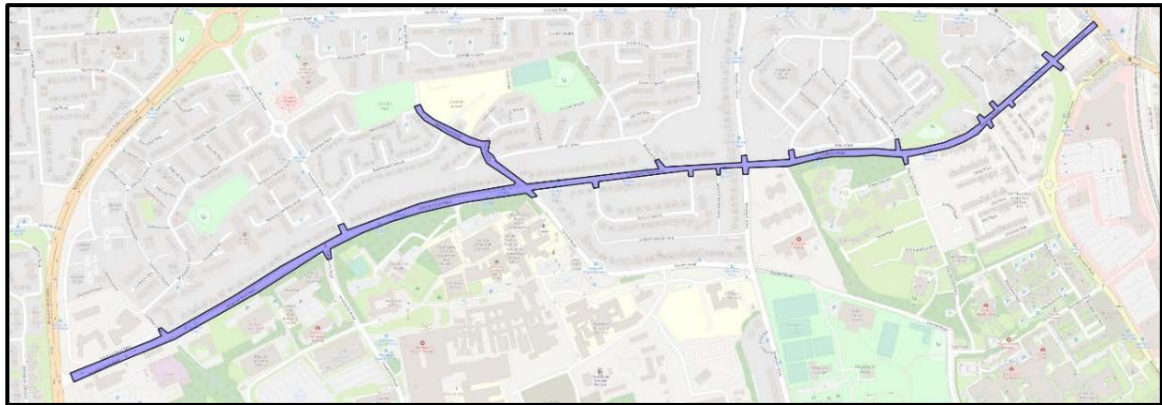
2.9.13. Also relevant to the study area is the established infrastructure improvement at the Haudagain roundabout. Farrans were commissioned by Transport Scotland to reconfigure the Haudagain Roundabout, formed by the A92 and A96, located to the north of the Ashgrove Connects Design Area. The project involved the provision of a new section of dual carriageway linking the western and southern approaches to Haudagain Roundabout to form a new 500m long bypass, with the aim of reducing traffic congestion and improving journey time reliability.

2.9.14. Although the project is relatively remote from Ashgrove Connects, it does contribute to wider active travel improvements. The Bypass links with the A92 and A96 via signal-controlled junctions, both of which provide toucan crossings over each approach, which connect with either shared or segregated cycle / footways.

2.10. Parking

2.10.1. Car parking surveys were undertaken on Tuesday 26th April and Saturday 30th April 2022. The surveys covered the full length of Ashgrove Road West and Ashgrove Road, along with the first 20m of each side road, as illustrated in Figure 2.4. As requested by ACC, the survey area also extended north on Cornhill Terrace and Beechwood Road to observe pick-ups / drop-offs at Cornhill Primary School.



Figure 2.4 – Parking Survey Area

- 2.10.2. Parking occupancy on Ashgrove Road West was minimal overnight, indicating a negligible level of use by residents. It reached a peak occupancy of approximately 30 vehicles on the surveyed weekday (of an overall estimated capacity of 112 spaces) and did not exceed ten parked vehicles on the Saturday survey.
- 2.10.3. Parking occupancy on Ashgrove Road was near full capacity (approximately 28 spaces) overnight and dropped to around 50% during the day on both the weekday and Saturday surveys, indicating that the majority of spaces are used by residents.
- 2.10.4. Given that the Design Area extends south on Laurelwood Avenue to the Elm Place junction further surveys should be undertaken during Stage 3 to cover both Laurelwood Avenue and Elm Place to establish baseline parking demand levels within the full Design Area.



2.11. Policy Context

2.11.1. A review of all established policy documentation relevant to Ashgrove Connects was undertaken as part of the Baseline Assessment. A summary of these documents and their alignment with Ashgrove Connects is presented in Table 2.1.

Table 2.1 - Policy Review Summary

Document	Overall Aims & Synergy with Ashgrove Connects
Local Outcome Improvement Plan 2016 to 2026	Links reduced car usage with various issues such as net zero, connectivity, and employment Sets percentage targets for increasing walking and cycling as main mode of travel by 2026
Climate Change Plan 2021 to 2025	Sets out scope of ACC's net zero ambitions, with interim targets Note that Council General Fund Revenue Budget and Capital Programme has funding commitment for initiatives that will support development of net zero
Regional Transport Strategy 2040	Aims include enhancing travel opportunities, reducing number and severity and casualties, increasing use of active travel, reducing proportion of journeys by car
Local Transport Strategy 2016 to 2021	Increase no. people walking / cycling / using public transport Improve public realm by prioritising pedestrians, cyclists, public transport
NE Scotland Roads Hierarchy 2019	Proposes to reclassify Ashgrove Road West as a C-class road / tertiary route
Active Travel Action Plan 2017 to 2021	The aim is to create an environment and culture in which walking and cycling are convenient, safe, comfortable, healthy and attractive choices of travel for everyday journeys. The associated network plan does not directly reference Ashgrove due to age of document, but its aims align with Ashgrove Connects.
Aberdeen City Central Locality Plan 2021 to 2026	Identifies Ashgrove and Stockethill as priority neighbourhoods Aims include creating employment opportunities, improving access to services, create opportunities for people to connect and increase physical activity
Partnership Development Plan 2021	Produced to support Local Outcome Improvement Plan
Sustainable Urban Mobility Plan 2020	Key principle is to lock in benefits of AWPR to prioritise movement of active and sustainable travel through the reallocation of carriageway space and other prioritisation and traffic management measures

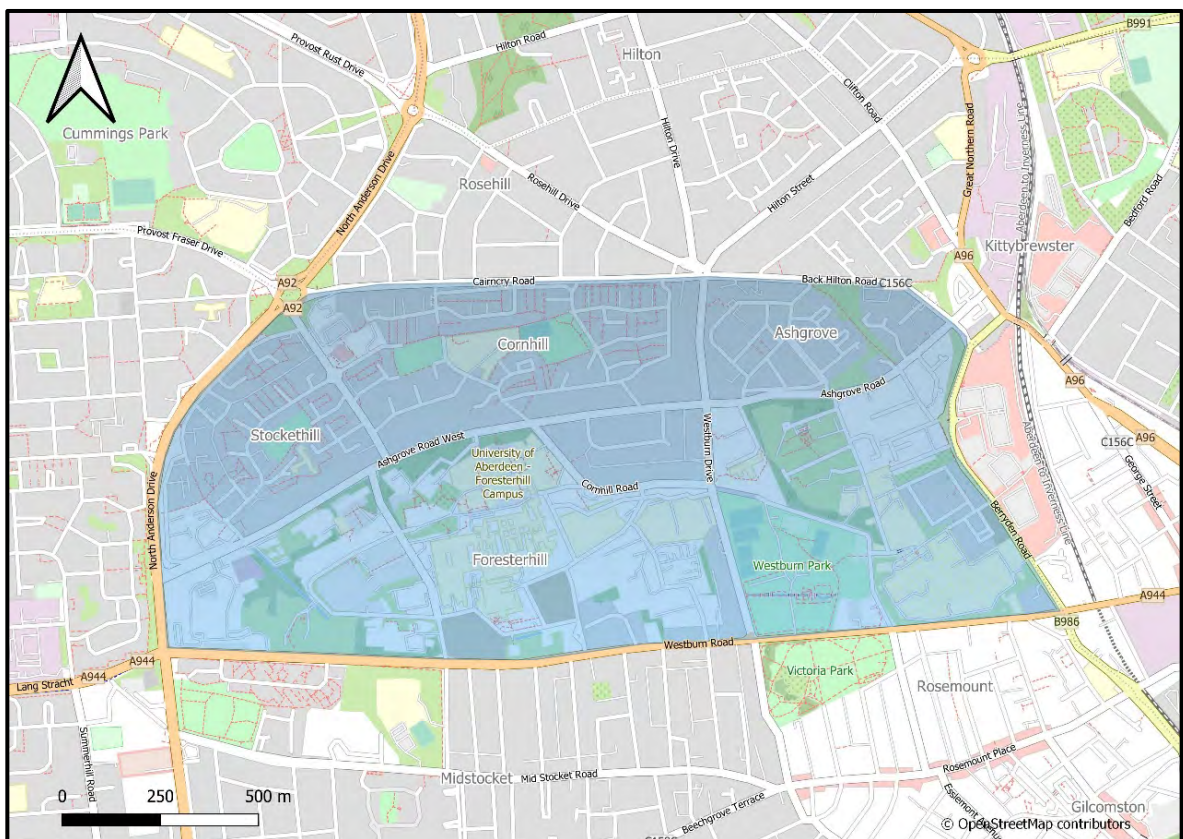


3. Engagement Summary

3.1. Introduction

- 3.1.1. This Chapter summarises the engagement undertaken which has actively involved the public and stakeholders to ensure their needs and aspirations are identified, understood, and considered, and to provide a level of influence over decisions. This is summarised in full in the Stage 1 Engagement Report (document CR-D1), Stage 2 Engagement Report (document CR-D2) and the Baseline Assessment (CR-K).
- 3.1.2. Engagement to date has comprised of raising awareness and understanding of the project, identifying local priorities, and developing these into Design Objectives with the support of the Stakeholder Working Group and generating feedback on Initial Design Ideas.
- 3.1.3. The area of engagement is presented in Figure 3.1.

Figure 3.1 – Engagement Area



- 3.1.4. A Stakeholder Engagement and Communications Plan has been developed which sets out the aims and objectives of the engagement process alongside a Stakeholder Matrix to identify levels of stakeholder influence against anticipated levels of interest in the project. This has been regularly



reviewed and updated throughout, taking into consideration any gaps in engagement with key demographics and lessons being learned.

3.1.5. An activities tracker has been kept up to date to record the level of engagement throughout the project, summarised in Figure 3.2.

Figure 3.2 – Level of engagement



3.2. Stage 1 (Define Stage)

3.2.1. Engagement on the project commenced in March with the launch of the project website, online webinar, walking audits as shown in Figure 3.3 and meetings with residents and stakeholders.

3.2.2. The purpose of this engagement period was to raise awareness and understanding of the project locally and gather information from the community on their experiences of using the streets. The information gathered helped to define local priorities and steer the development of Design Objectives.

3.2.3. Due to Covid-19 guidelines at the time, the project delivered a hybrid approach to engagement with a mixture of online and offline methods. Contact details were made available for members of the public to contact the project team directly by phone and email.

Figure 3.3 – Walking Audit with Cornhill Primary School



Participant at the walking audit:

“It was interesting to think critically about a street I’ve always used but never actively thought about.”

- 3.2.4. Between Tuesday 8th March and Sunday 3rd April, the project website received 958 visitors with 677 contributions either submitted directly on the website or surveyed by the project team.
- 3.2.5. This was promoted locally through local member briefings, a press release to local media, leaflet drops to residents and businesses, social media and notifications to identified stakeholders.
- 3.2.6. Most people who responded either live and work in the area and normally travel by active modes when combining on foot and by bike. There were slightly more female respondents and most fell within the 35-44 age category.
- 3.2.7. The top three topics respondents commented on overall were *traffic and parking*, *moving around on foot, by bike or wheelchair* and *feeling safe*. Figure 3.4 presents the themes respondents commented on, with the most popular appearing the largest.

Figure 3.4 – Word Cloud of Respondents' Comments



Survey respondent:

“The Ashgrove Road West/Foresterhill Road staggered junction is confusing and overly complicated. Multiple times as a car driver and cyclist I have experienced near misses due to traffic in the wrong lane. The sequencing of the lights is suboptimal, with traffic getting stopped on the junction, blocking it for cross-traffic, and significant spells in the cycle where no traffic gets to use the crossing.”

- 3.2.8. More detail on the engagement undertaken and findings from Stage 1 is presented in the Baseline Assessment (CR-K).
- 3.2.9. Known gaps in the engagement response during Stage 1 include:
- Invitations to join a walking audit and attend a meeting of Disability Equity Partnership (DEP) were extended to Aberdeen City Council Officers however a lack of response has meant engagement has not yet taken place with disability forums. If there continues to be no



response or availability from disability forums, engagement should take place with a local care home and other sources to understand and assess accessibility requirements.

- Responses from businesses has been low. Further business drop-ins should take place during Stage 2 to establish key contacts and raise further awareness of the project.

3.3. Stakeholder Working Group

- 3.3.1. During Stage 1, a Stakeholder Working Group was established providing stakeholder and community representation to help the project align with local priorities. A Terms of Reference was developed outlining the groups purpose, responsibilities and membership.
- 3.3.2. The Stakeholder Working Group has invited representatives from different street users such as local residents, institutions, community groups, emergency services and disability groups. All groups invited to join the Stakeholder Working Group receive meetings invites and papers. Table 3-1 outlines the groups who have attended the meetings so far.
- 3.3.3. To date, four meetings of the Stakeholder Working Group have taken place as summarised in Table 3.1. Each meeting has been held with a clear purpose and to seek stakeholder validation on key outputs including the emerging themes from Stage 1, Design Objectives and findings from Stage 2.

Table 3.1 – Stakeholder Working Group meeting schedule

Date	Validation	Attendees
Wednesday 27 th April	Emerging themes from Stage 1	ACC – Roads Projects ACC – Transport Strategy Atkins University of Aberdeen NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Rosemount & Mile End Community Council Grampian Cycle Partnership Aberdeen Health and Social Care Partnership
Wednesday 18 th May	Design Objectives (5 out of 6)	ACC – Roads Projects ACC – Transport Strategy Atkins University of Aberdeen NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Cairncry / Cornhill Community Association Grampian Cycle Partnership
Wednesday 15 th June	Design Objectives (6 out of 6)	ACC – Roads Projects ACC – Transport Strategy Atkins NHS Grampian Resident of Ashgrove Road West



		Resident of Ashgrove Road Rosemount & Mile End Community Council
Wednesday 24 th June	Findings from Stage 2	ACC – Roads Projects Atkins University of Aberdeen NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Rosemount & Mile End Community Council Grampian Cycle Partnership Aberdeen Health and Social Care Partnership

3.3.4. The Stakeholder Working Group has provided strong support to the project delivery team and should continue to help to drive the project forward.

3.4. Stage 2 (Develop Stage)

3.4.1. The second consultation period commenced on Tuesday 21st June and closed on Sunday 17th July. The purpose of this was to collect feedback on the Initial Design Ideas to inform the development of a Concept Design.

3.4.2. The consultation was promoted through local member briefings, a press release to local media, leaflet drops to residents and businesses, social media, notifications to identified stakeholders and blogs through the project website. A copy of all the communication material can be found in Appendix 1 of the Stage 2 Engagement Report (CR-D2).

3.4.3. The consultation material was displayed on the project website and at Cornhill Library for people to view and respond to.

Participant at Cornhill Library:

“Thanks for the opportunity to view the designs. We did so at Cornhill Library this morning. We found these well-presented and so please accept our thanks to you and your team.”

3.4.4. Alongside public events such as the webinar and drop-ins, workshops were also held with Cornhill Primary School, Crosby House Care Home and residents of Ashgrove Road and Laurelwood Avenue, as shown in Figure 3.5. These workshops allowed for more in-depth discussion on specific elements of the Initial Design Ideas such as parking and traffic flow for residents living on Ashgrove Road and Laurelwood Avenue and accessibility considerations for residents of Crosby House Care Home.



Figure 3.5 – Workshop with residents



3.4.5. The activities held during this period are summarised in Table 3.2 and more detail is provided in the Stage 2 Engagement Report (CR-D2).

Table 3.2 – Summary of Activities Held

Date	Activity	Audience	Attendees
Wednesday 22 nd June	Workshop	Cornhill Primary School	6
Monday 27 th June	Briefing	Local members	1
Tuesday 28 th June	Webinar	Public	5
Tuesday 5 th July	Drop-in	Public	44
Wednesday 6 th July	Workshop	Crosby House Care Home	15
Tuesday 12 th July	Workshop	Ashgrove Road and Laurelwood Avenue residents	9
Overall Attendees			80

3.5. Summary of Responses

3.5.1. A more detailed analysis of respondents and responses is provided in the Stage 2 Engagement Report (CR-D2).

3.5.2. Between Tuesday 21st June and Sunday 17th July, the project website received 872 visitors with 92 contributions either submitted directly on the website or surveyed by the project team.



- 3.5.3. It was noted that the majority of respondents live or work in the area and normally travel by active modes, either on foot or by bike, similar to Stage 1. There were slightly more female respondents and most fell within the 35-44 age category.
- 3.5.4. The initial designs were split into two areas for people to respond to:
- Ashgrove Road West; and
 - Ashgrove Road and Laurelwood Avenue.

Ashgrove Road West

- 3.5.5. Respondents were asked to feedback on the overall design ideas for this area against the Design Objectives:
- **80% of respondents agreed or mostly agreed** about the designs “*creating a slower, quieter street environment.*”
 - **84% of respondents agreed or mostly agreed** about the designs “*making crossing the road and using junctions easier and a more comfortable experience.*”
 - **89% of respondents agreed or mostly agreed** about the designs “*making the street feel more attractive and safer for people to spend time in.*”
 - **84% of respondents agreed or mostly agreed** about the designs “*making it easier to walk.*”
 - **80% of respondents agreed or mostly agreed** about the designs “*enabling people of ages and abilities to move around by bicycle.*”
 - **49% of respondents agreed or mostly agreed** and **37% neutral** about the designs “*providing parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.*”
- 3.5.6. Respondents made the following general feedback on the overall designs for Ashgrove Road West:
- Support for:
 - The level of ambition shown.
 - A 20mph speed limit but concern people will not adhere to this without enforcement such as speed cameras.
 - Dissuading through traffic but scepticism about whether the design will be able to reduce traffic levels to prevent congestion, particularly at key junctions.

Respondent:

“Very impressed with the plans, especially the separate pedestrian, cycle, road ways.”

- Concern about:
 - Emergency service access and impact on response times if the road is narrowed.
 - Future maintenance of areas of greenspace, trees, and cycle lanes.
 - Impact on access to and visibility from driveways from trees and cycle lanes.



Respondent:

“Not sure how drive accesses can be maintained and have safe cycle ways. All this planting is good but current maintenance of green in the city is rubbish.”

- Suggestion to:
 - Improve signage for parking at the Foresterhill Health Campus.
 - Improve bike storage for those in flats.
 - Demonstrate how the designs will integrate with wider infrastructure changes.

Respondent:

“20mph speed limit now! We can't wait for later Stages. The changes clearly need to be integrated into an overall design in relation to Berryden Corridor and Anderson Drive potential revisions.”

Ashgrove Road and Laurelwood Avenue

3.5.7. Respondents were asked to feedback on the overall design ideas for this area against the Design Objectives:

- **77% of respondents agreed and or mostly agreed** about the designs *“creating a slower, quieter street environment.”*
- **69% of respondents agreed and or mostly agreed** about the designs *“making crossing the road and using junctions easier and a more comfortable experience.”*
- **67% of respondents agreed and or mostly agreed** about the designs *“making the street feel more attractive and safer for people to spend time in.”*
- **69% of respondents agreed and or mostly agreed** about the designs *“making it easier to walk.”*
- **69% of respondents agreed and or mostly agreed** about the designs *“enabling people of ages and abilities to move around by bicycle.”*
- **50% of respondents agreed and or mostly agreed** about the designs *“providing parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.”*

3.5.8. Respondents made the following general feedback on the overall designs for Ashgrove Road and Laurelwood Avenue:

- Support for:
 - A 20mph speed limit.
 - Improved visibility and crossings.
 - Aesthetics improvements.

Respondent:

“Really hope that some combination of these ideas actually comes to fruition!”

- Concern about:
 - Location of parking bays.



- Emergency service access and impact on response times if the road is narrowed.
- Moving traffic volume and parking problems onto other residential streets.

Respondent:

“Reducing parking spaces will shift the cars to other streets - not necessarily solving any issues in the larger sense.”

- Suggestion to:
 - Focus on reducing traffic volume further.
 - Extend 20mph zone to Elm Place.
 - Encourage businesses to promote their off-street customer car parks.

Respondent:

“More greenery should be planted, not just trees, and Ashgrove Road is wide enough to accommodate this along with a cycle path.”

3.6. Workshop Responses

- 3.6.1. The purpose of the workshop with pupils of Cornhill Primary School was to present, discuss and develop the Initial Design Ideas through a 3D model. This highlighted:
- Positive feedback to many of the key design features, particularly more crossings, gateway features, secure cycle parking, modal filters, pocket parks and informal play areas.
 - The need for secure cycle parking to enable more people to cycle, particularly for those living in high rise flats.
 - The opportunity to trial some of the designs to gain more feedback from the community before making changes permanent.
- 3.6.2. The purpose of the workshop with residents and staff of Crosby House Care Home was to understand their travel behaviour, identify barriers to moving around and highlight improvements This highlighted:
- Many residents and their families travel by foot, wheelchair, and car/taxi to access the care home. Residents tend to travel along Ashgrove Road West, Ashgrove Road, and Laurelwood Avenue to visit the hospital/GP, shop, meet family/friends, and visit the park.
 - Identified issues included high traffic speed and volume, high kerbs, no resting places, poor pavement conditions, and restricted visibility at junctions, particularly at the Ashgrove Road entrance to May Baird Avenue.
 - Positive feedback to many of the key design features, particularly more crossings, 20mph speed limit, gateway features, continuous footways, and enhanced greenspace.
- 3.6.3. The purpose of the workshop with residents of Ashgrove Road and Laurelwood Avenue was to discuss the issues they face as residents of the streets and to understand their priorities for change



including opportunities to change traffic flow, parking arrangements and greenspace. This highlighted:

- Identified issues included high traffic speed and volume, traffic congestion, restricted visibility from parked vehicles, and maintenance of greenspace.
- Support for a one-way system but concerns about increasing traffic volume on Laurelwood Avenue as a result.
- Support for quiet streets but unsure whether this is achievable.
- Support for improved greenspace but need to consider smaller trees/pockets rather than tall trees which create visibility and maintenance issues.
- Concern at displacing parking to other streets and locating spaces near high walls, increasing risk of vandalism.
- Priorities for change highlighted reducing traffic speed and volume, improving crossings, enhancing place quality, meeting parking demand where possible, and improving cycling connections.

3.7. Statutory Stakeholder Responses

- 3.7.1. The Scottish Ambulance Service highlighted the need to consider a two-lane approach to North Anderson Drive from Ashgrove Road West to minimise the risk of ambulances being delayed. They also requested details of the Construction Stage Plan once the project reaches implementation stage. It is recommended that they continue to be consulted at each stage of the design process.
- 3.7.2. First Bus highlighted the need to consider traffic flow where public transport operates through the signal-controlled junctions to assist with overall operation. First Bus raised no issues with the proposed active travel elements.
- 3.7.3. To date, no response has been received from the following key stakeholders:
- Police Scotland
 - Scottish Fire and Rescue
- 3.7.4. Stagecoach, Internal Council transport strategy and roads and planning authority stakeholders have been engaged at this early stage. This has identified the following items for consideration in the design process:
- Design and maintenance of landscaping, public realm;
 - The nature of sustainable urban drainage proposals and tie ins to existing drainage;
 - Maintenance of gullies;
 - Agreement on a materials palette in line with emerging policy;
 - Appropriate replacement of mature trees; and
 - Junction and network modelling alongside parallel schemes.



3.7.5. It is recommended that for each of these items, engagement continues to agree details during Stages 3 and 4.

3.8. Summary and Next Steps

3.8.1. The engagement response during RIBA Stages 1 and 2 was overwhelmingly positive, both in terms of the volume of responses and the constructive nature of the contributions.

3.8.2. This has demonstrated strong support for change however the number of respondents to the second consultation was lower than the first. There could be several reasons for this including the overlap with the school holiday period, high level of response to the planning application for the former Rosehill House building, and Covid-19 continuing to be a barrier to people attending events and community facilities. These factors should be taken into consideration as the project moves into Stage 3.

3.8.3. The Stakeholder Working Group continues to provide great support to the project, both validating outputs at key stages and updating the wider community. The group should continue to communicate as the project moves between RIBA Stage 2 and 3 and drive the project forward.

3.8.4. Known gaps in the engagement response during Stage 2 include:

- Despite attempts to engage disability representatives, engagement with disability forums has not yet taken place. To ensure the project has identified and taken account of accessibility considerations, engagement has taken place with residents, staff and families of Crosby House Care Home through meetings, a survey and workshop. Engagement should continue with Crosby House while attempts to engage disability forums continue.
- Despite regular contact with businesses through drop-ins, there has been very limited response to the project so far from business owners. Engagement should continue with regular drop-ins to raise awareness and recorded delivery of information to premises.

3.8.5. Atkins has taken the key messages into the finalisation of concept design proposals as part of RIBA Stage 2.

3.8.6. Further recommendations for the next Stage of engagement have been outlined in the Stage 2 Engagement Report (CR-D2).



4. Concept Design Options Assessment and Proposals

- 4.1.1. This section summarises the Concept Design Proposals and the options assessment undertaken to identify the preferred options.
- 4.1.2. The Concept Design assessment process was undertaken in three stages:
- Design Objectives were identified in Stage 1 (Section 4.3);
 - A High-Level Assessment of whole-scheme elements was undertaken to identify the general arrangement options for the length of street (Section 4.4); and
 - A Detailed Assessment of specific locations was undertaken to identify a preferred option(s) (Section 4.5).
- 4.1.3. Further detailed optioneering was undertaken with Council stakeholders to produce the proposed Concept Designs described in Section 4.6.

4.2. Engineering Standards

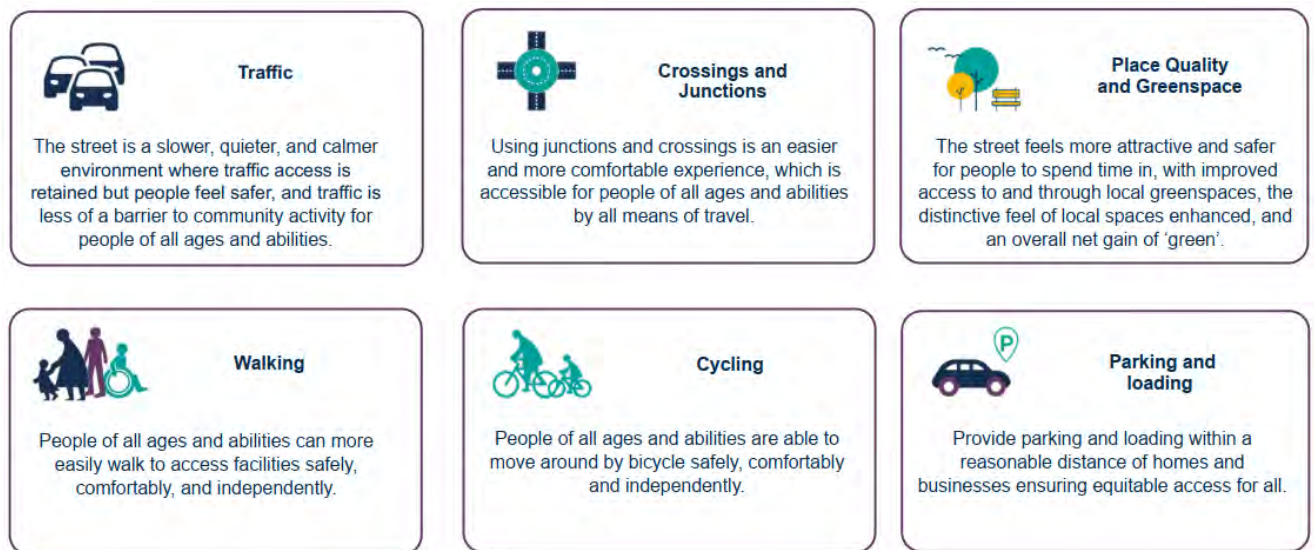
- 4.2.1. The design options identified for Ashgrove Connects have been designed taking account of the following documents:
- **Designing Streets:** The reclassification of the street to a C-class route provides an opportunity to design street elements in accordance with Designing Streets. It places emphasis on the importance of providing well-designed streets at the heart of sustainable communities and demonstrates the benefits that can be realised by assigning a higher priority to non-motorised users.
 - **National Roads Development Guide (NRDG):** The NRDG was adopted by ACC in 2014, with some area-specific alterations. This document supports Designing Streets while bridging the gap to more traditional road design guides. It identifies geometric provision, design / construction details, and parking provision guidance.
 - **Cycling By Design (CBD):** CBD provides guidance for cycling infrastructure design on all roads, streets, and paths in Scotland. It provides a variety of technical design considerations that should be met to ensure that active travel facilities are comfortable, safe, attractive, and suitable for walking and cycling users.
 - **Design Manual for Roads and Bridges (DMRB):** The DMRB sets out all current standards for the design, assessment, and operation of trunk roads in the UK.
 - **ACC Guidelines and Specification for Roads in Residential and Industrial Developments**



4.3. Design Objectives

- 4.3.1. Design Objectives were developed from community engagement, through policy and technical analysis of opportunities and constraints and were validated by the Stakeholder Working Group. The Design Objectives define how the scheme options are assessed and should continue to steer the development of the proposals through subsequent design stages. The process of Design Objectives development is detailed further in the Baseline Assessment. The Scheme Design Objectives are illustrated in Figure 4.1.

Figure 4.1 – Design Objectives



4.4. High Level Assessment

- 4.4.1. The high-level assessment focussed primarily on the overall approach taken for the scheme links.
- 4.4.2. A RAG (red-amber-green) scoring system was developed to assess options against each Design Objective. The RAG rating definitions are:
- Green – Achieves Design Objective
 - Amber – Partially achieves Design Objective
 - Red – Does not achieve Design Objective
- 4.4.3. From this assessment, some high-level options were taken forward for detailed assessment and lower performing options were discarded. A red rating against any single objective was likely to result in an option being discarded.
- 4.4.4. This section summarises the scheme elements taken forward for detailed assessment. The full list of options considered within the High-Level Assessment is provided in Appendix A.



Traffic speed limits

- 4.4.5. Feedback from the community came out strongly in favour of reducing traffic speed, particularly on Ashgrove Road and Ashgrove Road West, with concerns around safety, suppression of community activity and active travel comfort and attractiveness.
- 4.4.6. The adopted NE Scotland Roads Hierarchy identifies speed limits of 30-40mph as suitable for priority and secondary routes (i.e. A-class and B-class) and that 20mph is suitable for a tertiary (C-class) route. Ashgrove Road West, Ashgrove Road, Laurelwood Avenue and Elm Place are classified as C-class roads in the Roads Hierarchy and therefore a change in speed limit to 20mph throughout the study area would be consistent with adopted ACC policy.
- 4.4.7. Surveyed traffic speeds on Ashgrove Road and Ashgrove Road West indicate that, under current guidance, a speed limit change would require complementary speed control measures such as carriageway width reductions or traffic calming.

Traffic calming

- 4.4.8. Ashgrove Road West is a bus route and a key emergency access route. Therefore, only horizontal deflections on the main corridor are considered appropriate.
- 4.4.9. On all minor access streets (other than those acting as bus routes or emergency vehicle property accesses), both vertical and horizontal deflections are options taken forward.
- 4.4.10. Further to this, the removal of centrelines and introduction of alternative surface treatments are recognised to reduce traffic speed by reducing the feeling of priority certainty amongst drivers. These are taken forward as considerations for detailed assessment.

Carriageway lane widths

- 4.4.11. Carriageway running lane width reduction options were considered in the context of supporting speed reduction measures, to reallocate space to other uses within the Design Objectives and to reduce the maintenance burden of wide trafficked carriageways. The approach taken is that the vehicle carriageway space should be the minimum required to facilitate essential movement safely at slow speed within a 20mph speed limit, with traffic capacity a secondary consideration. The following options were taken forward:
- Lanes of 3m + sufficient vehicle clearance distances on Ashgrove Road West; on Ashgrove Road between Westburn Drive and Laurelwood Avenue; on Laurelwood Avenue and on Elm Place (clearance distances vary dependent on vehicle type);
 - Lanes no narrower than the existing traffic movement space on Ashgrove Road between Laurelwood Avenue and Berryden Road (measured as two-way running space of 5.6-5.8m).
- 4.4.12. It is further recommended that clearance distances are applied proportionately when calculating total carriageway width. The National Roads Development Guide (NRDG) recommends an absolute



minimum of 3m wide lanes on a bus route at 20mph (based on a 2.5m wheelbase width) + the relevant clearance distances depending on overall traffic and HGV (including bus) frequency. A 6m two-way carriageway width is the minimum that allows two buses to pass each other at low speed without mirrors overhanging footways. Assuming a 20mph speed limit, a 6.3m carriageway (3m lane + 3m lane + 0.3m clearance between vehicles) allows for additional clearance between vehicles to permit free flow at low speed. While additional clearance of 0.2m to each kerb generally allows buses and HGVs to avoid over-running gullies and therefore may be required where heavy vehicle frequency is especially high. However, to over-provide carriageway width will encourage higher free flow speed by general traffic. Further, for streets where some people will continue to cycle on the carriageway, Cycling by Design advises that “Where streets are designed for cycle users to mix with motor traffic, traffic lane widths should be designed to be between 2.8m and 3.2m to allow cycle users to safely adopt the primary riding position.”

4.4.13. The analysis summarised in Figure 4.2 and Table 4.1 indicates that the frequency of heavy vehicle to heavy vehicle interactions is currently approximately one interaction every two minutes at peak period at the busiest locations (1 and 2). Therefore, it is not likely to be the case that the over-running of gullies is a frequent occurrence in the study area and the full clearance distances are not likely to be necessary. For this reason, a full two-way carriageway width of 6.5m is considered to be appropriate for Ashgrove Road West, and 6-6.5m for Ashgrove Road. Consideration should be given to the clearance distances to pedestrians and cyclists on adjacent footways and cycle tracks to ensure that vehicles are able to pass without mirrors overhanging the running space of these facilities. Cycle tracks should therefore be designed with a buffer from the kerb.

Figure 4.2 – ATC Survey Locations



Table 4.1 – Traffic volume and heavy vehicle frequency

Site	Average Weekday Flow (vehicles per day (vpd))			Average Weekday HGV flow* (% of vpd)			Average Peak HGV Frequency (per hour)		
	East-bound	West-bound	Total	East-bound	West-bound	Total	East-bound	West-bound	Total
1	2,798	4,121	6,919	9.3%	8.4%	8.7%	23	29	52
2	4,388	6,248	10,636	7.8%	8.6%	8.3%	26	47	73



3 | 2,870 | 3,327 | 6,196 | 6.2% | 5.5% | 5.8% | 17 | 17 | 35

* Including buses

Cycling space

- 4.4.14. Cycling by Design provides guidance on the suitability of different cycle link types and the level of service they provide. The objective of this scheme is to provide a high level of service suitable for all ages and abilities.
- 4.4.15. Table 4.2 illustrates the maximum daily and peak hour flows on each link for which data is available. Figure 4.3 indicates how this relates to the guidance on the appropriate infrastructure required to achieve a high cycling level of service.

Table 4.2 – Maximum daily and peak period two-way flows


Site	Maximum daily two-way (pcu per day)	Maximum peak two-way (pcu per hour)	% HGVs
Ashgrove Road West (1)	7,223	649	8.7%
Ashgrove Road West (2)	11,114	920	8.4%
Ashgrove Road (3)	6,353	601	5.8%
Laurelwood Avenue	4,674	329	n/a
Elm Place	n/a	n/a	

- 4.4.16. The Ashgrove Road West and Ashgrove Road data has been identified from the ATC surveys undertaken in March 2022. The Laurelwood Avenue data has been identified from turning count data supplied by ACC; note that an expansion factor, assuming a neutral month of March, has been used to factor the supplied 12-hour flows to 24-hour flows using the method outlined in the COBA Manual. The Laurelwood Avenue data was supplied in PCUs (passenger car units), with no HGV data available. No data has been provided for Elm Place.



Figure 4.3 – Cycling level of service by traffic speed and volume

Motor Traffic Speed (85th percentile)	Two-way traffic flow (pcu per day)	Two-way traffic flow (pcu per hour)	Mixed Traffic Street	Detached or Remote Cycle Track	Cycle Track at Carriageway Level	Stepped or Footway Level Cycle Track	Light Segregation	Cycle Lane
0 to 30 kph	0 to 2000	0 to 200	●●●	●●●	●●●	●●●	●●●	●●●
	2000 to 4000	200 to 400	●●	●●●	●●●	●●●	●●●	●●●
	4000+	400+	●	●●●	●●●	●●●	●●●	●●
30 kph to 50 kph	0 to 1000	0 to 100	●●●	●●●	●●●	●●●	●●●	●●●
	1000 to 2000	100 to 200	●●	●●●	●●●	●●●	●●●	●●
	2000 to 4000	200 to 400	●	●●●	●●●	●●●	●●●	●●
50 kph to 65 kph	0 to 1000	0 to 100	●●	●●●	●●	●●	●●	●●
	1000 to 2000	100 to 200	●	●●●	●●	●●	●●	●
	2000+	200+	✗	●●●	●●	●●	●	●
65 kph to 80 kph	0 to 1000	0 to 100	●	●●●	●●	●●	●●	●
	1000+	100+	✗	●●●	●	●	●	●
80 kph to 95 kph	0 to 1000	0 to 100	●	●●●	●	●	●	●
	1000+	100+	✗	●●●	●	●	✗	✗
95 kph to 110 kph	All	All	✗	●●●	●	●	✗	✗



In relation to Design Principle – Safety

●●● **High Level of Service:** Suitable for most users.

●● **Medium Level of Service:** May not be suitable for some users, particularly novice users. Designer should consider the lack of attractiveness of the facility to these users and how this can be overcome or mitigated.

● **Low Level of Service:** Not suitable for a range of users, including novice and intermediate users. Should be avoided unless the risk to these users is conveyed to the Overseeing Organisation by the designer and accepted by the Overseeing Organisation. See Section 2.4.

✗ **Should not be used**

- 4.4.17. For the volume and composition of traffic in the study area, segregated cycle tracks should be considered.
- 4.4.18. For Laurelwood Avenue, Elm Place and Ashgrove Road (east of Laurelwood Avenue), options to provide a mixed traffic or cycle lane environment may be feasible depending on the nature of traffic movements. While these options are taken forward for consideration, it is observed that much of the traffic on these streets is through traffic and that without further traffic reductions cycling on carriageway is unlikely to suit the most vulnerable users such as children.
- 4.4.19. The highest level of coherence in an urban setting is offered by uni-directional cycle tracks on each side of the road carriageway. However it is recognised that where space is limited, bi-directional cycle tracks on one side of the road are an option.
- 4.4.20. Cycling by Design further recommends that “Within built up areas where a cycling facility is to be located adjacent to a road, there should be a strong presumption in favour of separating pedestrian and cycle movements.” Therefore shared use facilities have not been taken forward for further consideration.
- 4.4.21. Where cycle tracks are provided, the recommended widths in Cycling by Design are:
 - 2m for uni-directional tracks
 - 3m for bi-directional tracks
 - 0.5m buffer to the carriageway (up to 30mph speed limit)



- Additional clearance distance to fixed objects

Footways

- 4.4.22. The condition of footways in the study area is currently impacted by tree roots and other surface issues. As a starting point, the option taken forward is for full footway resurfacing as part of this scheme. However, this may be revisited at a future stage.
- 4.4.23. The following actions are also taken forward in relation to footways:
- Footway width should be retained or increased wherever possible, recognising that there are some situations where footway width reductions may be acceptable where footway use is low;
 - All footways should have appropriate flush access and tactile paving at crossings; and
 - Pedestrian priority over vehicular traffic at most side streets is appropriate, in line with changes to the Highway Code.

Ashgrove Road/ Laurelwood Avenue/ Elm Place traffic circulation

- 4.4.24. Consideration was given to the traffic circulation patterns in the east end of the study area.
- 4.4.25. Public engagement responses were that residents here were concerned about the current volume of through traffic being unsuitable for the street environment. In discussion with ACC, the following parameters in relation to traffic were identified:
- The BCI scheme requires that the right turn and straight-ahead movement out of Elm Place onto Berryden Road must be retained;
 - The left turn from Berryden Road into Ashgrove Road must be retained; and that
 - Turning movements from Ashgrove Road into Laurelwood Avenue must be retained.
- 4.4.26. The High Level assessment considered a number of one-way circulation and turning restriction options within these parameters, and the resulting impact on traffic flows (as derived from modelled turning counts). The options taken forward for detailed analysis are:
- Anti-clockwise one-way circulation on either or both Laurelwood Avenue or Ashgrove Road;
 - A false one-way street on Laurelwood Avenue; and
 - A left turn ban from Ashgrove Road into Berryden Road.

Overall options taken forward for detailed assessment

- 4.4.27. The key features taken forward for consideration in detailed assessment are as follows:
- Narrowing of carriageway widths
 - Segregated cycle tracks
 - Resurfaced footways with widening where possible
 - Side street entry treatments such as raised or continuous priority crossings and junction entry narrowing
 - Shorter and more crossings for people walking and cycling



- Sustainable tree retention, re-instatement and replacement
- Low level planting and or use of rain gardens to reduce run-off
- Community placemaking features such as artwork, seating and greenspace access

4.4.28. Further to this, consideration of alternative traffic circulation patterns at the east end of the study area are taken forward for more detailed analysis.

4.5. Detailed Options Assessment

4.5.1. The detailed options assessment incorporates:

- Overall scoring of the options against each design objective using the RAG rating;
- Consideration of the technical deliverability of each option; and
- In some cases, to inform the RAG rating, more detailed engineering assessments of operational safety and traffic performance.

4.5.2. The detailed options assessment focusses on specific locations in the study area. These are:

- North Anderson Drive/ Ashgrove Road West junction;
- Foresterhill Road/ Foresterhill/ Ashgrove Road West double junction;
- Cornhill Terrace/ Cornhill Road/ Ashgrove Road West junction
- Westburn Drive/ Ashgrove Road West junction
- Ashgrove Road/ Laurelwood Avenue/ Elm Place

4.5.3. This section summarises the options considered for each location and how these were assessed. The full list of options considered at each location is provided in Appendix B.



North Anderson Drive/ Ashgrove Road West Junction

4.5.4. A summary of the assessment of North Anderson Drive junction options is provided in Table 4.3.

Table 4.3 – Summary of North Anderson Drive Assessment

Ref	Option	Assessment outcome
NA1	Do Nothing	No improvement for walking, cycling or speed control
NA2	Tighten entries, remove left turn filter into Ashgrove Road West & adjust signal timings	Limited improvement for walking and cycling
NA3	Signal-controlled with parallel crossings 2 arms	Limited improvement for walking and cycling. Land take may be required
NA4	Signal-controlled with parallel crossings on 3 arms	Meets all objectives. Land take required west of North Anderson Drive
NA5	Roundabout with parallel crossings on all arms	Should be considered within the full corridor study. Land take will be required

* Proposed option(s) in bold

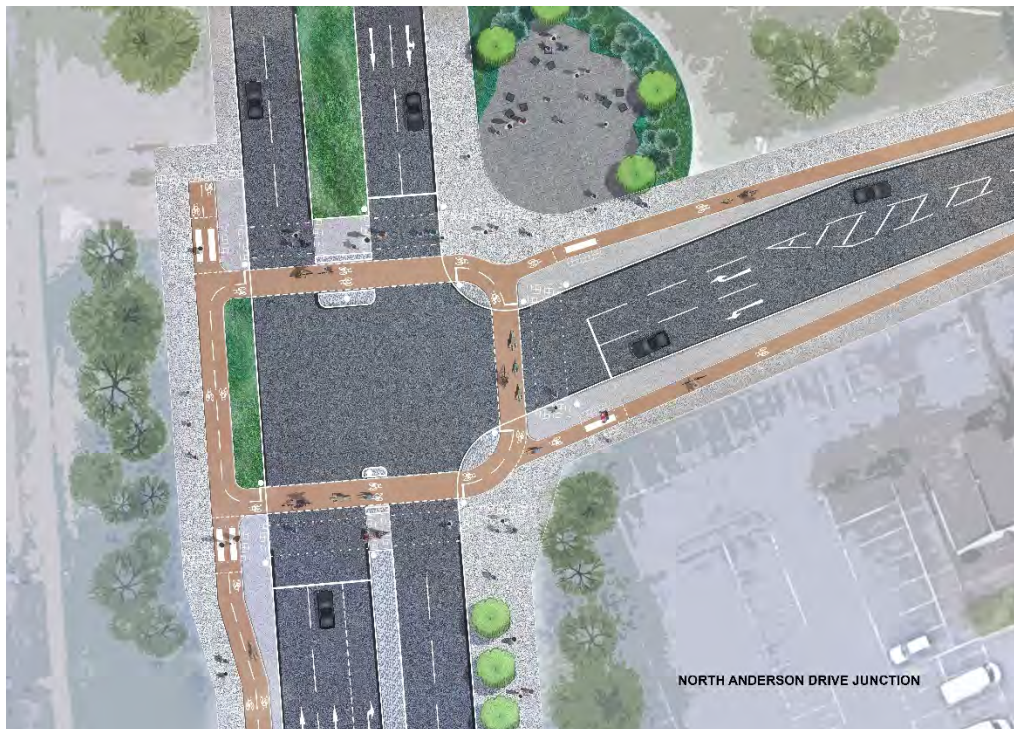
4.5.5. The assessment against objectives demonstrated that the signal-controlled junction with segregated cycle tracks and parallel crossings on all arms performs most favourably against the Design Objectives. The proposed layout is illustrated in Figure 4.4.

4.5.6. The preferred concept design is to retain signal-control, with the addition of cycle track crossings and upgraded pedestrian crossings to comply with guidance and standards:

- Parallel cyclist and pedestrian crossings;
- Uni-directional cycle tracks on the Ashgrove Road arm;
- A bi-directional cycle track on the west side of North Anderson Drive (pending tie-ins with the A96 multi-modal study);
- Removal of the left turn filter lane to discourage high speed through traffic onto Ashgrove Road;
- Retention of the two lane exit of Ashgrove Road in response to Emergency Service consultation;
- A community 'gateway' public realm area to the north-east side of the junction;
- All traffic movements are retained.

4.5.7. This option may require some increase in overall carriageway footprint.



Figure 4.4 – Proposed layout at North Anderson Drive


Deliverability

- 4.5.9. The junction performance of the preferred option was modelled. This is forecast to operate within capacity.
- 4.5.10. The design looks to create gateway features with the green spaces around the junction while improving the quality of these spaces. The quality of these spaces however does have a limit due to the proximity to North Anderson Drive and the associated noise and safety issues. Design of this space should be developed with the community and ACC Environmental Services.
- 4.5.11. The cycle facilities around the junction are bi-directional and with a north-south running cycle track on the west side. It is anticipated that the A92 multi-modal corridor study will consider improvements to the North Anderson Drive corridor in greater detail, including linked junction modelling and full corridor cycle track proposals. For this reason, therefore the preferred option retains the existing form of control (traffic signals) and approximate footprint of the existing junction. This allows future connections to tie into these tracks and have the option of transitioning to uni-directional tracks.
- 4.5.12. It is recommended that at RIBA Stage 3 further early engagement with the team developing the A92 multi-modal corridor proposals will be required to detail the design further. A number of mature trees will require replacement to include the cycle track on North Anderson Drive (west side). While the onward cycle track connection is shown on the west side of the junction, the most appropriate onward connection will be considered as part of the A92 study.



- 4.5.13. The junction has been tracked to ensure all existing turning movements can be accommodated.
- 4.5.14. The public realm proposal will require further development at Stage 3 to consider the form of the design as well as the ongoing ownership and maintenance of it.
- 4.5.15. The existing pedestrian crossing on the North Anderson Drive south arm is not currently compliant due to the lack of central refuge space. In order to provide adequate refuge islands to comply with guidance (the carriageway width of 18m is greater than the threshold for one stage crossings), the following changes are proposed:
- south arm central reservation widened to 2.2m (existing 1m)
 - North central reservation widened to 5.3m (existing 2.8m)
 - Southbound traffic approach lanes reduced to 3.25m each (total width 6.5m from existing approx. 7.75m)
 - Northbound traffic approach lanes reduced to 3.25m (total width 6.5m from existing approx. 7.4m)

Lane widths can be tapered back to the existing widths over a distance of approximately 50m

- 4.5.16. This will create a safer environment for pedestrians with slower traffic and better crossing facilities.

Engagement response

- 4.5.17. The community and Stakeholder Working Group responses indicate that a significant majority of people are positive about the proposal including:
- Change of environment to encourage lower traffic speeds;
 - New gateway and public space; and
 - Improved crossings.
- 4.5.18. The key remaining issues at this location that the community raised are:
- Improve sequencing of traffic lights to reduce congestion;
 - Enforcement of traffic speeds; and
 - Impact of future developments on the former Rosehill Day Centre site.

Respondent:

"I like that the crossings will be improved. I am not sure people will listen to the 20mph speed limit here especially as many use it to access hospital car parks."



Foresterhill Road/ Foresterhill/ Ashgrove Road West Junction

- 4.5.19. A summary of the primary options assessed for the Foresterhill Road/ Foresterhill junction is provided in Table 4.4.

Table 4.4 – Summary of Foresterhill Road / Foresterhill Assessment

Ref	Option	Assessment
FH1	Do Nothing	No improvement for walking, cycling or speed control
FH2	Tighten entries & adjust signal timings	Limited improvement for walking and cycling
FH3	Staggered Signal-controlled with parallel crossings	Fully achieves most objectives. Some cycling and walking movements experience delay
FH4	Staggered signal-controlled with two-stage right-turn cycling	Lower level of service than FH3. May be more deliverable if FH3 approach lane widths cannot be narrowed
FH5	Staggered Double Compact Roundabout with parallel crossings	Partially or fully meets all objectives
FH6	Staggered Double Mini Roundabout with parallel crossings	Significant technical and safety issues not overcome at RIBA Stage 2

N.B A number of options to re-align the Foresterhill Road carriageway (refer to Appendix A options FH7-10). This would require approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building. These options were discounted for that reason.

- 4.5.20. The two options performing most favourably against objectives and for deliverability are:
- FH3 Staggered signal-controlled with parallel crossings (Figure 4.5); and
 - FH5 Staggered double compact roundabout with parallel crossings (Figure 4.5)

Staggered Signal-controlled junction option

- 4.5.21. This proposal is to retain signal-control with the following changes:
- Parallel cyclist and pedestrian crossings;
 - Uni-directional cycle tracks on the Ashgrove Road arms;
 - Removal of the filter lanes to simplify and improve junction operation;
 - Reduction of pedestrian crossing distances;
 - All traffic movements are retained; and
 - This option can be delivered within the existing carriageway footprint.

Double Compact Roundabout option

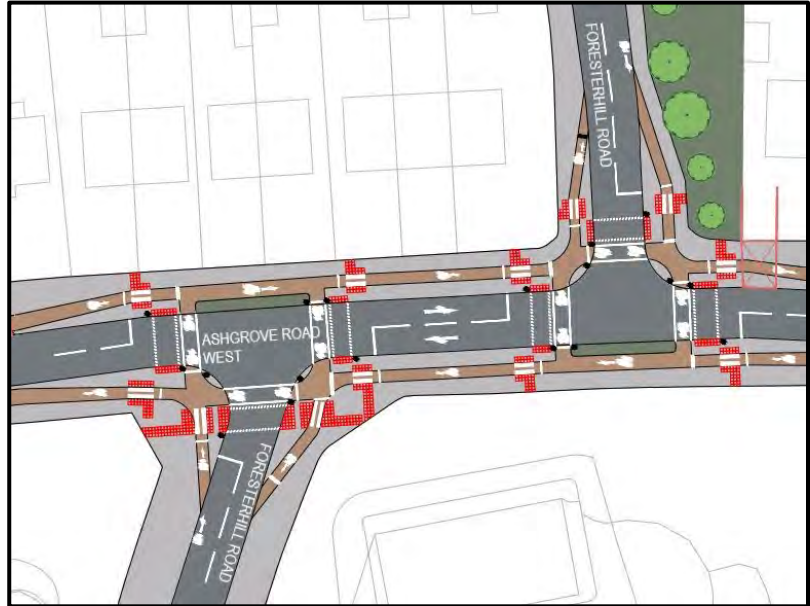
- 4.5.22. This option proposes to convert this junction into a double compact roundabout with the following features:
- Conversion of the Foresterhill Road and Foresterhill junctions into two roundabouts;
 - Parallel cyclist and pedestrian zebra crossings on all arms;



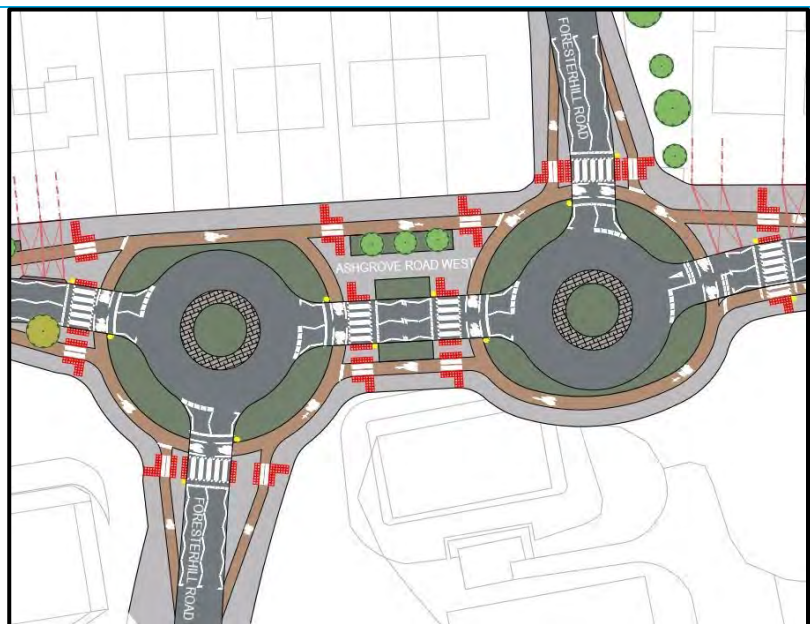
- Uni-directional cycle tracks on the Ashgrove Road arms;
- All traffic movements are retained; and
- This option will require some land purchase to the south of Ashgrove Road.

Figure 4.5 – Foresterhill Road junction layout proposed options

FH3 Staggered Signal-controlled with parallel crossings



FH5 Staggered Double Compact Roundabout with parallel crossings



Deliverability

4.5.23. This signal-controlled option can be delivered almost wholly within the existing carriageway footprint.



- 4.5.24. The zebra crossings of the cycle track are in most cases offset from the signal-controlled carriageway crossing. The optimal solution is to provide in-line crossings. If following further detailing it is not possible to deliver in-line zebra crossings within the existing footprint, one of two alternatives is recommended:
- Land-take to provide the necessary separation distance between tactile crossing points without constraining footway space; or
 - A continuous footway is provided for pedestrians over the cycle track, negating the need for tactiles.
- 4.5.25. The compact roundabout option will change the feel of this junction as active travel users will have priority using the zebra and parallel crossing points. In order to achieve sufficient deflection, the footprint of the junction will require some land purchase to the south of the junction. This will encroach on the underground reservoir within the Foresterhill Health Campus.

Engagement response

- 4.5.26. The community and Stakeholder Working Group responses indicate that a significant majority of people are positive about the proposal including:
- Simplified junction
 - Improved crossings with emphasis on people walking and cycling
 - Removal of parking spaces on approach to junction
- 4.5.27. The key remaining issues at this location that the community raised are:
- Traffic congestion blocking driveway access
 - Transition from cycle lanes onto Foresterhill Road
 - Impact of narrowing the road on ambulance response times

Respondent:

“Less lanes will simplify this for unfamiliar drivers, but the operation of lights also needs fixing...Further measures should be considered to prevent non-essential traffic using Ashgrove Road West, given the importance of hospital access by ambulances and the good bus service.”

Cornhill Terrace/ Cornhill Road / Ashgrove Road West Junction

- 4.5.28. A summary of the assessment of the Cornhill Terrace/ Cornhill Road options is provided in Table 4.5.



Table 4.5 – Summary of Cornhill Terrace / Cornhill Road Assessment

Ref	Option	Assessment
CH1	Do nothing	No improvement for walking, cycling or speed control
CH2	Tighten side road radii	Limited improvement for walking and cycling
Cornhill Terrace crossing		
CH3	Close Cornhill Terrace to traffic	All design objectives met fully. Removes junction conflicts and enhances school route. Possible operational issues with refuse vehicles and through traffic re-routing.
CH4	Cornhill Terrace continuous footway	All design objectives met fully. Removes junction conflicts and enhances school route. No impact on operations
Cornhill Road crossing		
CH5	Close Cornhill Road to traffic	Not possible on bus and emergency route
CH6	Continuous footway and cycle track over Cornhill Road	Vertical deflection not possible on bus and emergency route
CH7	Parallel crossing of Cornhill Road	High level of service for people walking and cycling. Feedback from ACC that ongoing maintenance of markings is an issue that may create additional cost burden across city if replicated
CH8	Cycle lane continued over Cornhill Road, dropped kerbs with no marked priority for pedestrians	Lower level of service for pedestrians and cyclists but reduced cost burden means this is most deliverable option

4.5.29. Although the parallel crossing of Cornhill Road and the traffic closure on Cornhill Terrace are the highest performing options against objectives, they perform less favourably on deliverability. The proposed option here is illustrated in Figure 4.6:

- CH4 Cornhill Terrace continuous footway;
- CH8 Cycle lane continued over Cornhill Road, dropped kerbs with no continuous priority for pedestrians; and
- Parallel crossing of Ashgrove Road.

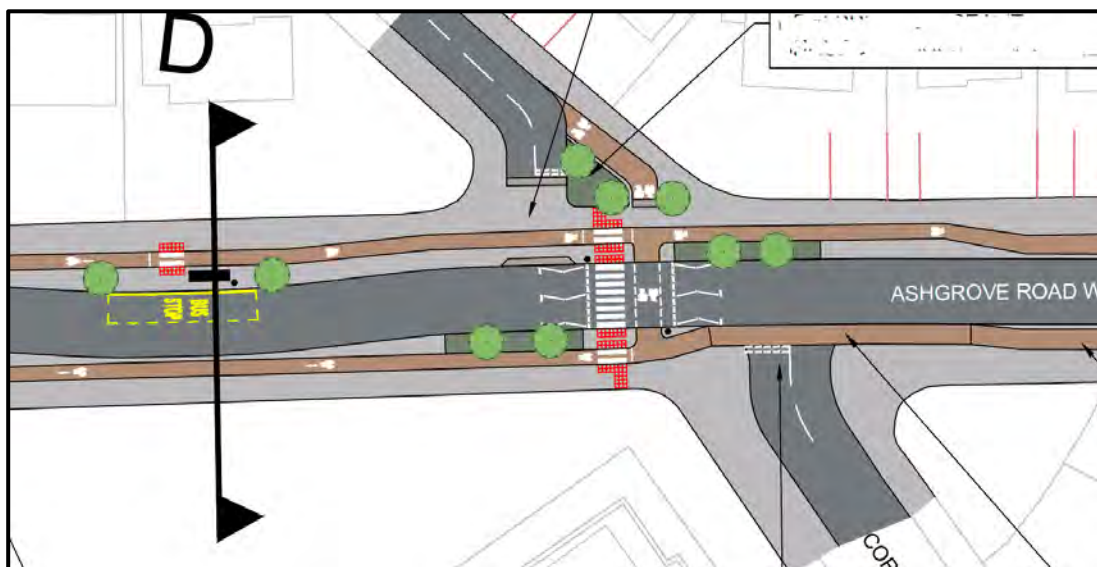
Deliverability

4.5.30. The proposed crossing of Ashgrove Road West is intended to address the missing desire line provision between bus stops, the hospital and Cornhill Primary school. There is an over 800m distance between formal crossings at this location and there is therefore good grounds to assume that, particularly with the addition of the cycle tracks to induce demand, the parallel crossing would be well used.



- 4.5.31. The design team is aware that ACC still applies the PV² assessment that is withdrawn from UK guidance. While a useful test to set budgetary priorities for upgrades there are significant shortcomings in applying this method of assessment to determine whether a crossing at this location is required. It is recommended that ACC commission a fuller assessment of potential induced demand at this location to determine whether this pedestrian and cyclist desire line should be met.
- 4.5.32. The interaction between bus stops, the proposed pedestrian crossings and vehicle turning movements has been carefully designed and tracked for feasibility. Further detailing of the interactions is recommended early in Stage 3 design.

Figure 4.6 – Cornhill Terrace/ Cornhill Road junction layout proposed option



Engagement response

- 4.5.33. The community and Stakeholder Working Group responses indicate that a significant majority of people are positive about the proposal including:
- New crossings;
 - Improving the perception of junction safety; and
 - Improved public space / greenspace.
- 4.5.34. The key remaining issues at this location that the community raised are:
- Noise impact of signalling crossings on closest residents;
 - Reduced visibility from greenspace improvements; and
 - Potential for vehicles to block the continuous footway / cycle lane when turning onto Ashgrove Road West from Cornhill Terrace.



Respondent:

“Move the bus stop to the west to allow the parallel crossing to be east of it, so nearer the junction?”

Westburn Drive/ Ashgrove Road West/ Ashgrove Road Junction

- 4.5.35. A summary of the assessment of the Cornhill Terrace/ Cornhill Road options is provided in Table 4.6 – Summary of Westburn Drive Assessment.

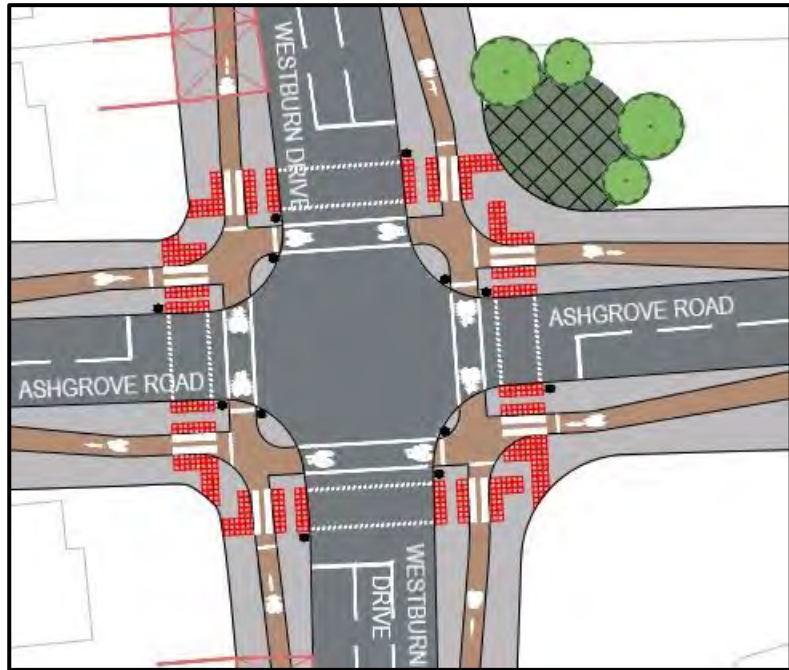
Table 4.6 – Summary of Westburn Drive Assessment

Ref	Option	Assessment
WB1	Do Nothing	No improvement for walking, cycling or speed control
WB2	Tighten entries & adjust signal timings	Limited improvement for walking and cycling
WB3	Signal-controlled (pedestrian crossing of cycle track partially signal-controlled)	Greater delay to cycling and walking than WB4. Possible safety issues with two forms of pedestrian / cycling control
WB4	Signal-controlled (zebra pedestrian crossing of cycle track)	High level of service for cycling and walking. Junction model operates within capacity
WB5	Signal-controlled Two-Stage Right-Turn	Low level of service for some cycle users. Junction model operates within capacity
WB6	Closure of Ashgrove Road West arm	Severs a bus route and emergency vehicle route. Unlikely to receive public and stakeholder support
WB7	Closure of Ashgrove Road arm	Severs an emergency vehicle route. Unlikely to receive public and stakeholder support
WB8	Closure of both Ashgrove Road arms	Severs a bus route and emergency vehicle route. Unlikely to receive public and stakeholder support
WB9	Segregated cycling Compact Roundabout	High level of service for cycling and walking. Requires land take and detailing of private driveway accesses. Junction model operates over capacity
WB10	Segregated cycling Mini Roundabout	Significant technical and safety issues not overcome at RIBA Stage 2

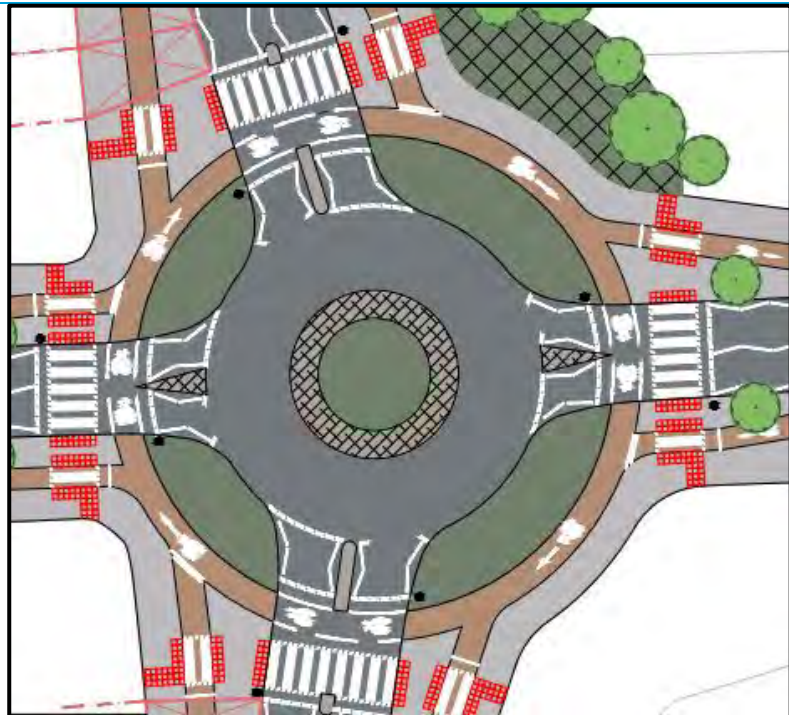


Figure 4.6 – Westburn Drive junction preferred options

**WB4 Signal-controlled
(zebra pedestrian
crossing of cycle track)**



**WB9 Segregated
cycling Compact
Roundabout**



4.5.36. A number of junction control options were explored to identify the most favourable layouts. The two options to be taken forward for further development at RIBA Stage 3 are:

- WB4 Signal-controlled Segregated Cycling (pedestrian crossing of cycle track); and



- WB9 Segregated cycling Compact Roundabout.

4.5.37. This proposal is to retain signal-control with the following changes:

- Parallel cyclist and pedestrian crossings;
- Uni-directional cycle tracks on the Ashgrove Road arms;
- Reduction of pedestrian crossing distances; and
- All traffic movements are retained.

4.5.38. This option can be delivered within the existing carriageway footprint.

Compact Roundabout option

- Conversion of the junction into a compact roundabout;
- Parallel cyclist and pedestrian zebra crossings on all arms;
- Uni-directional cycle tracks on the Ashgrove Road arms; and
- All traffic movements are retained.

4.5.39. This option will require some land purchase to the south-east and north-east of Ashgrove Road.

Deliverability

4.5.40. The signal-controlled option offers an overall higher level of service for all users, in terms of all abilities walking and cycling and minimising junction delay. While the roundabout option performs best on delay for most pedestrians and cyclists. The land-take requirements and the design of access to nearby private driveways require further investigation in the roundabout option.

4.5.41. A mini roundabout option with segregated cycle tracks (WB10) was explored. Atkins can find no precedent for this layout and Atkins' assessment is that the layout possible at this location fails to meet some of the key geometric guidance principles that ensure it is safe by design. However, should ACC decide to explore this option at a later stage, it is recommended that a more detailed safety study and possibly off-street or on-street trials are commissioned prior to implementation.

4.5.42. There is an opportunity to open up the high stone wall to permit access or a public realm opportunity towards Gillespie Crescent which may create a more welcoming environment and the opportunity for community engagement.

Engagement response

4.5.43. The community and Stakeholder Working Group responses indicate that a significant majority of people are positive about the proposal including:

- Priority crossings;
- Encouraging slowing traffic speeds approaching the junction; and
- Enhanced greenspace.

4.5.44. The key remaining issues at this location that the community raised are:

- Driver understanding of the roundabout layout;



- Reduced visibility from any improved greenspace; and
- Impact of opening the high wall on noise and safety for residents living behind this.

Respondent:

"I like the roundabout but worry how safe crossings would be. Concerned with the lights that turning right (south) onto Westburn Drive would be harder."

Ashgrove Road/ Laurelwood Avenue/ Elm Place

Key constraints

4.5.45. A number of key constraints had to be taken into account at this location:

- Current traffic volumes are incompatible with all ages and abilities cycling on street and therefore a segregated cycle track is required between Ashgrove Road and Berryden Road;
- The designs required to tie in with the concept proposals for the Berryden Corridor Improvement;
- The right turn vehicular exit from Elm Place onto Berryden Road (and the access for vehicles through Laurelwood Avenue) had to remain open. So a full closure of Laurelwood Avenue was ruled out in early option sifting;
- The vehicular left turn into Ashgrove Road from Berryden Road had to be retained;
- The businesses on Ashgrove Road require vehicular access to loading and off-street parking; and
- Although the majority of residents have off-street options, a number of residents live in terraced homes or flats. Therefore overnight parking demand should be provided for within a reasonable distance unless those residents have an off-street option.



- 4.5.46. The shortlisted options taken through assessment at this location are presented in Table 4.7 – Shortlist of Ashgrove Road/ Laurelwood Avenue/ Elm Place assessments.

Table 4.7 – Shortlist of Ashgrove Road/ Laurelwood Avenue/ Elm Place assessments

Ref	Option	Assessment summary
ALP 1	Do Nothing	No improvement for walking, cycling or speed control
ALP 2	Tighten entries & adjust signal timings	Limited improvement for walking and cycling
ALP 3	One way circulation anti-clockwise, space reallocated to walking and cycling	More opportunities for car parking retention Analysis indicated that this would divert traffic onto Laurelwood Avenue
ALP 4	Two-way traffic on Ashgrove Road, one way southbound on Laurelwood	Laurelwood - This would allow a two-way cycle track to be provided along with parking on one side Ashgrove – traffic calming to respond to community concerns, retention of parking, no cycle track
ALP 5	One-way westbound on Ashgrove Road, no exit from Laurelwood to Ashgrove (false one-way)	Laurelwood - This would allow a two-way cycle track to be provided along with parking on one side Ashgrove – traffic calming to respond to community concerns Concerns with traffic management compliance. Considered to divert too much traffic onto Laurelwood Avenue
ALP 6	Retain two-way traffic movements on Ashgrove Road and Laurelwood	Insufficient space for cycling and walking unless all parking removed. This was not deemed publicly acceptable



Engagement response to options presented

4.5.47. A key element of the options development and assessment was public acceptability of the options. The public was presented with three primary options that transparently presented the impacts alternately on combinations of cycling, parking, tree loss and traffic volume impact. The full engagement materials are provided in Appendix C.

4.5.48. The community and the Stakeholder Working Group responses indicate that a majority of people are positive about the options presented at consultation, including:

- 20mph speed limit;
- New crossings;
- Enhanced greenspace; and
- Safer cycling and walking.

4.5.49. The issues raised by some members of the community were:

- Location of parking bays, particularly between May Baird Avenue and Laurelwood Avenue; People expressed concern at the perception of safety of parking further along Ashgrove Road
- Ensuring customers park within off-street car parks; and
- The impact of the Berryden Corridor Improvement Scheme on traffic levels.

Respondent:

“The junction must not direct traffic travelling east on Ashgrove Road on to Laurelwood Avenue. It has to be borne in mind that Laurelwood Avenue, Cedar Place and Elm Place are residential streets, they should not be seen as a short cut between Ashgrove Road and Berryden Road.”

Proposed Option

4.5.50. All options at this location involved making trade-offs between cycling and walking amenity, tree felling, parking capacity and traffic volumes.

4.5.51. The proposed option to take forward is ALP4 which features:

- Two-way traffic on Ashgrove Road with traffic calming;
- One way southbound traffic on Laurelwood Avenue;
- A two-way cycle track on Laurelwood Avenue and Elm Place;
- Retention of existing trees and the potential to provide additional trees on Ashgrove Road and Laurelwood Avenue; and
- Retention of 40 parking bays and the removal of unlawful parking opportunities.

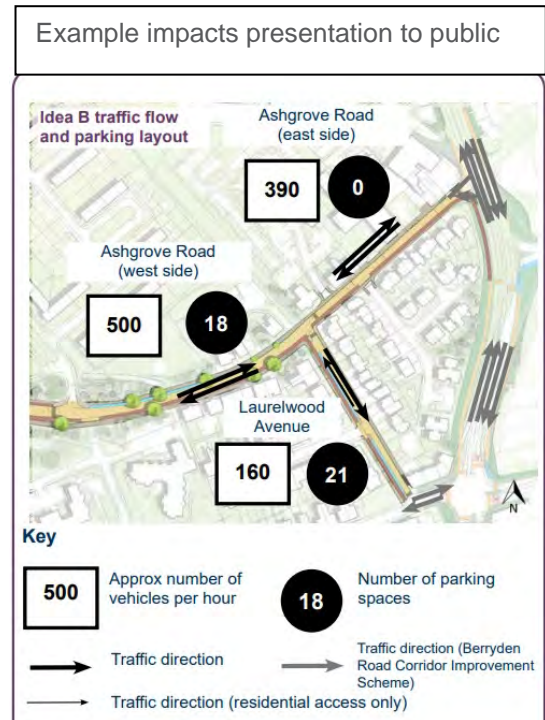


Table 4.8 – Proposed option for Ashgrove Road, Laurelwood Avenue and Elm Place

<p>Ashgrove Road (May Baird to Laurelwood Ave)</p>	
<p>Ashgrove Road (Laurelwood to Berryden)</p>	
<p>Laurelwood Avenue/ Elm Place</p>	

4.5.52. This option is not the highest performing for cycling as it forces people travelling northbound into a more circuitous route with a gradient on Laurelwood Avenue and Berryden Road. However it does seek to create more favourable on-carriageway conditions for those who value directness while providing a longer all-abilities route.



- 4.5.53. This option has the advantage of reducing traffic volume on Laurelwood Avenue and retaining full width footways and existing trees, with the potential for more trees throughout the area.

4.6. Summary

- 4.6.1. This Options assessment was undertaken firstly at a high level and then for more involved details at certain locations, alongside public engagement.
- 4.6.2. The selected options were developed into the proposed Concept Design. Some of the key features are illustrated in the next chapter.



5. Proposed Concept Design

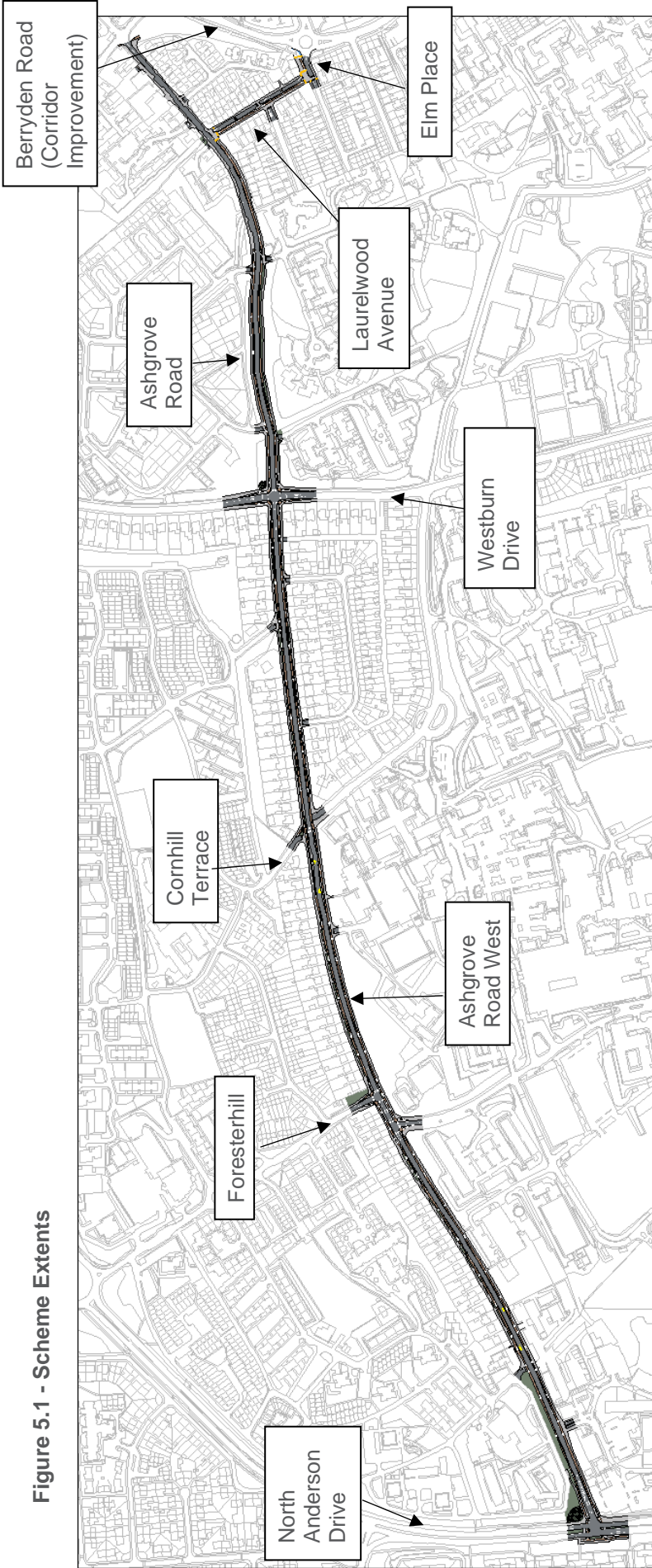
- 5.1.1. This chapter highlights some of the key features of the proposed design. Reference should be made to the design drawings (series ASH-ATK-HGN-ZZZZZ-DR-CH-000001 to 000011) and visualisations (series ASH-ATK-HGN-ZZZZZ-VS-UD-00001 to 00008).

5.2. Scope of works

- 5.2.1. The proposed scheme incorporates Ashgrove Road West, Ashgrove Road, Laurelwood Avenue and Elm Place between North Anderson Drive and Berryden Road. The full extent of the scheme is illustrated in Figure 5.1.



Figure 5.1 - Scheme Extents



5.3. General profiles

Figure 5.2 - Ashgrove Road West Existing and Proposed Cross-Sections (facing east)

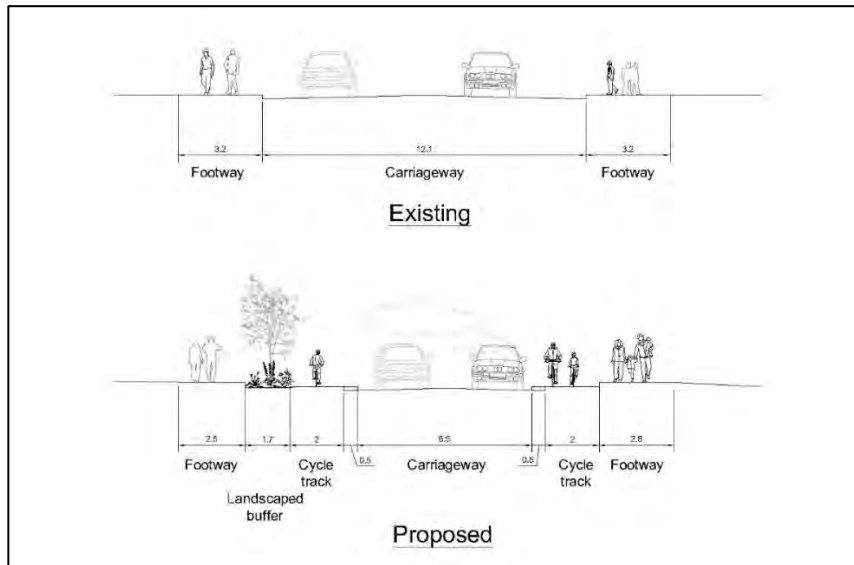


Figure 5.3 – Ashgrove Road West illustrative street view (before and after facing west)

Before



After



Figure 5.4 – Cornhill Road junction (before and after)

Before



After



**Figure 5.5 – Ashgrove Road (between Westburn Drive and May Baird Avenue)
Existing and Proposed Cross-Sections (facing east)**

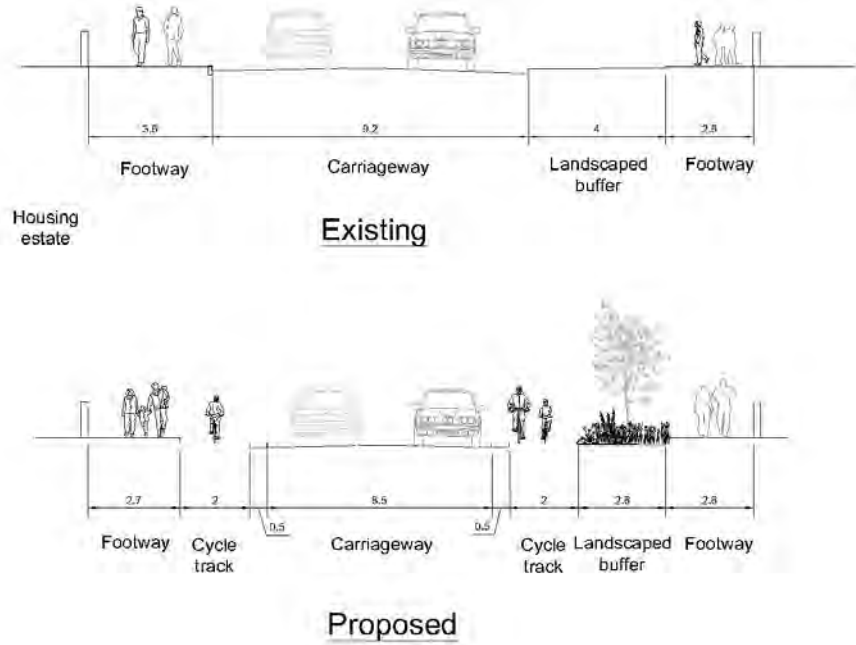
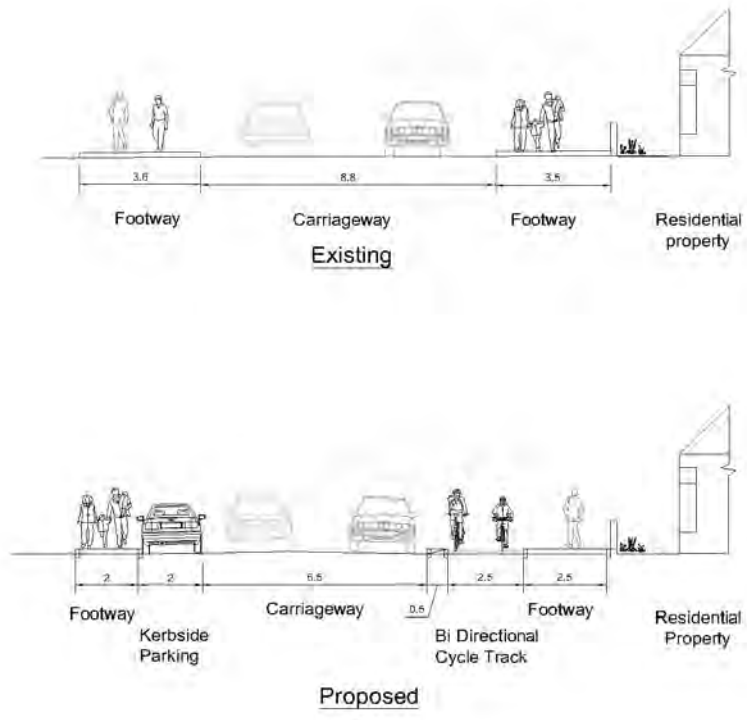


Figure 5.6 – Ashgrove Road (between May Baird Avenue and Laurelwood Avenue) Existing and Proposed Cross Sections (facing east)



5.3.1.

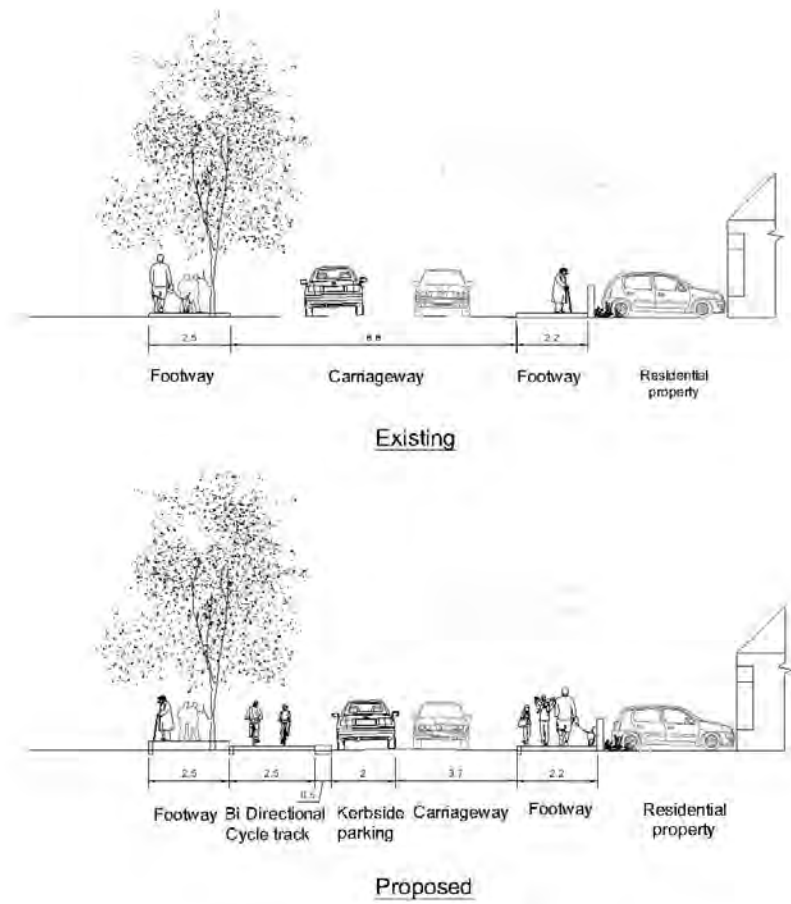
Before



After

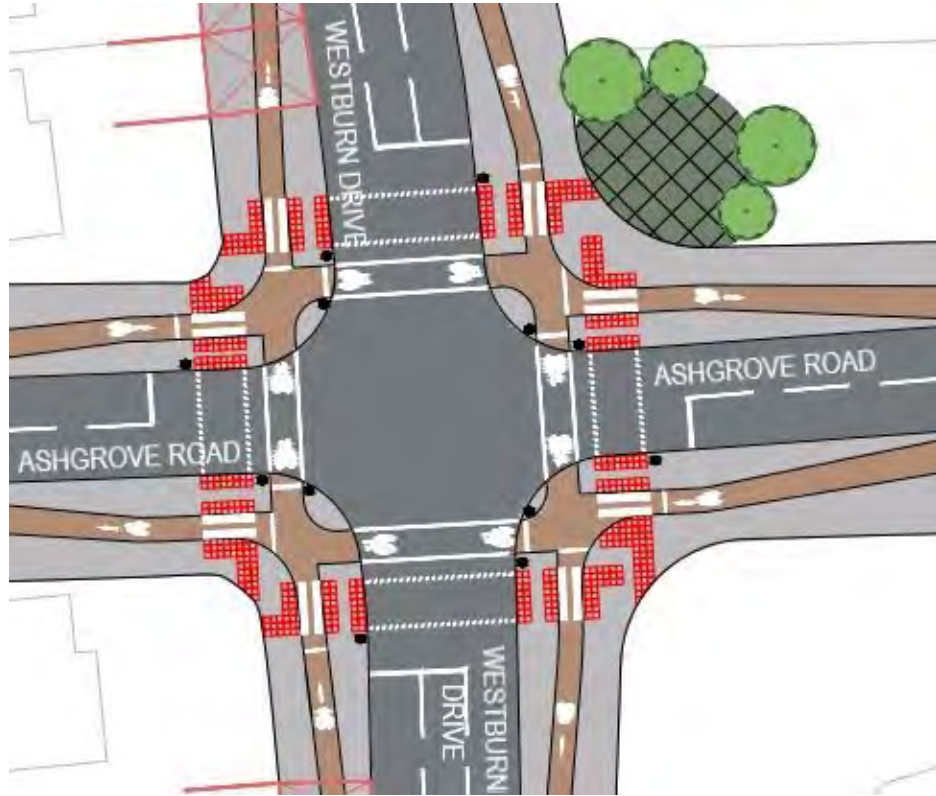


Figure 5.7 – Laurelwood Avenue Existing and Proposed Cross-Sections (facing north)

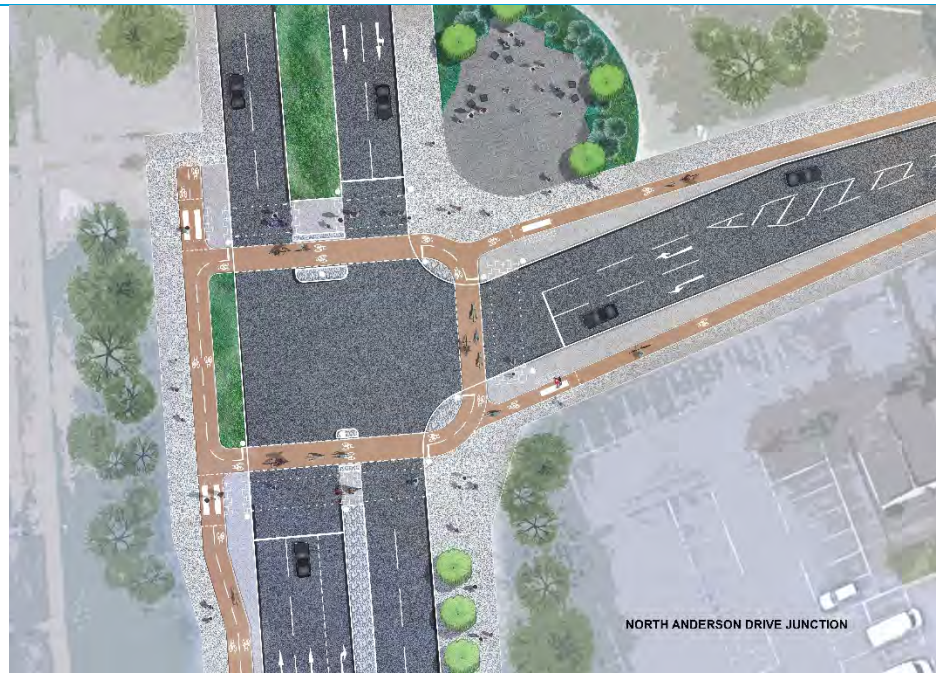


5.4. Signal-controlled junctions

Westburn Drive/
Ashgrove Road

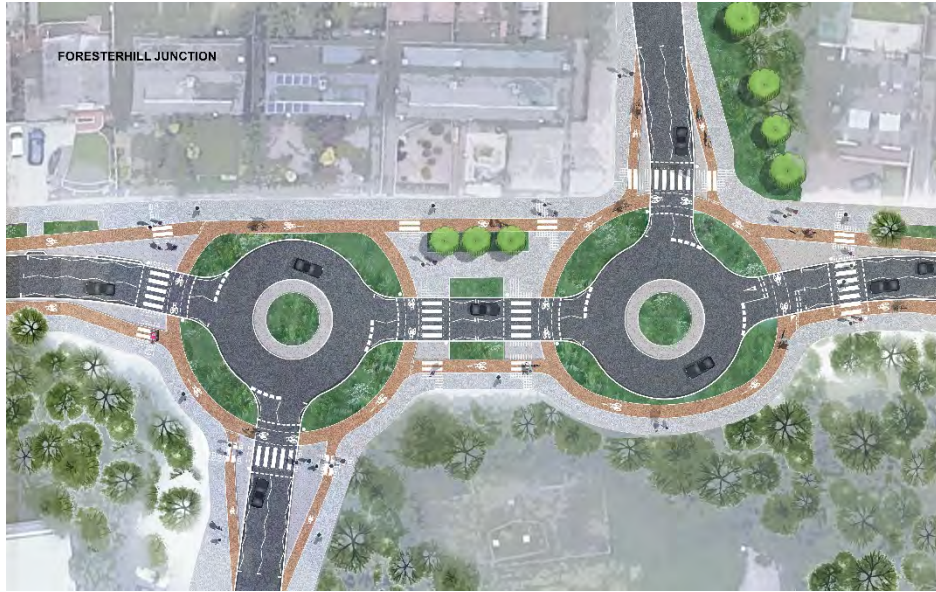


N Anderson
Drive/ Ashgrove
Road



5.5. Compact roundabout design

Foresterhill/
Foresterhill Road/
Ashgrove Road



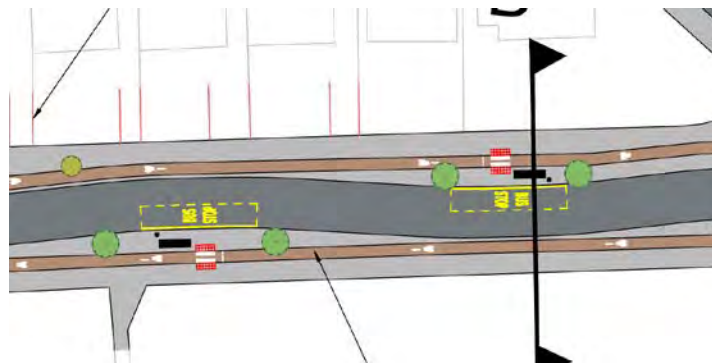
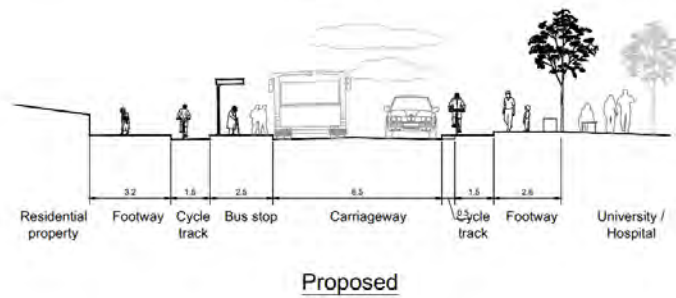
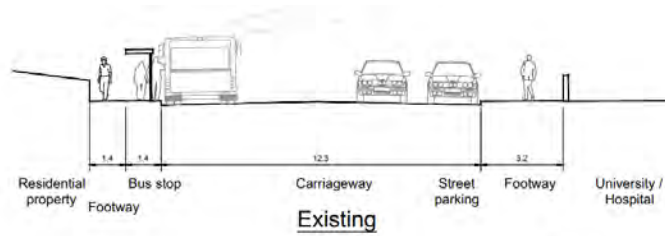
Westburn Drive



5.6. Bus stop and cycle track interactions

5.6.1. Cycle track bypasses of bus stops are generally provided with full width available. This arrangement is known to deliver the highest level of risk reduction for street users as a whole by separating all modes.

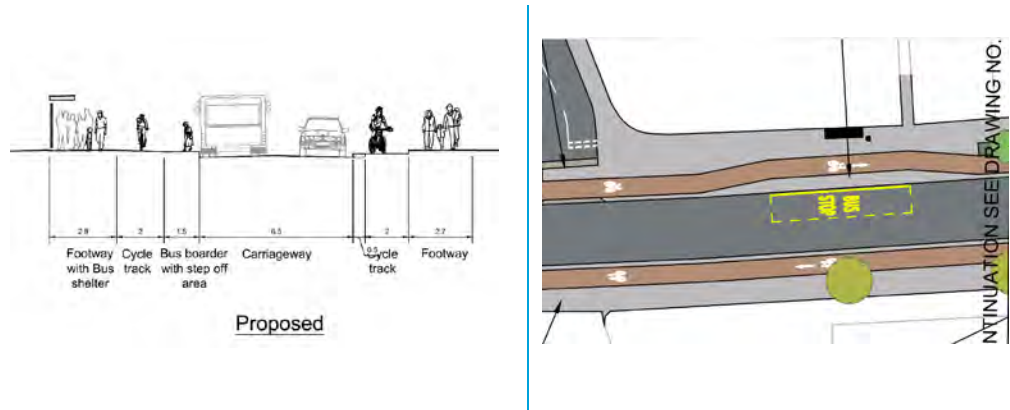
Bus stop layout
(Ashgrove Road West,
west of Cornhill
Terrace)



5.6.2. At the two bus stops immediately east of Castleton Drive, an alternative layout is demonstrated for constrained locations. This results in the bus shelter being located at the back of the footway. It is recommended that the options here are investigated in further detail at Stage 3 – it may be possible to achieve a full bus boarder island by reallocating cycle track and landscaping widths.

5.6.3. At this stage the design team has been unable to get a response from the Disability Equity Partnership.

Bus stops layout (Ashgrove Road West (east of Castleton Drive))

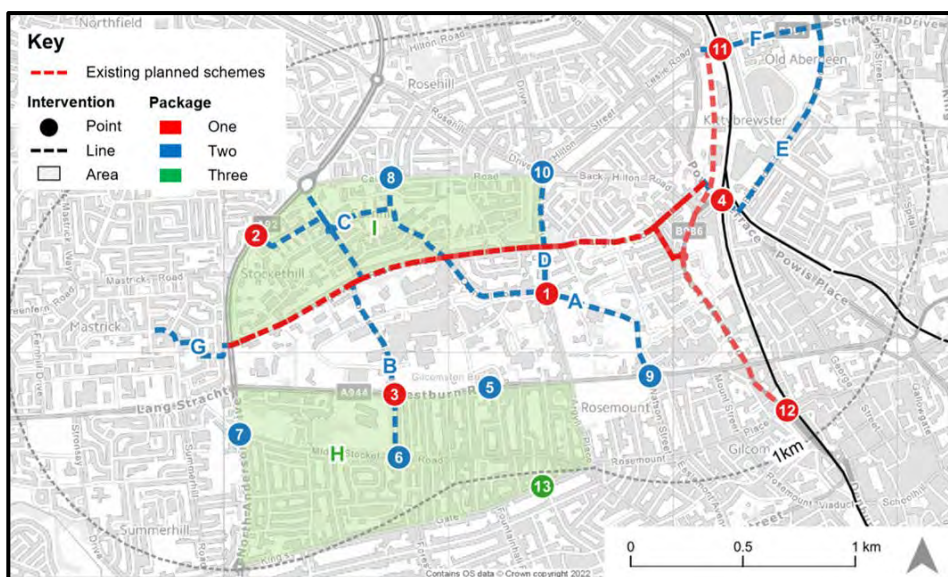


5.7. Active Travel Network Assessment proposals

5.7.1. The Active Travel Network Assessment (CR-J) identifies additional improvements that could be developed as part of or following scheme implementation. Those changes are therefore not considered within the scope of the proposals in the preceding sections of this Chapter.

5.7.2. A relatively small number of additional crossings and links delivered in tandem with Ashgrove Connects would significantly improve safe access, reduce severance, and support a wider range of journeys as shown in Figure 5.3:

Figure 5.3 - Recommended phased Improvements local to the study area



5.7.3. The impact of delivering Ashgrove connects as well as the additional minor interventions is illustrated in Figure 2.4 (before and after). This demonstrates the change in the network area that would be accessible by all ages and abilities walking and cycling were these interventions to be delivered.

5.7.4. It is recommended that:

- An independent level of service assessment is recommended at each development stage of the scheme, to ensure quality is maintained through to delivery; and that
- Progress is made towards a comprehensive strategic network study to provide a city-wide plan prioritising active travel routes for future development. This process would benefit from targeted engagement that would greatly enhance and enrich the network planning process along with further data collection and auditing.

Figure 5.4 - Permeability of the network for walking and cycling before and after interventions*



*Note that the 'after' scenario does not yet incorporate impact of the package links D, F or G or crossing 10. These are likely to illustrate further improvements in permeability.

6. Engineering Assessment

6.1. Introduction

6.1.1. This chapter summarises the impact of the preferred options for the scheme on existing infrastructure, summarising the key technical and deliverability opportunities and constraints.

6.2. Summary of proposals

6.2.1. The key features of the proposals impacting on existing infrastructure are summarised in Table 5.1.

- 20mph speed limit on Ashgrove Road and Ashgrove Road West;
- Reduced carriageway width and pedestrian crossing distances;
- Continuous footways at side roads to provide design priority for pedestrians;
- One new controlled crossing of Ashgrove Road West;
- A net increase in the number of street trees and green infrastructure (detailed in Chapter 6);
- Two new opportunities for public realm features as gateways into the community;
- Segregated cycle tracks on
 - Ashgrove Road West;
 - Ashgrove Road between Westburn Drive and Laurelwood Avenue; and
 - Laurelwood Avenue and Elm Place.
- Enhanced bus stop facilities and cycle bypasses of bus stops; and
- Reduction in available on street parking commensurate, prioritising residential need where required.

6.2.2. It is not the intention at RIBA Stage 2 of these Concept Design proposals to have resolved all operational and design challenges. The intention is to present technically feasible solutions and to highlight the deliverability constraints that should be dealt with in detail at subsequent stages. These are presented in full within the Designer's handover documents and summarised here.

6.3. Impacts

Carriageway

6.3.1. Full carriageway and footway reinstatement is assumed to be required for the full length of the route between property boundaries.

6.3.2. Following topographical surveys and further detailing, cost savings may be identified by rationalising the extents of reinstatement.

Vehicle tracking

6.3.3. Vehicle tracking has been undertaken for all existing and forecast HGV and bus movements. The designs are navigable for all intended traffic movements. The following elements in particular require further tracking conducted as the designs progress:

- The interaction of bus movements and bus stops between Cornhill Road and Ashgrove Road;

- The carriageway width and forward visibility at the horizontal deflection west of Cornhill Road/ Cornhill Terrace; and
- Loading access for the businesses at the east end of Ashgrove Road should be retained around the traffic calming features.

6.3.4. Engagement with emergency services and ACC operational teams has informed the concept designs, notably:

- Two approach lanes from Ashgrove Road to North Anderson Drive are retained;
- Level access to emergency service facilities is retained (no vertical deflection); and
- Cornhill Drive remains open for traffic, including refuge access.

On-street car parking

6.3.5. To align with the design objectives developed with the community, the aim of the parking proposals is to provide appropriately within a reasonable distance of homes and businesses. Observational surveys indicate that the vast majority of daytime turnover can be accommodated in off-street car parks and driveways. For residents, parking demand has been measured and largely accommodated near homes.

6.3.6. This is summarised in Table 6.1 provides a summary of the existing and proposed parking provision, along with surveyed parking demands within the designated parking bays and unrestricted parking areas within the Design Area. It does not include parking outwith legal parking spaces.

Table 6.1 - Summary of Existing & Proposed Parking Provision

Section	Existing	Proposed	Peak Demand (daytime)	Peak Demand (overnight)
ARW (N Anderson to Westburn)	112	0	30	3
AR (Westburn to May Baird)	0	0	0	0
AR (May Baird to Laurelwood)	13	9	10	10
AR (Laurelwood to Berryden)	15	11	10	11
Laurelwood	27	20	no data*	no data*
Elm Place	0	0	no parking permitted	no parking permitted
Total	167	40	50**	24*

* Further surveys required on Laurelwood Avenue and other minor streets at Stage 3

** The higher peak in daytime demand is assumed to be associated with business parking that can be accommodated in off-street car parks

6.3.7. The proposals are to provide no formal on-street parking bays on Ashgrove Road West.

6.3.8. On Ashgrove Road, while there is little difference between the peak daytime and overnight demands on, these peak demands do not provide an accurate reflection of the full daily parking demand profiles when turnover is higher. The overnight values are a reflection of residential

demands throughout the Design Area, while the daytime demands are largely driven by non-residential users.

- 6.3.9.** As noted in Section 2.10 additional surveys will be required on Laurelwood Avenue and Elm Place to establish existing levels of demand.
- 6.3.10. It is noted that while there is a shortfall of daytime parking on Ashgrove Road West it is anticipated that any residual demand will be met by off-street parking. The daytime Ashgrove Road West parking is largely assumed to be linked to commuter, works, and delivery traffic, demand for which can be served off-street.
- 6.3.11. Any shortfall for overnight parking on Ashgrove Road is assumed to be minor, given existing demands and the proposed level of provision, and any residual demand can be met on nearby streets.
- 6.3.12. The proposals will include the implementation of Traffic Regulation Orders (TROs) to prohibit parking and loading outside the parking bays provided throughout the Design Area, in line with the proposed parking provision summarised in Table 6.1.
- 6.3.13. Further work will be undertaken during Stages 3 and 4 to progress the TRO proposals. This will include continuous engagement with stakeholders and residents, as well as behaviour change activation with those affected by the proposals.
- 6.3.14. The feedback received from the public on parking proposals along Ashgrove Road West was mostly positive, particularly the improvements this could bring to the overall visibility and layout of junctions. Where people felt more neutral towards this, feedback suggested improvements would need to be made to sign post people to available car parks within the Foresterhill Health Campus to reduce the risk of parking displacement onto residential side streets.
- 6.3.15. The feedback received from the public on parking proposals along Ashgrove Road and Laurelwood Avenue was slightly more mixed. Where people felt positive towards this, the feedback highlighted improvements this could bring to the overall visibility of junctions, crossings and access to properties and businesses. Where people felt more negative towards this, feedback highlighted two primary concerns:
- The location of parking bays between May Baird Avenue and Laurelwood Avenue being situated further away from properties, increasing the distance to travel and risk of vandalism from reduced visibility.
 - The number of parking bays being provided, particularly for those in properties without driveways and the increasing number of multiple occupancy licences within the area.
- 6.3.16. The Concept Design for Ashgrove Road and Laurelwood Avenue has been adapted on the back of this feedback to consider how to provide more space for parking whilst ensuring this does not compromise the other Design Objectives.
- 6.3.17. Those who attended the workshops for residents of Ashgrove Road and Laurelwood Avenue engaged constructively over the parking proposals and this should continue as the proposals

develop. The residents also highlighted the need to work with businesses in the area to encourage more use of their available off-street customer car parks. This has been included within the Behaviour Change Activation Plan (CR-A) as an opportunity to encourage a shift in parking behaviour.

Driveways

- 6.3.18. As there are many residential buildings along the corridor, there will also be many driveways crossing the footway and cycle track. The detailing of the ramp at the carriageway kerb will require further consideration, however it is assumed that a “Dutch entrance kerb” is most appropriate.
- 6.3.19. The Highway Code recommends but does not require drivers to reverse into driveways and emerge forwards. This allows the optimal visibility to cross footway, cycle track and enter the carriageway safely.

6.4. Summary of Constraints

- 6.4.1. An initial review of potential engineering constraints has been undertaken using site visits, responses from utility providers and online Google Maps. This review is not exhaustive but was designed to identify significant potential challenges early in the design process so that the project is cognisant of these as the design is developed. The constraints identified will need further investigation in the next design stage and their impact should be verified before changes are made to the design proposals.
- 6.4.2. These will impact each of the options to broadly the same degree, so have not been included as part of the options assessment.
- 6.4.3. Table 6.2 summarises the engineering constraints that were identified as part of this exercise.

Table 6.2 – Summary of engineering constraints

Location	Constraint	Notes
Sitewide	Lighting columns and utility cabinets.	Many of the lighting columns are located at the front of the footway. Where the footway kerbs are moved there is a risk that most of these will require to be moved.
Sitewide	Topographical	There is a risk that there will not be enough level difference for efficient drainage and the proposed kerb differential cannot be realised.
Sitewide	Street trees	There is a need to remove or replace several mature trees to accommodate the design proposals. It is also noted that the roots of large trees are likely to have spread to under the road.
Sitewide	As this is an urban area there will be limited space to lay down material and equipment and it is important to consider that there will be members of the public in close proximity.	Liaison with contractor is important to ensure that designs have construction methods suitable for the area.

Location	Constraint	Notes
Sitewide	There are a number of metal manhole covers in the existing carriageway.	If possible, these should not be located in the proposed cycle track or on crossings
Ashgrove Road West (North Anderson Drive– Ashgrove Road West Corner)	The proposed footway may encroach on an existing wooden fence. It is also noted that in this location the proposed cycle track may clash with 4 no. utility boxes and a large pole.	Additional land purchase and permission to change the alignment of the fence may be required.
Ashgrove Road West (Ashgrove Road West – North Anderson Drive Corner)	The ground appears to slope away at this location, meaning that the embankment may need to be built up to allow for the proposed footway. There may also be the need for some vegetation clearance (inc. some trees).	A stability check on the embankment will likely be required. It should also be considered that it is likely that access may be needed from the car park below during construction so permission from the landowner would need to be sought
Foresterhill junction (signal-controlled option)	In order to provide pedestrians with in-line crossings of cycle track to the signal-controlled junction, around a 1-2m strip of land purchase may be required from the Foresterhill Health Campus.	land purchase may be required. Land ownership searches are being conducted by ACC
Foresterhill Junction (compact roundabout option) (Western roundabout)	The proposed highway boundary appears to be within 1.5m of an underground reservoir that is part of the Foresterhill Health Campus site. The owners have been contacted and confirmed that it is in use. This option would require land take	Further investigation would be required with the asset owner to advise on the possibility of land purchase and on construction options in the vicinity.
Foresterhill Junction (compact roundabout option)	The proposed option appears to encroach upon part of the Foresterhill Health Campus site.	Additional land purchase may be required. Land ownership searches are being conducted by ACC
Westburn Drive (east side)	The proposed option will encroach third party land that appears to be part of Elmwood Hospital to the south west and greenspace to the north west of unknown ownership.	Additional land purchase may be required. Land ownership searches are being conducted by ACC
Laurelwood Avenue (Approx. 20m north of the junction with Elm Place)	There is a substation in this location.	Incorporate further detailed information in contractor's tender documents
Sitewide	LV electric cables have only 0.45m cover under the footway. Initial information from providers indicate that these are present across the site.	Incorporate further detailed information in contractor's tender documents
Sitewide	Medium pressure gas main is present under the main carriageway on Ashgrove Road (approx. 3m from the south footway)	If any excavation needs to take place within the exclusion zone, then hand digging would need to be used.
Ashgrove Road (between North Anderson Drive and the Ambulance centre)	Extra high voltage (132kV) nominally at a depth of 0.8m under the carriageway and 0.9m under the footway	Incorporate further detailed information in contractor's tender documents

7. Environmental Assessment

7.1. Introduction

7.1.1. This section of the report summarises the environmental assessment of the Design Area. It was agreed with the client that full Environmental Impact Assessment was not required at this stage of the Scheme. This section therefore reports on the:

- Preliminary Ecological Appraisal;
- Trees;
- Greenspace and SUDS; and
- Heritage and Conservation.

7.1.2. This section of the report should be read alongside the detailed assessment of existing conditions in the Baseline Assessment.

7.2. Preliminary Ecological Appraisal

7.2.1. The aim of the Preliminary Ecological Assessment (CR-E) was to identify the following:

- The key ecological constraints to the scheme
- If additional ecological surveys are required to inform an ecological impact assessment
- Avoidance, mitigation, compensation, and enhancement measures

7.2.2. The preparation of the report involved two main components: a desk study and a site walkover survey.

7.2.3. The desk study included a data request from the North East Scotland Biological Records Centre for information on any protected and notable species, and sites of local importance. An online search was also undertaken to investigate nearby statutory and non-statutory designated sites of nature conservation importance, ancient woodland inventory, waterbodies, and priority habitats.

7.2.4. The walkover survey followed the UK Habitat Classification System methodology and was undertaken between 21/07/2022 and 22/07/2022. It recorded the habitats and evidence of, or the suitability for, protected and priority species. The Survey Area comprised the Design Area and extended 50m in all directions, where accessible, from the Design Area boundary.

Baseline Conditions

7.2.5. No statutory designated sites for nature conservation were recorded within 2km of the Survey Area.

7.2.6. Two non-statutory designated sites for nature conservation were recorded within 1km of the site:

- Inverness – Aberdeen Railway Line Local Nature Conservation Site
- Hilton Wood Local Nature Conservation Site

7.2.7. The Survey Area mostly comprises hardstanding (roads and footways) and houses with associated gardens. Areas of species-poor grassland, ornamental scrub planting, and broadleaved woodland

were scattered throughout the Design Area, typically located around community amenity areas and commercial businesses.

- 7.2.8. Habitats within the Survey Area have suitability to support bats, badger, nesting birds, common species of reptile, red squirrel, hedgehog, and priority invertebrates. Possible veteran trees were also recorded.

Mitigation

- 7.2.9. Avoidance and mitigation measures include the following:
- Retention of habitat within the Survey Area as far as possible, including trees
 - Avoidance of night-time working (defined as 30-minutes prior to sunset and 30-minutes after sunrise)
 - Implementation of pollution prevention measures
 - Methods to prevent accidental harm to wildlife during the works

Opportunities

- 7.2.10. Opportunities for biodiversity enhancement include the following:
- The installation of woodcrete bat and bird boxes within woodland areas
 - The creation of habitats through habitat piles in grassland areas
 - An increase in the floristic diversity through local-sourced green hay and woodland floristic communities

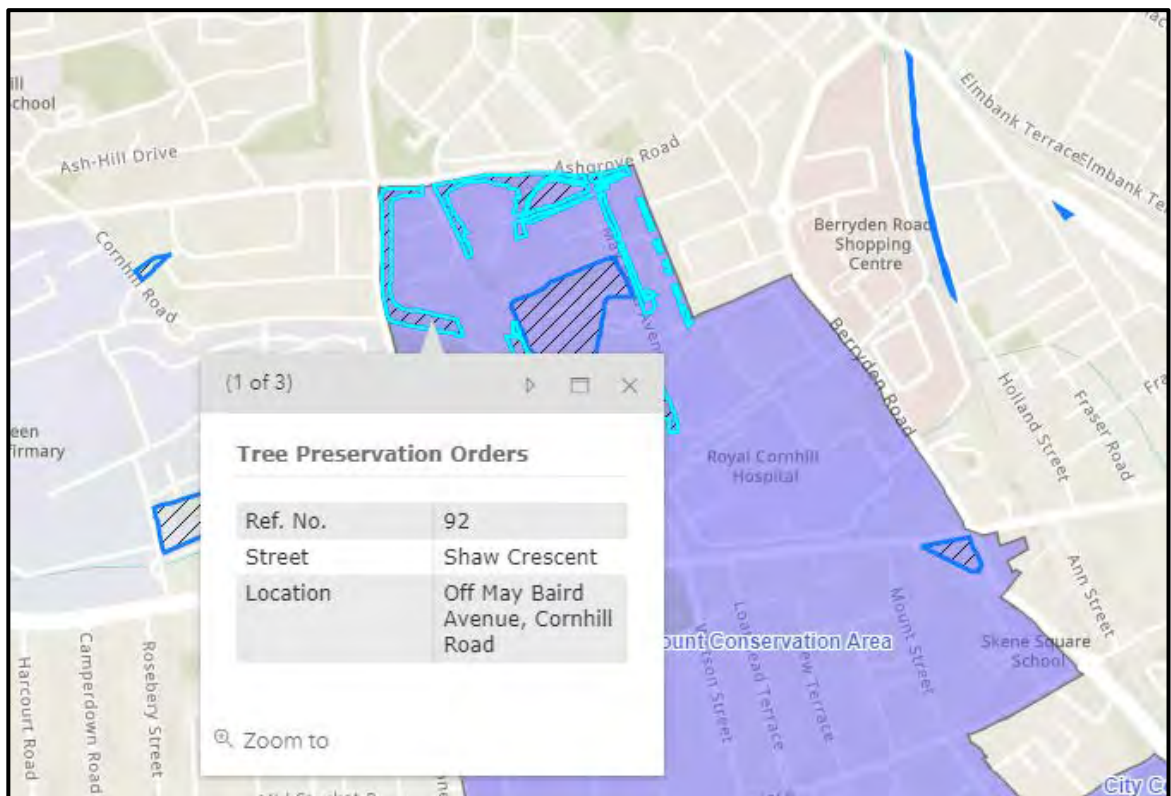
Recommendations

- 7.2.11. A preliminary bat roost assessment (PBRA) of structures and ground level tree assessment (GLTA) may be required, depending on the nature of the proposed works associated with the Scheme.
- 7.2.12. If works are likely to impact suitable habitat for red squirrel a survey for the presence or likely absence of squirrel dreys.

7.3. Trees

- 7.3.1. During RIBA Stages 1 and 2, an analysis of tree numbers and protection orders was undertaken and consultation was conducted with ACC's Tree Protection Officer. There are around 100 trees in the carriageway area within the project boundary. Additionally, there are a number of wooded areas, greenspaces and parkland adjacent to the project boundary with a high number of mature trees.
- 7.3.2. While all trees set within a Conservation area are automatically protected, an explicit tree preservation order is placed on the edge planting surrounding Elmwood and Roxburghe House, two NHS hospital facilities, running along Westburn Drive and Ashgrove Road. An extract of this area is illustrated in Figure 7.1

Figure 7.1 - Tree Preservation Orders



- 7.3.3. A quantification of the impact of the proposed scheme on tree numbers is provided in Table 7.1.
- 7.3.4. Stakeholder consultation indicated that many trees between North Anderson Drive and Foresterhill junctions are approaching the end of their lifespan and are already showing damage to the roots. The road section between Foresterhill and Cornhill junctions is planted with young trees, while the stretch from Cornhill to Westburn Drive has large mature lime trees of high quality. The eastern section of the project area on Ashgrove Road and Laurelwood Avenue has some scattered trees, with several trees already removed due to disease.

Table 7.1 - Quantification of impact on trees

Route section (within carriageway boundary unless stated)	Retain	remove	new	Total existing	Total proposed	Net change
North Anderson Drive (including gateway and west side outside of carriageway boundary)	7 *	8	7	15	14	-1
Ashgrove Road West between North Anderson Drive and Foresterhill	40	1	13	41	53	12
Foresterhill signal-controlled junction	0	1	6	0	6	6 **
Ashgrove Road West between Foresterhill and Cornhill	11	2 ***	17	13	28	11
Ashgrove Road West between Cornhill and Westburn Drive	25	2 ***	32	27	57	33
Westburn Drive signal-controlled junction	0	0	6	0	6	6 **
Ashgrove Road between Westburn Drive and Laurelwood Avenue	9	1 ***	16	10	25	15
Ashgrove Road between Laurelwood Avenue and Berryden Road	0	0	10	0	10	10
Laurelwood Avenue and Elm Place	6	2 ***	10	8	16	8
Total	98	17	117	110	213	103

* within the immediate vicinity of the junction

** assumes a signal-controlled junction. In the Compact roundabout scenarios, approximately 30-40 mature trees located outside of the carriageway at each of Foresterhill and Westburn Drive will require removal that may not be able to be reinstated

*** Carriageway, footway and cycle track construction in this location may irreparably damage the root base of mature trees. Replanting of trees in the adjacent greenspace is a replacement strategy if required.

Proposed next steps/ Mitigations

7.3.5. The scope of retaining existing trees will depend on the type of cycle infrastructure delivered and which construction method is chosen. There are several options for low-impact construction of cycle track but in the event of construction risking damage to the root zones of existing trees the safe choice is to replant the tree. For mature trees the replacement ratio could be 2-to-1 and as the table shows there is a large number of new trees proposed which would cover any loss of existing trees.

Opportunities

7.3.6. The project proposal proposes a large number of greenspaces on Ashgrove Road West where additional trees can be planted. The greenspace on Ashgrove Road immediately east of Westburn Drive also present an opportunity for replanting trees that were felled due to lime disease.

Recommendations

7.3.7. A replacement strategy should be developed alongside ACC's Tree Protection Officer and low-impact construction methods should be researched further.

7.4. Greenspaces and SUDS

7.4.1. There are currently no SUDS features on the corridor and there are no significant greenspaces in the carriageway space.

Opportunities

- 7.4.2. This concept design identifies opportunities to improve the streetscape and to create a consistent look and feel along the Ashgrove Road West and Ashgrove Road Corridor with landscaping and placemaking approaches that could follow alongside emerging Council policies on materials. Equally, there may be opportunities for some of those landscaped areas to be delivered as rain gardens to reduce run-off and alleviate capacity challenges in the sewer system. These should be explored in future project stages.

Impact/ Quantification of changes (positives & negative)

- 7.4.3. The proposed design allows for approximately 1,500 sqm of new greenspace to be delivered on Ashgrove Road West (0sqm at present) . The signal-controlled options at Foresterhill and Westburn Drive junctions add approximately 60 sqm each. The roundabout options for these junctions add approximately 370 and 780 sqm of greenspace however this makes up for the greenspace lost in land take. In total Ashgrove Road West has a net gain of 1,400 sqm with 120 sqm addition if the signal-controlled option is preferred. Due to Ashgrove Road and Laurelwood Avenue's existing narrow geometry, the only existing greenspace is located on the south side of Ashgrove Road between Westburn Drive and May Baird Avenue. This is approximately 750 sqm. Our design does require land take from this existing greenspace to provide high quality footways and cycle tracks, meaning that the new proposed area is approximately 580 sqm, a net loss of 270 sqm. In total along the entire corridor, the design has a net gain of between 1,130 and 1,250 sqm.

Section *	Approx Existing (m2)	Approx Proposed (m2)	Approx Net gain/ loss (m2)
Ashgrove Road West (N Anderson to Westburn Dr)	0	1,500*	+ 1,500
AR	750	480	-270
Laurelwood/ Elm PI	0	0	0

* within the building to building carriageway and assuming the signal-control options at Foresterhill and Westburn

**With the roundabout options there are further opportunities for greenspace within the carriageway, however this comes at the cost of greenspace land take off the carriageway The overall impact will be relatively neutral.

Recommendations

- 7.4.4. The proposed streetscape improvements have received strong support from the community. It is recommended that an early step of Stage 3 should be to agree in more detail with Council officers the approach to the placemaking and landscaping features of these elements.

7.5. Heritage and Conservation

Impact of changes

- 7.5.1. The Westburn Drive / Ashgrove Road / Ashgrove Road West junction is adjacent to the north-west corner of the Rosemount and Westburn Conservation area. If after further investigation, the project promoter chooses to go forward with a compact roundabout solution there will be an additional impact on the conservation area and in particular a requirement to remove approximately 30-40 mature trees that are part of the Tree Protection Order applied to all trees in conservation areas and partly with the removal of part of the boundary wall on Ashgrove Road and Westburn Drive. This is quantified in section 7.3. It is worth noting that the boundary wall is not mentioned specifically in the Conservation Area Character Appraisal and the proposed works are far from any listed buildings. However, removing the trees, which are mature trees of relatively high quality, may be a reason for objections.
- 7.5.2. Similarly at the Foresterhill junction around 30-40 additional mature trees would require removal (over and above the impact for the signal-controlled junction option).

Opportunities & constraints

- 7.5.3. The tree preservation orders in place within the conservation area presents a challenge to the project as it may restrict the delivery of a compact roundabout which would require parts of the wall and several trees to be removed. If approval was given to remove the walls on both sides of the street there is an opportunity to improve the streetscape further – the engagement responses noted that it currently feels enclosed and unsafe due to the long stretch of unbroken wall.

Next steps and mitigations

- 7.5.4. Due to the alignment of Ashgrove Road West and Ashgrove Road it is not feasible to deliver the compact roundabout solution at Westburn Drive without extending into greenspace land within the conservation area.
- 7.5.5. The boundary wall could be rebuilt to align with the new site boundary and thus re-establish the character of the space with the wall. There is scope within the wider project area to replant trees, even on a 2-to-1 ratio, to replace the mature trees that would need to be removed.

Recommendations

- 7.5.6. It is recommended that the opportunity to develop some of the placemaking and artwork opportunities alongside the community in order to secure buy-in and creativity from the people who know the area well.
- 7.5.7. Consultation with ACC Environmental Services and the Tree Preservation Officer should continue during Stage 3.

8. Traffic Assessment

8.1. Introduction

- 8.1.1. This Chapter summarises the junction modelling exercise undertaken for the existing layouts and the preferred design options, using the supplied traffic data from the Berryden Corridor project. The traffic network diagrams and modelling outputs are presented in CR-B.
- 8.1.2. Modelling was undertaken at four junctions:
- North Anderson Drive/ Ashgrove Road West
 - Foresterhill/ Foresterhill Road/ Ashgrove Road West double junction
 - Westburn Drive/ Ashgrove Road West/ Ashgrove Road
 - Ashgrove Road/ Laurelwood Avenue
- 8.1.3. The primary purpose of the junction modelling exercise was to identify the impact of the preferred junction options, not to dictate the objectives-led options assessment. So while preliminary modelling was also undertaken on some alternative options during sifting, this is not reported on here.

8.2. Methodology

- 8.2.1. The junction modelling has been undertaken using the following industry-standard software packages –
- Traffic signals – Linsig 3
 - Roundabouts – Junctions 10 (ARCADY module)
 - Priority junctions – Junctions 10 (PICADY module)
- 8.2.2. Traffic signal timing data for the existing junctions was supplied by Aberdeen City Council. Geometric parameters for the existing junctions and the identified options were measured using Ordnance Survey mapping in AutoCAD. The saturation flows that the modelling software derived from the identified geometric parameters were not calibrated as no queue data was available with which to base any calibration on.

8.3. Traffic Data

- 8.3.1. Aberdeen City Council provided weekday junction turning count data extracted from the Aberdeen City Centre Paramics Model 2019. The model used 2019 baseline traffic flows, and the Paramics network included the following development considerations:
- City Centre Low Emissions Zone (LEZ)
 - City Centre Masterplan
 - South College Street Junction Improvements
 - Haudagain Junction Improvements
 - Berryden Corridor Improvements

- 8.3.2. The supplied turning count data was provided in PCUs (passenger car units), and no data was provided for HGVs. As agreed with Aberdeen City Council no allowance was made for further background traffic growth or any committed developments.
- 8.3.3. Weekday AM and PM peak hour data was identified for each junction from the supplied data. The modelled scenarios were therefore as undernoted:
- Supplied weekday AM peak hour (08:00 – 09:00)
 - Supplied weekday PM peak hour (17:00 – 18:00)
- 8.3.4. The traffic network diagrams for the supplied data are presented in CR-B.

8.4. Assessment Criteria

- 8.4.1. There are two general indicators for each software package used to identify whether a junction is operating within or over capacity. One indicator is linked to individual approaches, and the other is for the full junction.
- Linsig:
 - Degree of Saturation: approaches experiencing a Degree of Saturation (DoS) over 90% are operating above capacity.
 - Percentage Residual Capacity: this indicates how much additional traffic can be accommodated across the entire junction before a DoS of 90% is reached on a single approach. A positive value indicates that the junction retains spare capacity, and a negative value indicates that the junction is over capacity.
 - Junctions 10 (both ARCADY and PICADY modules):
 - Ratio of Flow to Capacity: approaches experiencing a Ratio of Flow to Capacity (RFC) values of greater than 0.85 are operating at capacity, and approaches operating above an RFC of 1.0 are above capacity
 - Network Residual Capacity: similar to the PRC in Linsig, this indicates how much additional traffic can be accommodated across the junction before an RFC of 0.85 is reached on a single approach. A positive value indicates that the junction retains spare capacity, and a negative value indicates that the junction is over capacity.

8.5. Modelling Results Summary

- 8.5.1. This Section presents the summary results of the modelling for each of the identified options. The full modelling outputs are presented in CR-B, and summary results comparing the modelled Percentage Residual Capacities and Network Residual Capacities for the existing and identified options are presented in Table 8.1.

Table 8.1 – Percentage and Network Residual Capacity Summary

Junction	Existing		Option 1		Option 2	
	AM	PM	AM	PM	AM	PM
North Anderson Drive	19%	10%	25%	9%	n/a	n/a
Foresterhill Road	135%	139%	49%	43%	74%	71%
Westburn Drive	51%	33%	24%	-10%	21%	6%
Laurelwood Avenue	214%	115%	172%	93%	n/a	n/a

- 8.5.2. The summary results indicate that, with the exception of Westburn Drive Option 1 (the compact roundabout), each of the identified junction options would remain within operating capacity. The following sections provide more detailed results summarising the predicted queues and DoS / RFC on each approach to the junctions for each option.
- 8.5.3. It should be noted that some queues are denoted as “(flare)” because Linsig combines the queue lengths for ‘long’ and ‘short’ lanes into a single queue length. The long and short lanes have been identified in the results tables.
- 8.5.4. It is recommended that further junction modelling is conducted during RIBA Stages 3-4 when the junctions will be designed in further detail.

North Anderson Drive / Ashgrove Road West

- 8.5.5. The modelling results for the existing and future layouts for North Anderson Drive are presented in Table 8.2 and Table 8.3 respectively.

Table 8.2 – North Anderson Drive Modelling Results – Existing Layout (Linsig)

Approach	Lane / Direction	AM		PM	
		Queue (pcu)	DoS	Queue (pcu)	DoS
N Anderson Drive (north)	Left (short)	(flare)	75%	(flare)	72%
	Ahead 1 (long)	14.9	75%	13.6	72%
	Ahead 2	14.7	74%	13.3	71%
Ashgrove Road West (east)	Left	1.9	21%	2.2	22%
	Right	0.2	5%	7.1	80%
N Anderson Drive (south)	Ahead 1	10.6	57%	16.6	77%
	Ahead 2 (long)	9.9	65%	18.2	82%
	Right (short)	(flare)	76%	(flare)	82%
Residual Capacity		19.0%		10.3%	

Table 8.3 – North Anderson Drive Modelling Results – Future Layout (Linsig)

Approach	Lane / Direction	AM		PM	
		Queue (pcu)	DoS	Queue (pcu)	DoS
N Anderson Drive (north)	Left / Ahead	16	72%	16	80%
	Ahead	16	72%	17	80%
Ashgrove Road West (east)	Left	4	70%	9	82%
	Right	(flare)	70%	(flare)	82%
N Anderson Drive (south)	Ahead 1	10	53%	19	78%
	Ahead 2 (long)	11	69%	20	83%
	Right (short)	(flare)	72%	(flare)	83%
Residual Capacity		24.6%		9.1%	

8.5.6. The modelling of the preferred option for North Anderson Drive indicates that the junction would remain within capacity, as the residual capacity in both the AM and PM peaks are positive. The highest DoS was reported as 82% on the east approach in the PM peak hour, below the 90% threshold.

8.5.7. A comparison of the modelled queues for the existing and preferred option for North Anderson Drive is presented in Table 8.4. It demonstrates that while queues are predicted to increase, these increases would be relatively limited, and would not extend beyond the available storage.

Table 8.4 – North Anderson Drive Queue Comparison

Approach	Lane / Direction	Approx Capacity (pcu)	Existing		Option 1	
			AM	PM	AM	PM
N Anderson Drive (north)	Left (short)	2	(flare)	(flare)	n/a	n/a
	Ahead 1 (long)	50	15	14	16	16
	Ahead 2	50	15	13	16	17
Ashgrove Road West (east)	Left	20	2	2	4	9
	Right	20	0	7	(flare)	(flare)
N Anderson Drive (south)	Ahead 1	26	11	17	10	19
	Ahead 2 (long)	26	10	18	11	20
	Right (short)	9	(flare)	(flare)	(flare)	(flare)

Foresterhill Road / Ashgrove Road West

8.5.8. The modelling results for the existing, Option 1, and Option 2 layouts for Foresterhill Road are presented in Table 8.5, Table 8.6, and Table 8.7 respectively.

Table 8.5 – Foresterhill Road Modelling Results – Existing Layout (Linsig)

Junction	Approach	Lane / Direction	AM		PM	
			Queue (pcu)	DoS	Queue (pcu)	DoS
West	Ashgrove Road West (internal)	Left	0	17%	0	6%
		Ahead	0	5%	2	16%
	Foresterhill (south)	Left (short)	(flare)	31%	(flare)	32%
		Right (long)	2	31%	2	32%
	Ashgrove Road West (west)	Ahead (long)	2	17%	3.2	25%
		Right (short)	(flare)	17%	(flare)	25%
East	Ashgrove Road West (internal)	Left	0	6%	1	6%
		Ahead	2	20%	3	28%
	Foresterhill (south)	All	4	38%	4	37%
	Ashgrove Road West (east)	Ahead (short)	(flare)	38%	(flare)	38%
		Right (long)	4	38%	3	38%
Residual Capacity			135%		139%	

Table 8.6 – Foresterhill Road Modelling Results – Option 1 (ARCADY)

Junction	Approach	AM		PM	
		Queue (pcu)	RFC	Queue (pcu)	RFC
West	Ashgrove Road West Internal (east)	1	0.47	1	0.32
	Foresterhill (south)	0	0.15	1	0.38
	Ashgrove Road West (west)	0	0.29	0	0.30
East	Ashgrove Road West Internal (west)	1	0.38	1	0.47
	Foresterhill (north)	1	0.35	1	0.37
	Ashgrove Road West (east)	1	0.43	1	0.41
Residual Capacity		34%		32%	

Table 8.7 – Foresterhill Road Modelling Results – Option 2 (Linsig)

Junction	Approach	AM		PM	
		Queue (pcu)	DoS	Queue (pcu)	DoS
West	Ashgrove Internal (east)	1	34%	3	32%
	Foresterhill (south)	2	31%	5	39%
	Ashgrove (west)	3	21%	4	31%
East	Ashgrove Internal (west)	3	29%	3	35%
	Foresterhill (north)	5	52%	5	53%
	Ashgrove (east)	5	44%	6	52%
Residual Capacity		74%		71%	

8.5.9. A comparison of the modelled queues for the existing and preferred option for North Anderson Drive is presented in Table 8.8. It demonstrates that Option 1 would reduce the queues across both the west and east junctions, while Option 2 would result in queues only marginally longer than the existing levels.

Table 8.8 – Foresterhill Road Queue Comparison

Junction	Approach	Lane / Direction	Approx Capacity (pcu)	Existing		Option 1		Option 2	
				AM	PM	AM	PM	AM	PM
West	Ashgrove (internal)	Left	3	0	0	1	1	1	3
		Ahead	3	0	2				
	Foresterhill (south)	Left (short)	2	(flare)	(flare)	0	1	2	5
		Right (long)	15	2	2				
	Ashgrove (west)	Ahead (long)	50	2	3	0	0	3	4
		Right (short)	8	(flare)	(flare)				
East	Ashgrove (internal)	Left	3	0	1	1	1	3	3
		Ahead	3	2	3				
	Foresterhill (north)	All	10	4	4	1	1	5	5
	Ashgrove (east)	Ahead (short)	4	(flare)	(flare)	1	1	5	6
		Right (long)	35	4	3				

Westburn Drive / Ashgrove Road / Ashgrove Road West

8.5.10. The modelling results for the existing, Option 1, and Option 2 layouts for Westburn Drive presented in Table 8.9, Table 8.10, and Table 8.11 respectively.

Table 8.9 – Westburn Drive Modelling Results – Existing Layout (Linsig)

Approach	Lane / Direction	AM		PM	
		Queue (pcu)	DoS	Queue (pcu)	DoS
Westburn (north)	Left / Ahead (long)	13	60%	16	67%
	Right (short)	(flare)	60%	(flare)	67%
Ashgrove Road (east)	Left / Ahead (long)	4	56%	3	43%
	Right (short)	(flare)	56%	(flare)	43%
Westburn (south)	Left / Ahead (long)	9	44%	16	67%
	Right (short)	(flare)	44%	(flare)	67%
Ashgrove Road West (west)	Left / Ahead (long)	5	56%	10	68%
	Right (short)	(flare)	56%	(flare)	68%
Residual Capacity		51.2%		32.8%	

Table 8.10 – Westburn Drive Modelling Results – Option 1 (ARCADY)

Approach	AM		PM		
	Queue (pcu)	RFC	Queue (pcu)	RFC	
Westburn (north)	3	0.68	3	0.72	
Ashgrove Road (east)	1	0.39	2	0.43	
Westburn (south)	1	0.51	2	0.69	
Ashgrove Road West (west)	1	0.52	8	0.91	
Residual Capacity		24%		-10%	

Table 8.11 – Westburn Drive Modelling Results – Option 2 (Linsig)

Approach	Lane / Direction	AM		PM	
		Queue (pcu)	DoS	Queue (pcu)	DoS
Westburn (north)	Left / Ahead (long)	18	74%	20	80%
	Right (short)	(flare)	74%	(flare)	82%
Ashgrove (east)	All	6	67%	6	70%
Westburn (south)	Left / Ahead (long)	11	53%	21	83%
	Right (short)	(flare)	53%	(flare)	83%
Ashgrove (west)	All	9	75%	14	85%
Residual Capacity		20.8%		6.3%	

8.5.11. A comparison of the modelled queues for the existing and preferred option for North Anderson Drive is presented in Table 8.12. It demonstrates that Option 1 would result in significantly reduced queueing across the junction, with only the west approach predicted to experience any notable queueing (in the PM peak). Queues are predicted to increase for Option 2 but are likely to remain within the available storage. The predicted queue of 21pcu on the south approach in the PM peak would be spread across the ahead and right-turn lanes, which have a combined capacity of 25pcu.

Table 8.12 – Westburn Drive Queueing Comparison

Approach	Lane / Direction	Approx Capacity (pcu)	Existing		Option 1		Option 2	
			AM	PM	AM	PM	AM	PM
Westburn (north)	Left / Ahead (long)	50	13	16	2	3	18	16
	Right (short)	5	(flare)	(flare)			(flare)	(flare)
Ashgrove (east)	Left / Ahead (long)	10	4	3	1	1	6	6
	Right (short)	5	(flare)	(flare)				
Westburn (south)	Left / Ahead (long)	20	9	16	1	2	11	21
	Right (short)	5	(flare)	(flare)			(flare)	(flare)
Ashgrove (west)	Left / Ahead (long)	28	5	10	1	8	9	14
	Right (short)	5	(flare)	(flare)				

Laurelwood Avenue

8.5.12. The modelling results for the existing, Option 1, and Option 2 layouts for Laurelwood Avenue are presented in Table 8.13, Table 8.14, and Table 8.15 respectively.

Table 8.13 – Laurelwood Avenue Modelling Results – Existing (PICADY)

Approach	AM		PM	
	Queue (pcu)	RFC	Queue (pcu)	RFC
Laurelwood Avenue	0	0.18	16	0.30
Ashgroad Road (west)	0	0.23	3	0.34
Residual Capacity	214.0%		115.0%	

Table 8.14 – Laurelwood Avenue Modelling Results – Future Layout (PICADY)

Approach	AM		PM	
	Queue (pcu)	RFC	Queue (pcu)	RFC
Laurelwood Avenue	0	0.00	16	0.00
Ashgroad Road (west)	0	0.24	3	0.37
Residual Capacity	172.0%		93.0%	

Table 8.15 – Laurelwood Avenue Queueing Comparison

Approach	Approx Capacity (pcu)	Existing		Option 1	
		AM	PM	AM	PM
Laurelwood Avenue	n/a	0	0	0	0
Ashgroad Road (west)	16	0	0	0	0

8.5.13. The results indicate that the junction is operating under minimal pressure at present, and this will continue with the provision of the design option for Laurelwood Avenue.

8.6. Vehicular traffic circulation

8.6.1. The proposals for the east end of the Design Area include changing Laurelwood Avenue to a one-way operation, restricting traffic to southbound movements only. This will require traffic that would previously have travelled northbound on Laurelwood Avenue to seek an alternative route. The following assumptions have therefore been made with regards to traffic circulation in this location:

- All northbound Laurelwood Avenue traffic would instead travel northbound via the Berryden Corridor and then turn west onto Ashgrove Road at the new left-in / left-out junction provided as part of the Berryden Corridor.
- Traffic that would have previously turned left (west) from Laurelwood Avenue onto Ashgrove Road would instead be assumed to run east-west on Ashgrove Road from the Berryden left-in / left-out junction.
- Traffic that would have previously turned right (east) from Laurelwood Avenue onto Ashgrove Road would make the same movements as traffic turning left (west). However, instead of continuing west past Laurelwood Avenue it would stop at a destination between Laurelwood Avenue and the Berryden junction.

- Any traffic to the west of Laurelwood Avenue would be unaffected.

8.6.2. The supplied and proposed two-way traffic movements to the east of Westburn Drive, along with the identified change in flows, is summarised in Table 8.16

Table 8.16 - Ashgrove Road Traffic Circulation

Location	Observed		Proposed option		Change	
	AM	PM	AM	AM	AM	PM
Ashgrove Road (East of Westburn)	418	529	418	529	±0	±0
Ashgrove Road (West of Laurelwood Road)	338	499	338	499	±0	±0
Laurelwood Road	237	329	127	159	-111	-170
Ashgrove Road (East of Laurelwood Road)	131	227	239	344	+108	+117
Ashgrove Road (West of Berryden Road)	52	222	162	391	+111	+170
Berryden North	1146	1286	1146	1286	±0	±0
Berryden South	1129	1108	1239	1278	+111	+170

9. Behaviour Change Activation

- 9.1.1. This section presents a summary of the Behavioural Change Activation Report; the full version of is presented in CR-A.
- 9.1.2. Aberdeen's significant investment in new transport infrastructure is essential in achieving the City's Active Travel Action Plan objective of increasing the number of people cycling and walking each day. As well as building high quality infrastructure, there is the need for targeted "activation" to maximise the mode shift potential. Activation refers to the physical interventions that will encourage people to travel more sustainably by providing them with the knowledge, resources and skills to do so.
- 9.1.3. Activation plans seek to engage communities, schools, businesses and other local stakeholders through a combination of activities to deliver behaviour change. Programme activities can include measures such as bike libraries, community cycle hubs, walking groups and led rides; in combination with campaigns, cycle training, partnerships, knowledge and awareness raising and promotion of active travel.
- 9.1.4. The bespoke Activation Plan proposed by Atkins will enable ACC to maximise the potential usage of the Ashgrove Connects project and to extend understanding of the benefits of improved infrastructure. Without developing an activation plan alongside an infrastructure scheme, the return on investment will be slower to realise or not be realised in full.
- 9.1.5. Community engagement has taken place throughout the project, helping to bring local people together and provide a platform for them to share ideas, and in doing so identify active travel and placemaking opportunities. Engagement within educational settings, community resident groups and public facing organisations has ensured that this Activation Plan is co-designed, has key stakeholder buy-in and incorporates inclusive initiatives that meet the needs of the local communities.
- 9.1.6. Table 9.1 summarises the activities required to deliver the activation plan over the first three years, with the aim of reducing revenue funding as the physical interventions are implemented. Note that 'M&E' refers to the Monitoring and Evaluation Plan.

Table 9.1 – Behaviour Change Activation Plan Estimated cost

Year	Activity	Consultant / Third party supplier cost (£)	Assumptions	Total
Year 1	Development and approval of the Ashgrove Connects Behaviour Change Activation Plan	£20,000	The work to develop the finalised Activation Plan will be carried out by a chosen consultant via the approved commissioning process	£20,000
	Delivery of School Activation	£10,000	Third party suppliers to delivery chosen interventions	£10,000
	Overall coordination of the Activation Programme (including M&E)	£5,000	ACC to appoint a qualified programme coordinator to oversee the Activation Programme	£5,000
Total Year 1				£35,000
Year 2	Delivery of School Activation	£30,000	As above	£30,000
	Delivery of Community Activation	£30,000		£30,000
	Delivery of Business Activation	£5,000		£5,000
	Overall coordination of the Activation Programme (including M&E)	£15,000		£15,000
Total Year 2				£80,000
Year 3	Delivery of School Activation	£20,000	There is an assumption that year three costings will reduce as activities become self-sustained after the year 2 delivery period.	£20,000
	Delivery of Community Activation	£20,000		£20,000
	Delivery of Business Activation	£5,000		£5,000
	Overall coordination of the Activation Programme (including M&E)	£15,000		£15,000
Total Year 3				£60,000
Combined Activation Total				£175,000

9.1.7. It is recommended that these projected revenue costs are included in a future funding bid.

10. Delivery Options Appraisal

- 10.1.1. Further to the detailed assessment of scheme options, consideration has been given to the packaging of interventions for phased or partial delivery. These are scored against design objectives, deliverability and high-level cost assumptions. This section appraises packaging options against broad achievement of objectives.

10.2. Description of Options packages

- 10.2.1. The package options are described briefly below. It is assumed in all options that engagement, behaviour change and monitoring and evaluation would take place.

Do nothing

- 10.2.2. No change to the infrastructure in the area beyond the Berryden Corridor Improvement (BCI) scheme. While the lowest risk to deliver, this option may be impacted by public acceptance of no change.

Do Minimum 1 – Minor pedestrian improvements

- 10.2.3. This option is to implement side road, crossing and junction treatments to benefit pedestrians. This would include providing continuous footways, tightened corner radii and build outs to prevent parking in locations that impede other users.
- 10.2.4. The benefit of this option is that it would provide quick win benefits and is low deliverability risk. However, this option may not attract third party funding due to the limited impact of the interventions and may be less supported by the community than other options.

Do Minimum 2 – Soft segregated cycle tracks

- 10.2.5. This option is a lower cost way to provide cycle tracks within the confines of the existing carriageway, for example by providing bolt-down rubber kerbs. For the purpose of this option, it is proposed that at junctions these tracks transition into existing stop lines.
- 10.2.6. This option has the same impact on parking as full implementation, other than at Ashgrove Road east of Laurelwood Avenue where the existing layout can be retained. The primary benefit of this option is the relatively fast implementation time and lower cost. However, the benefit would primarily be for people cycling and not for other users. For this reason, it may be less supported by the community than other options unless clearly conducted as a temporary measure.

Do Minimum 3 – Ashgrove Road, Laurelwood Avenue and Elm Place traffic circulation only

- 10.2.7. This option would be to implement only the revised traffic circulation plans to complement the Berryden Corridor Improvement (BCI). This would reduce traffic on Laurelwood Avenue and Elm Place but would have limited impact on the other objectives. On its own it may be less publicly acceptable for residents in Ashgrove Road West.

Do Something 1 – Full implementation

- 10.2.8. This option would propose to implement the full scheme outlined in Chapter 4 of this report. The benefits of the scheme are to provide lower traffic impact on communities, the highest potential mode shift to sustainable modes, lower cost access to employment and improved community cohesion and satisfaction.

Do Something 2 – Ashgrove Road, Laurelwood Avenue and Elm Place only

- 10.2.9. This option is to implement the full proposed improvements at the east end of the study area between Westburn Drive and Berryden Road. The significant benefit to this option is to complement the BCI scheme and to respond to community priorities alongside BCI implementation.

Do Something 3 – Junctions and crossings + Do Something 2

- 10.2.10. This option is to implement the proposed junction improvements on Ashgrove Road West alongside the full redesign of the east end of the study area as described in Do Something 3. Junctions are the most hazardous locations for people walking and cycling and this would offer improvement for people walking, cycling and wheeling in the area at lower implementation cost than the full scheme.

Do Something 4 – Ashgrove Road West only

- 10.2.11. This option is to implement the full proposed improvements at the east end of the study area between Westburn Drive and Berryden Road. The benefit of this is that implementation on Ashgrove Road presents less delivery challenges than the east end of this site and would address the most significant traffic issues identified as well as provide more community spaces for residents. However this option (without also implementing the east end of the study area) would leave a gap in the cycle network connection between the communities and the city.

Assumed cost

- 10.2.12. An order of cost estimate has been prepared for the delivery of the full scheme (Do Something 1), at between £15-16m including all design development and construction fees. In order to develop order of scale cost to compare alternative options, the categorisation in Table 10.1 is applied:

Table 10.1 – Categorisation of order of scale cost

Category	Order of scale cost
High	£10m to £16m
Medium	£5m to £10m
Low	£0m to £5m

Qualitative Appraisal of packages

- 10.2.13. A 7 point qualitative scoring scale has been applied to each option, as shown in Table 10.2.

Table 10.2 – Qualitative appraisal scale

Score	Benefit	
		these are benefits or positive impacts which, depending on the scale of benefit or severity of impact, the practitioner feels should be a principal consideration when assessing an option's eligibility for funding;
+3	Major benefit	these are benefits or positive impacts which, depending on the scale of benefit or severity of impact, the practitioner feels should be a principal consideration when assessing an option's eligibility for funding;
+2	Moderate benefit	the option is anticipated to have only a moderate benefit or positive impact. Moderate benefits and impacts are those which taken in isolation may not determine an option's eligibility for funding, but taken together do so;
+1	Minor benefit	the option is anticipated to have only a small benefit or positive impact. Small benefits or impacts are those which are worth noting, but the practitioner believes are not likely to contribute materially to determining whether an option is funded or otherwise.
0	No benefit or impact	the option is anticipated to have no or negligible benefit or negative impact.
-1	Small minor cost or negative impact	the option is anticipated to have only a moderate cost or negative impact. Moderate costs/negative impacts are those which taken in isolation may not determine an option's eligibility for funding but taken together could do so.
-2	Moderate cost or negative impact	the option is anticipated to have only a moderate cost or negative impact. Moderate costs/negative impacts are those which taken in isolation may not determine an option's eligibility for funding, but taken together could do so;
-3	Major cost or negative impacts	these are costs or negative impacts which, depending on the scale of cost or severity of impact, the practitioner should take into consideration when assessing an option's eligibility for funding.

Table 10.3 – Qualitative scoring against objectives

Package	City & Region Policy	Transport Scotland/ Sustrans	Design objectives	Total
Do nothing	0	0	0	0
Do minimum 1 – Minor pedestrian improvements	+1	+1	+1	+3
Do Minimum 2 – Soft segregation cycle tracks	+1	+1	+1	+3
Do Minimum 3 – Ashgrove Road, Laurelwood Avenue and Elm Place traffic circulation only	+1	0	+1	+2
Do Something 1 – Full implementation	+3	+3	+3	+9
Do Something 2 – Ashgrove Road, Laurelwood Avenue and Elm Place only	+1	+1	+2	+4
Do Something 3 – Junctions and crossings + Do Something 2	+2	+2	+2	+6
Do Something 4 – Ashgrove Road West only	+1	+1	+2	+4

Table 10.4 – Qualitative scoring against deliverability

Package	Public acceptance	Technical Feasibility	cost	Affordability	Total
Do nothing	-2	+3	Low *	-1	0
Do minimum 1 – Minor pedestrian improvements	-1	+3	Low *	-1	+1
Do Minimum 2 – Soft segregation cycle tracks	-2	+2	Low	+3	+1
Do Minimum 3 – Ashgrove Road, Laurelwood Avenue and Elm Place traffic circulation only	-1	+2	Low*	-1	-1
Do Something 1 – Full implementation	+2	+1	High	+2	+5
Do Something 2 – Ashgrove Road, Laurelwood Avenue and Elm Place only	0	+2	Med	+2	+4
Do Something 3 – Junctions and crossings + Do Something 2	+2	+1	High	+2	+5
Do Something 4 – Ashgrove Road West only	+1	+2	Med	+1	+3

* May be unlikely to receive third party funding

10.3. Summary of Delivery Options Appraisal

- 10.3.1. The Do Nothing and Do Minimum options offer minor benefits and are unlikely to meet with significant public acceptance. Most of these options may not receive third-party funding and therefore may compare unfavourably with some higher cost options. They are not considered further as viable at this stage.
- 10.3.2. All the Do Something Options demonstrate moderate or major benefits against City policy outcomes, Design Objectives and to a varying degree public acceptance.
- 10.3.3. Full implementation of the scheme offers the most significant benefits to the City and is therefore likely to attract the greatest public acceptance as well as clear alignment with the objectives of the main third-party funder. It is recommended that this is progressed as a single project in order to maximise the impact.

10.4. Funding and Construction phasing

- 10.4.1. Three important factors have been considered in relation to the recommended phasing of project delivery:
- The source of third party funding that this project is primarily aligned with is Transport Scotland/ Sustrans' Places for Everyone Fund. This offers 100% design funding and 70% construction funding. The next window for applications closes on 18th October 2022 for funding announcements in December 2022 ([Places for Everyone - Sustrans](#));

- Aberdeen City Council can use the Berryden Corridor Improvement as match funding to cover the remaining 30% construction funding provided the projects are delivered at least partly in the same construction year. BCI construction begins in 2023-24; and
- Full implementation of Ashgrove Connects will maximise the benefits of the BCI and maximise the potential for public acceptance.

Primary delivery phasing recommendation

- 10.4.2. This appraisal therefore recommends that Ashgrove Connects is progressed to Stage 3-4 as a single project and that it is delivered in parallel with the BCI Improvement.

Alternative delivery phasing option

- 10.4.3. There may be a reason in the future to deliver the project in phases. There are many ways to phase delivery, some of which are considered in 'Do Something' options in the appraisal. However the most beneficial alternative phasing to maximise benefits to the community and to the BCI is to:
- Deliver the east end of the study area (Ashgrove Road, Laurelwood Avenue and Elm Place) are implemented prior to or alongside BCI delivery;
 - Deliver Ashgrove Road West proposals in a second phase subsequently; and
 - Ensure that the North Anderson Drive junction design and the A92 multi-modal corridor proposals are complementary to each other, although they do not necessarily have to be aligned to the same timescale.
- 10.4.4. The detail of this is considered further in the Business Case.

11. Economic Impact

11.1. Overview of Benefits

- 11.1.1. By improving the quality of this area, and by delivering new places to rest and dwell, Ashgrove Connects will deliver amenity and recreational benefits along the corridor. Public realm improvements have been shown to increase local levels of economic activity, boost property values, and make an area more attractive to potential investors.¹
- 11.1.2. ACC is seeking to deliver on local and national commitments to accessible neighbourhoods.² Compact communities improve the accessibility of key amenities and services for non-motorised users. This would also allow people to travel actively in support of their health and well-being, without access being limited by the cost of transport.³
- 11.1.3. Walking, wheeling, and cycling provide affordable and reliable transport.⁴ Investment in areas of multiple deprivation can promote differential equity impacts by improving access to services and employment opportunities for those on a low income. Further, projects which reduce car dependency may free up additional disposable income for impacted households.⁵
- 11.1.4. There are also wider benefits of the scheme which need to be considered. Such impacts are increasingly given greater weight in transport policy. The Scottish Government's new *National Transport Strategy* places walking and wheeling and the top of the sustainable transport hierarchy, followed directly by cycling.⁶
- 11.1.5. Active travel projects encourage modal shift from the private car. By reducing the need to travel unsustainably, active travel projects can help meet transport planning objectives to reduce traffic congestion, energy consumption, and carbon emissions.⁷ The *Council Climate Change Plan 2021 – 2025* states that ACC will promote active travel for these reasons to help tackle the climate emergency.⁸ Encouraging people to walk and cycle also means lower roads maintenance costs to the Council,⁹ fewer accidents and collisions, and improved air quality.
- 11.1.6. The health benefits of active travel are well-established. Increasing walking and cycling trips is a cost effective and practical way to improve public health as it gets more people out exercising more often.¹⁰ GPs in some parts of the UK are now even prescribing walking and cycling to patients as a way to improve public health and reduce costs to the NHS.¹¹ There is a clear link between

¹ Living Streets (2018). [The Pedestrian Pound: the business case for better streets and places.](#)

² The Scottish Government committed to the 20-minute neighbourhood concept in the [2020-21 Programme for Government](#). ACC included the concept as one of the key assessment themes in the [Place Based Investment Programme Fund](#).

³ ClimateXChange (2021). [20-minute neighbourhoods in a Scottish context.](#)

⁴ World Health Organisation (2022). [Walking and cycling: latest evidence to support policy-making and practice.](#)

⁵ Scottish Government (2022). [Reducing car use for a healthier, fairer, and greener Scotland.](#)

⁶ Scottish Government (2020). [National Transport Strategy.](#)

⁷ Christian Brand, et al. (2022). [The Climate Change Mitigation Effects of Daily Active Travel in Cities](#)

⁸ Aberdeen City Council (2021) [Council Climate Change Plan 2021 – 2025.](#)

⁹ Relative to the equivalent journey by car. See: Todd Litman (2016), [Transportation Cost and Benefit Analysis Guidebook, Section 5.6.](#)

¹⁰ Scottish Government (2019). [National Walking Strategy: Action Plan 2016-2026.](#)

¹¹ Davies, N. (2022). [GPs to prescribe walking and cycling in bid to ease burden on NHS.](#) The Guardian.

increased physical exercise and reduced risk of chronic conditions like type 2 diabetes, heart disease, many types of cancer, depression and anxiety, and dementia.

- 11.1.7. Health benefits will even accrue to people who do not travel using the new active travel infrastructure. An increased mode share to walking and cycling will improve air quality across the project area. This will complement the Council’s LEZ (Low Emission Zone) strategy, which was developed in response to dangerous levels of air pollution (mainly nitrogen dioxide – NO2) mostly caused by road traffic.
- 11.1.8. Finally, projects like Ashgrove Connects make active travel more safe, reliable, and, crucially, fun. Walking, wheeling, and cycling is already less stressful than driving¹² but improved infrastructure will enhance the quality of any journey and deliver enjoyment and wellbeing benefits to those who use it.¹³
- 11.1.9. The wide range of benefits anticipated through the Ashgrove Connects scheme is summarised in Table 11.1 overleaf.

Table 11.1 – Anticipated Benefits of Ashgrove Connects

Community impacts	Enables walkable and cyclable neighbourhoods Greater accessibility of amenities and services Differential equality impacts for people on low incomes Reduces car dependence	Amenity value and public realm	Improves accessibility for non-motorised users Transport cost savings Open space preservation Improves quality of life
Modal shift from the private car	Reduces carbon emissions Reduces traffic congestion Lower road maintenance costs Fewer road accidents Improves local air quality	Health impacts	Higher levels of physical activity Improves health Fewer sick days – economic growth Reduces costs to the NHS
Journey quality benefits	Improves user convenience, comfort, and safety Enjoyment and wellbeing impacts		

Monetising Active Travel Benefits

- 11.1.10. Active travel, accessible neighbourhoods, and the sustainable transport hierarchy have been established as policy priorities by the Scottish Government. A wealth of academic and grey literature supports this view, demonstrating the net positive impact of related projects at a macro level. ACC has accordingly focused on how best to deliver on these priorities by consulting our communities and businesses and designing schemes to a high quality, rather than directing resource to indicative monetary estimates.
- 11.1.11. Transport appraisal guidance in Scotland and the UK focuses largely on vehicular traffic. The primary benefits of transport investments, in the view of transport economists, are journey time

¹² Alexander Legrain, Naveen Eluru, and Ahmed M. El-Geneidy (2015). [Am Stressed, Must Travel: The Relationship between Mode Choice and Commuting Stress](#)

¹³ Leonhard K. Lades, Andrew Kelly, and Luke Kellehera (2020). [Why is active travel more satisfying than motorized travel? Evidence from Dublin.](#)

savings. Such savings are valued because they allow more productive work to be carried out or more leisure to be enjoyed, at least in the short-run.¹⁴ Consequently, there has been little space, historically, for the ‘slow modes’ – as walking, wheeling, and cycling were once described.

- 11.1.12. The UK Department for Transport (DfT) has now developed an approach for active travel schemes.¹⁵ This allows the health benefits of walking and cycling to be considered, and benefit–cost ratios for such schemes can be much higher than for conventional road improvements.¹⁶ Yet such appraisals rely on resource-intensive demand forecasts which are inherently uncertain. The DfT notes that due to relatively low scheme costs, cost-benefit analysis is highly sensitive to the findings of these forecasts.¹⁷
- 11.1.13. This points to the paradox in active travel appraisal. The extensive evidence base – government policy, academic literature, and climate and health data – all point to the benefits of sustained investment in active travel schemes. At the same time, evidencing the benefits of a specific scheme is resource intensive and fraught with uncertainties. Decision makers across Europe have often therefore relied on the larger evidence base alone to make the case for local cycling schemes. The focus is often instead on the outcomes which will contribute to wider mode shift at regional or national levels.
- 11.1.14. For example, the Parisian municipal government published its *Plan Vélo 2021-2026* in December 2021.¹⁸ This new plan aims to make the city ‘100% cyclable’ by constructing over 112 miles of segregated cycle lanes. The city committed to this €250 million investment in cycling infrastructure and did not need to justify this through formal cost-benefit analysis. Instead, the positive impact of cycling was established at a national level by the French government.¹⁹
- 11.1.15. Similarly, Copenhagen has excellent cycling infrastructure with segregated cycle lanes on every main road. Over a quarter (28%) of all trips and almost half (49%) of commutes to work or education were taken by bike in 2018.²⁰ At the publication of its first bicycle account in 1996 and later when the city launched its ambitions to become the “best cycling city of the world” in 2006, no cost-benefit analysis underpinned the business case for cycling infrastructure.²¹ Instead, the city has focused on directly measurable indicators, such as trip numbers, the length of the cycle network, and budget allocations, as well as regular surveys of cyclists.²²
- 11.1.16. Oslo undertook extensive consultation before the publication of its city cycling strategy in 2015.²³ Once again, instead of focusing on notional benefits derived from models, the city is targeting measures around travel behaviour, journey quality, and user safety. Regular surveys of the

¹⁴ David Metz (2016). *Travel Fast or Smart?: A Manifesto for an Intelligent Transport Policy*. London Publishing Partnership.

¹⁵ Department for Transport (2020). [TAG UNIT A5.1 Active Mode Appraisal](#).

¹⁶ Department for Transport (2014). [Value for Money Assessment for Cycling Grants](#)

¹⁷ Department for Transport (2020). [TAG UNIT A5.1 Active Mode Appraisal](#). para. 2.1.4.

¹⁸ Ville de Paris (2021). [Plan Vélo 2021-2026](#).

¹⁹ République française (2021). [Impact économique et potentiel de développement des usages du vélo en France en 2020](#).

²⁰ City of Copenhagen (2019). [The Bicycle Account 2018](#).

²¹ COWI (2009). [Economic evaluation of cycle projects - methodology and unit prices](#).

²² City of Copenhagen (2011). [Good, Better, Best The City of Copenhagen's Bicycle Strategy 2011-2025](#).

²³ Oslo kommune (2015). [Oslos sykkelstrategi 2015-2025](#)

communities affected forms an integral part of monitoring and evaluation, rather than ex post measurements of economic impact.²⁴

- 11.1.17. This approach can even be found in the UK. The Mayor of London introduced the Mini-Hollands scheme in 2013. Here, outer London Boroughs were invited to bid for funding to build Dutch-style cycling infrastructure.²⁵ Waltham Forest constructed 14 miles of segregated cycling paths and introduced extensive traffic calming and mixed mode crossing. The Borough's bid to the Greater London Assembly makes no mention of monetised benefits, instead outlining the likely qualitative benefits of the scheme and committing to monitoring trip and accident data.²⁶ The other successful bids did include monetised assessments, however, here again, community impacts/ improved quality of life benefits were considered prominently in both cases.²⁷
- 11.1.18. The outcomes set out in the Monitoring and Evaluation framework (see Section 11.2) confirm the wide range of benefits associated with the scheme. While these have not been monetised it is clear that the scheme would deliver high Value for Money should formal cost-benefit analysis be undertaken.

11.2. Monitoring & Evaluation

Introduction

- 11.2.1. This Chapter sets out a brief outline of the Monitoring & Evaluation (M&E) Plan, and the current Stage 1-2 plan is presented in CR-C.

Purpose

- 11.2.2. In line with Sustrans' Places for Everyone funding application requirements and Transport Scotland policy guidance, the Ashgrove Connects Stage 1-2 M&E Plan develops a framework which would be used to capture, analyse and present data required to evaluate the likely impacts of the project pre and post construction. This also serves as a reference tool to guide future monitoring activities throughout the remaining lifecycle of the project.

Monitoring & Evaluation Framework

- 11.2.3. The proposed framework outlines a series of quantitative and qualitative outcomes and performance indicators based on overarching project objectives (Walking/Wheeling, Cycling, Crossings and Junctions etc.) which would be used to measure the project's impact. A sample of these include:
- Quantitative:
 - Peak and daily through traffic movements in the area;
 - Percentage of LGV/HGV movements;
 - Mean, max and 85%ile traffic speeds;

²⁴ Oslo kommune (2021). [Holdningsundersøkelse om å sykle Oslo 2020](#)

²⁵ Mayor of London (2016). [Transforming cycling in outer boroughs: Mini-Hollands programme](#)

²⁶ Waltham Forest Council (2013). [Mini-Holland bid](#).

²⁷ Enfield Council (2013). [Mini-Holland bid report](#); Royal Borough of Kingston upon Thames (2014). [Kingston mini-Holland Programme outline business case](#)

- Road collisions and casualties.
 - Qualitative:
 - Perceptions of safety in the design area;
 - Perceived attractiveness of the design area;
 - Perceived friendliness of walking/wheeling, and cycling journeys in the design area;
 - Walking Audit scores.
- 11.2.4. Monitoring activities proposed within the plan are oriented towards tackling identified (actual and perceived) issues within the design area and achieving the Design Objectives. Evaluation of the project, similarly, are oriented to assess the extent to which these issues have been mitigated and objectives have been achieved post-construction.

Future Reporting Requirements

- 11.2.5. There are noted to be three main outputs of the Monitoring and Evaluation Plan, these are.:
- Baseline (Pre-construction) Monitoring reports, which evidence the baseline performance and potential impacts of a proposed route/project and its surrounding study area from inception to project handover to / adoption.
 - 1-Year After (1YA, Interim) Monitoring Studies, which serves as an interim output of the M&E Plan, presenting the findings from data gathered and surveys undertaken one full year after a project's construction and certification. The 1YA study represents a benchmark for short-term objectives.
 - 3-5 Years After (3-5YA, Final) Monitoring Studies, this serves as the final output of the Monitoring & Evaluation Plan. Presenting the findings from data gathered and surveys undertaken after the scheme has been operation for 3 or 5 years. 3YA or 5YA studies are used to evaluate longer-term objectives.
- 11.2.6. It is recommended that funding allowance is made during Stage 3-4 to ensure that all necessary baseline data is captured and future funding applications allow for post-implementation monitoring.

12. Summary and Recommendations

12.1.1. This report has been prepared to the DMRB TD37/93 Stage 2 Scheme Assessment report structure in accordance with the client's requirements. It summarises the baseline context and Design Objectives, as reported in full in the Baseline Assessment (document CR-K), and summarises the assessments undertaken to refine and develop the identified Concept Design options to be taken to RIBA Stage 3 design.

12.2. Design Objectives

12.2.1. Design Objectives were developed from a combination of community engagement, established policy, and technical analysis of opportunities and constraints. The Design Objectives were then validated by the Stakeholder Working Group. The Design Objectives define how the scheme options are assessed and should continue to steer the development of the proposals through subsequent design stages.

12.3. Scheme Options Assessment

12.3.1. A three stage Options Assessment was undertaken to identify a concept design proposal. This was complemented by extensive community engagement to inform the designs.

12.3.2. The resulting concept design has therefore robustly considered a broad range of options and enjoys broad public and stakeholder support.

12.4. Proposed option

12.4.1. The proposed changes are:

- 20mph speed limit on Ashgrove Road and Ashgrove Road West;
- Reduced carriageway width and crossing distances;
- Continuous footways at side roads to provide design priority for pedestrians;
- One new controlled crossing of Ashgrove Road West;
- A significant net increase in the number of street trees and green infrastructure;
- Two new opportunities for public realm features as gateways into the community;
- Segregated cycle tracks on
 - Ashgrove Road West;
 - Ashgrove Road between Westburn Drive and Laurelwood Avenue; and
 - Laurelwood Avenue and Elm Place.
- Enhanced bus stop facilities and cycle bypasses of bus stops; and
- Reduction in available on street parking commensurate, prioritising residential need where required.

12.5. Benefits

12.5.1. The benefits of the project are:

Community impacts	<ul style="list-style-type: none"> • Enables walkable and cyclable neighbourhoods • Greater accessibility of amenities and services • Differential equality impacts for people on low incomes • Reduced car dependence 	Amenity value and public realm	<ul style="list-style-type: none"> • Improved accessibility for non-motorised users • Transport cost savings • Open space preservation • Improved quality of life
Modal shift from the private car	<ul style="list-style-type: none"> • Reduced carbon emissions • Reduced traffic congestion • Lower road maintenance costs • Fewer road accidents • Improved local air quality 	Health impacts	<ul style="list-style-type: none"> • Higher levels of physical activity • Improved health • Safer roads for all users • Fewer sick days – economic growth • Reduced costs to the NHS
Journey quality benefits	<ul style="list-style-type: none"> • Improved user convenience, comfort, and safety • Enjoyment and wellbeing impacts 		

12.6. Costs

12.6.1. Cost estimates have been provided, at an estimated £16million to full construction (subject to assumptions and exclusions, including inflationary uncertainty).

12.6.2. The Business Case estimates that while there are short-term adaptations to be made the reallocation of road-space from vehicular traffic to sustainable modes is likely to result in either a neutral or reduced maintenance burden for ACC.

12.7. Deliverability

12.7.1. The scheme is largely designed within the existing public boundary, with standard engineering constraints to mitigate.

12.8. Packages and phasing

12.8.1. A number of package options were appraised. Full implementation offers the greatest maximisation of benefits and alignment with policy and objectives, particularly if delivered prior to or alongside the BCI.

- 12.8.2. The scheme is well aligned with Transport Scotland/ Sustrans' Places for Everyone funding which makes delivery affordable. This fund offers full design development costs and 70% of construction funding. The match funding element can be secured if the project is delivered prior to or alongside BCI implementation.

12.9. Next Steps

- 12.9.1. It is therefore recommended that ACC applies for funding for RIBA Stages 3-4 in October 2022 (for 2023-24) for the full scheme and to target construction commencement within the BCI construction period.
- 12.9.2. The immediate next steps are therefore to:
- Seek Council City Growth and Resources Committee approval to proceed;
 - Update the community on progress;
 - During RIBA Stage 3 it will be important early in the design process to:
 - Invest further in community relations by continuing the depth of engagement to date;
 - Address the identified gaps in response from businesses and local disability representatives;
 - Work with stakeholders to plan implementation of the Behaviour Change Activation Plan;
 - Plan for all monitoring and evaluation baseline data collection to be complete prior to implementation;
- 12.9.3. At an early stage in the design process address the remaining design challenges prior to detailed design, in particular to:
- Determine whether the final preferred options at Foresterhill/ Foresterhill Road and at Westburn Drive should be signal-controlled or roundabout junctions;
 - Finalise the balance of parking layouts and streetscape enhancements at Laurelwood Avenue and the east end of Ashgrove Road by continuing to engage in detailed discussions with residents and ACC officers;
 - Develop detailed solutions for maintenance, materials, sustainable urban drainage (including the potential for rain gardens) and for public realm and landscaping enhancements through further detailed engagement with relevant ACC officers.

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Appendix A

High Level Options Assessment

Design Objectives	
1	Traffic The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.
2	Crossings and Junctions Using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.
3	Place Quality and Greenspace The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of 'green'.
4	Walking People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.
5	Cycling People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.
6	Parking and Loading Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.

Ratings

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

- Achieves Design Objective
- Partially achieves Design Objective
- Doesn't Achieve Design Objective

Location ref	Location description	Option		Description	Objectives appraisal						Take forward to detailed assessment	Comments on filtering decision
		Option Ref	Definition		Traffic	Crossings & junctions	Place & greenspace	Walking	Cycling	Parking & loading		
All	All	1	Traffic speed limit	30mph speed limit	Red	Yellow	Red	Yellow	Red	n/a	N	Extensive research demonstrates that 30mph speed limit settings are less compatible with community environments than 20mph settings, for reasons of safety, perceptions of safety.
All	All	2	Traffic speed limit	20mph speed limit	Green	Yellow	Green	Green	Green	n/a	Y	Extensive research demonstrates that 20mph is the appropriate speed limit for most urban streets, is the default speed limit for tertiary/ local streets in the Aberdeen Roads Hierarchy and is gradually being implemented as the default urban speed limit across the UK. The concept design works towards a lower design speed compatible with a 20mph limit.
All	All	3	Traffic speed limit	Neighbourhood speed limit (10mph or lower)	Red	Yellow	Green	Yellow	Green	n/a	N	A 5-10mph speed limit is compatible with neighbourhood streets with a high place value, relatively high housing density and lots of community and play activity. The volume of traffic (circa 6,000-10,000 vpd) and environment is not considered conducive to a self-enforcing 10mph speed limit.
All	Main corridor	1	Traffic calming	Vertical deflection	Red	Yellow	Green	Yellow	Green	n/a	N	The whole Ashgrove Road West/ Ashgrove Road corridor is a bus route as well as an emergency vehicle route. Aberdeen City's approach is to not implement vertical traffic calming on such routes.
All	Main corridor	2	Traffic calming	Horizontal deflection	Green	Yellow	Green	Green	Green	n/a	Y	The use of carriage way narrowing, horizontal deflections, tightening of corner radii and the removal of right turn ghost islands or filters, as well as bringing bus stop boxes into the mainline flow, are all permitted techniques for slowing traffic.
All	Side streets	3	Traffic calming	Vertical deflection	Green	Yellow	Green	Green	Green	n/a	Y	In most cases, side streets do not carry bus or emergency vehicle traffic and traffic volumes are low. Therefore vertical traffic calming to control speed and provide pedestrian and cycle priority is permitted. There are some exceptions and this should be considered on a case by case basis.
All	Side streets	4	Traffic calming	Horizontal deflection	Green	Yellow	Green	Green	Green	n/a	Y	The use of carriage way narrowing, horizontal deflections, tightening of corner radii and the removal of right turn ghost islands or filters, as well as bringing bus stop boxes into the mainline flow, are all permitted techniques for slowing traffic.
All	All	1	Footways	Do nothing - retain existing surface	n/a	Yellow	Red	Red	n/a	n/a	N	Existing footway surface is uneven and the roots of mature street trees disrupt the surface. It is likely that trees may fall over time.
All	All	2	Footways	Do minimum - limited patching and resurfacing in the worst locations	n/a	Yellow	Yellow	Yellow	n/a	n/a	N	While this should not be taken forward as the priority - the reality of funding priorities may mean that this option is kept on the table at further stages of design.
All	All	3	Footways	Replacement and reinstatement of trees only where necessary for the scheme	n/a	Yellow	Yellow	Yellow	n/a	n/a	N	While this should not be taken forward as the priority - the reality of funding priorities may mean that this option is kept on the table at further stages of design.
All	All	4	Footways	Replacement and reinstatement of trees + resurface damaged surface throughout	n/a	Yellow	Yellow	Yellow	n/a	n/a	Y	The Stage 2 design should aim to price for full reinstatement, however the requirement should be revisited at stage 3 to prioritise investment.

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		Option Ref	Definition		Traffic	Crossings & junctions	Place & greenspace	Walking	Cycling			Parking & loading	
ARW	Ashgrove West	1	Traffic lane widths	Retain existing carriageway space allocations	Yellow	Red	Green	Green	Green	Green	Green	N	Existing carriageway lane widths encourage high speed and overtaking and limits the opportunity to achieve other objectives. There is considerable under-utilised carriageway space at present.
ARW	Ashgrove West	2	Traffic lane widths	Traffic movement lanes 3m each + clearance distances	Green	Green	Green	Green	Green	Green	Green	Y	Through traffic, HGV and bus movement can be accommodated and will allow space to be reallocated to achieve the other objectives. Narrow carriageways encourage low traffic speed. Full free-flow clearances on a through route (rather than access recommended by the NROG would result in a total two-lane carriageway width of 6.7m, however this assumes no mirror overhang of the kerb, full clearance from kerb and 0.3m between opposing vehicle mirrors. The heavy vehicle flows on this tertiary/ local route that is primarily for access justify a narrower assumption of 6.5m, particularly where there is clearance distance to footway infrastructure and pedestrians that would be the case with protected cycle tracks.
ARW	Ashgrove West	3	Traffic lane widths	Traffic movement lanes less than 3m each	Green	Red	Green	Green	Green	Green	Green	N	Through traffic, HGV and bus movement cannot be accommodated. Lanes narrower than 3m creates safety risk for these movements at the identified volume.
ARW	Ashgrove West	1	Cycling space	Shared carriageway with traffic	n/a	n/a	n/a	Green	Green	Green	Green	N	This may help maximise space for placemaking and green infrastructure. However where two-way traffic volume exceeds 200 PCUs per hour or speeds are over 30kph it will not achieve a high level of service for all ages and abilities and is likely to encourage cycling on footways.
ARW	Ashgrove West	2	Cycling space	Shared footway	n/a	n/a	n/a	Green	Green	Green	Green	N	In combination with a narrow carriageway, this may help maximise space for placemaking and green infrastructure. However cycling on footways in the urban setting is not appropriate to allow all ages and abilities of pedestrian to feel comfortable. Equally it will not provide cycle users with sufficient directness and comfort and confident cyclists will not use it.
ARW	Ashgrove West	3	Cycling space	Uni-directional painted lanes	Yellow	Green	Green	Green	Green	Green	Green	N	Where two-way traffic volume exceeds 200PCUs per hour or speeds are over 30kph this will not achieve a high level of service for all ages and abilities, and is likely to encourage cycling on footways.
ARW	Ashgrove West	4	Cycling space	Uni-directional protected tracks	Green	Green	Green	Green	Green	Green	Green	Y	The highest level of service for all ages and abilities on heavily trafficked streets. This is also the most space hungry and will require the carriageway to be narrowed to 6-6.5m to be accommodated. Impact on measured parking demand is minimal.
ARW	Ashgrove West	5	Cycling space	Bi-directional protected tracks	Green	Green	Green	Green	Green	Green	Green	Y	Bi-directional tracks are suitable for all ages and abilities and perform far better than non-protected options. In comparison with uni-directional tracks they have slight space-saving advantages, however they are typically less coherent and can create additional conflicts at junctions. It is recommended that they are only used where space or functionality prevents the use of uni-directional tracks. Impact on measured parking demand is minimal.
ARW	Ashgrove West	1	On-street parking	Retain existing capacity	n/a	n/a	n/a	Green	Green	Green	Green	N	Surveys indicate that there is very little on street parking and the vast majority of existing capacity is unused. Retention of on-street parking will limit the opportunity to use the space for movement and place.
ARW	Ashgrove West	2	On-street parking	Meet isolated residential demand	n/a	n/a	n/a	Green	Green	Green	Green	N	Surveys indicate a very low level of overnight (assumed to be residential) on-street parking (3 vehicles). This can be accommodated in off-street locations or on side streets.
ARW	Ashgrove West	3	On-street parking	Remove all parking	n/a	n/a	n/a	Green	Green	Green	Green	Y	Surveys indicate a very low level of overnight (assumed to be residential) on-street parking (3 vehicles). This can be accommodated in off-street locations or on side streets.

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		Option Ref	Definition		Traffic	Crossings & junctions	Place & greenspace	Walking	Cycling			Parking & loading		
AWWMB	Ashgrove Road (Westburn to May Baird)	1	Traffic lane widths	Retain existing carriageway space allocations									N	Existing carriageway lane widths encourage high speed and overtaking and limits the opportunity to achieve other objectives. There is considerable under-utilised carriageway space at present.
AWWMB	Ashgrove Road (Westburn to May Baird)	2	Traffic lane widths	Traffic movement lanes 3m each + clearance distances									Y	Through traffic and the low levels of HGV movement can be accommodated and will allow space to be reallocated to achieve the other objectives. Narrow carriageways encourage low traffic speed. Full free-flow clearances on a through route (rather than access) recommended by the NRDC would result in a total two-lane carriageway width of 6.7m, however this assumes no mirror overhang of the kerb, full clearance from kerb and 0.3m between opposing vehicle mirrors. The heavy vehicle flows on this tertiary/local route that is primarily for access justify a narrower assumption of 6-6.5m, particularly where there is clearance distance to footway infrastructure and pedestrians that would be the case with protected cycle tracks.
AWWMB	Ashgrove Road (Westburn to May Baird)	3	Traffic lane widths	Traffic movement lanes less than 3m each									N	Low levels of HGV movement can be accommodated. Lanes narrower than 3m creates are feasible at this location at the identified volume.
AWWMB	Ashgrove Road (Westburn to May Baird)												N	This may help maximise space for placemaking and green infrastructure. However where two-way traffic volume exceeds 200 PCUS per hour or speeds are over 30kph it will not achieve a high level of service for all ages and abilities and is likely to encourage cycling on footways.
AWWMB	Ashgrove Road (Westburn to May Baird)	1	Cycling space	Shared carriageway with traffic		n/a							N	In combination with a narrow carriageway, this may help maximise space for placemaking and green infrastructure. However cycling on footways in the urban setting is not appropriate to allow all ages and abilities of pedestrian to feel comfortable. Equally it will not provide cycle users with sufficient directness and comfort and confident cyclists will not use it.
AWWMB	Ashgrove Road (Westburn to May Baird)	2	Cycling space	Shared footway		n/a							N	Where two-way traffic volume exceeds 200PCUS per hour or speeds are over 30kph this will not achieve a high level of service for all ages and abilities, and is likely to encourage cycling on footways.
AWWMB	Ashgrove Road (Westburn to May Baird)	3	Cycling space	Uni-directional painted lanes		n/a							N	The highest level of service for all ages and abilities on heavily trafficked streets. This is also the most space hungry and will require the carriageway to be narrowed to 6-6.5m to be accommodated. Some reduction in verge will likely be required. Likely reduction in parking capacity, with a slight impact on demand.
AWWMB	Ashgrove Road (Westburn to May Baird)	4	Cycling space	Uni-directional protected tracks		n/a							Y	Bi-directional tracks are suitable for all ages and abilities and perform far better than non-protected options. In comparison with uni-directional tracks they have slight space-saving advantages, however they are typically less coherent and can create additional conflicts at junctions. It is recommended that they are only used where space or functionality prevents the use of uni-directional tracks. Likely reduction in parking capacity similar to uni-directional tracks, with a slight impact on demand.
AWWMB	Ashgrove Road (Westburn to May Baird)	5	Cycling space	Bi-directional protected tracks		n/a							Y	Surveys indicate that there is no on street parking provision. Providing on-street parking will limit the opportunity to use the space for movement and place.
AWWMB	Ashgrove Road (Westburn to May Baird)	1	On-street parking	Retain existing capacity		n/a							N	Meeting all residential demand on the corridor itself will limit the opportunity to provide uni-directional protected cycle tracks and wider footways.
AWWMB	Ashgrove Road (Westburn to May Baird)	2	On-street parking	Meet measured residential demand		n/a							N	There is limited if any demand for residential parking at this location. Occasional parking can take place on side streets.
AWWMB	Ashgrove Road (Westburn to May Baird)	3	On-street parking	Remove all parking on the corridor		n/a							Y	

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		Option Ref	Definition			Crossings & junctions	Place & greenspace	Walking	Cycling			Parking & loading	
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	1	1 traffic lane widths	Retain existing carriageway space allocations								N	Existing carriageway lane widths encourage high speed and overtaking and limits the opportunity to achieve other objectives. There is considerable under-utilised carriageway space at present.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	2	2 traffic lane widths	Traffic movement lanes 3m each + clearance distances								Y	Through traffic and the low levels of HGV movement can be accommodated and will allow space to be reallocated to achieve the other objectives. Narrow carriageways encourage low traffic speed. Full free-flow clearances on a through route (rather than access) recommended by the NRDG would result in a total two-lane carriageway width of 6.7m, however this assumes no mirror overhang of the kerb, full clearance from kerb and 0.3m between opposing vehicle mirrors. The heavy vehicle flows on this tertiary/ local route that is primarily for access justify a narrower assumption of 6.65m, particularly where there is clearance distance to footway infrastructure and pedestrians that would be the case with protected cycle tracks.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	3	3 traffic lane widths	Traffic movement lanes less than 3m each + clearance distance								Y	Low levels of HGV movement can be accommodated. Lanes narrower than 3m creates are feasible at this location at the identified volume.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	1	1 cycling space	Shared carriageway with traffic		n/a						N	This may help maximise space for placemaking and green infrastructure. However, where two-way traffic volume exceeds 200 PCUs per hour or speeds are over 30kph it will not achieve a high level of service for all ages and abilities and is likely to encourage cycling on footways.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	2	2 cycling space	Shared footway		n/a						N	In combination with a narrow carriageway, this may help maximise space for placemaking and green infrastructure. However cycling on footways in the urban setting is not appropriate to allow all ages and abilities of pedestrian to feel comfortable. Equally it will not provide cycle users with sufficient directness and comfort and confident cyclists will not use it.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	3	3 cycling space	Uni-directional painted lanes		n/a						N	Where two-way traffic volume exceeds 200PCUs per hour or speeds are over 30kph this will not achieve a high level of service for all ages and abilities, and is likely to encourage cycling on footways.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	4	4 cycling space	Uni-directional protected tracks		n/a						Y	The highest level of service for all ages and abilities on heavily trafficked streets. This is also the most space hungry and will require the carriageway to be narrowed to 6-6.5m to be accommodated. Some reduction in verge will likely be required. Likely reduction in parking capacity, with a slight impact on demand.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	5	5 cycling space	Bi-directional protected tracks		n/a						Y	Bi-directional tracks are suitable for all ages and abilities and perform far better than non-protected options. In comparison with uni-directional tracks they have slight space-saving advantages, however they are typically less coherent and can create additional conflicts at junctions. It is recommended that they are only used where space or functionality prevents the use of uni-directional tracks. Likely reduction in parking capacity similar to uni-directional tracks, with a slight impact on demand.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	1	1 On-street parking	Retain existing capacity	n/a							Y	Residential demand at flats and terraced homes indicates a preference to retain existing parking where possible.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	2	2 On-street parking	Meet isolated residential demand	n/a							Y	Residential demand at flats and terraced homes indicates the need to retain existing parking where possible.
AMBL	Ashgrove Road (Way Baird to Laurelwood Ave)	3	3 On-street parking	Remove all parking	n/a							N	Residential demand at flats and terraced homes indicates the need to retain parking where possible.

Design Objectives	
1	Traffic The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.
2	Crossings and Junctions Using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.
3	Place Quality and Greenspace The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of 'green'.
4	Walking People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.
5	Cycling People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.
6	Parking and Loading Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.

Ratings

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

- Achieves Design Objective
- Partially achieves Design Objective
- Doesn't Achieve Design Objective

Location ref	Location description	Option		Description	Traffic	Objectives appraisal				Take forward to detailed assessment	Comments on filtering decision	
		Option Ref	Definition			Crossings & junctions	Place & greenspace	Walking	Cycling			Parking & loading
ALB	Ashgrove Road (Laurelwood to Berryden)	1	1 traffic lane widths	Retain existing carriageway space allocations (5.6-5.8m two-way traffic) or equivalent for one-way street	Green	Green	Green	Green	Green	Green	Green	Maximises the opportunity to achieve other objectives. However by rationalising parking and introducing traffic calming measures, opportunities may be identified
ALB	Ashgrove Road (Laurelwood to Berryden)	2	2 traffic lane widths	Traffic movement lanes 3m each + clearance distances	Green	Green	Green	Green	Green	Green	Green	Limits the opportunity to achieve other objectives. Through traffic and the low levels of HGV movement can be accommodated within existing movement space. Increasing the traffic movement space would remove all parking and speed up traffic
ALB	Ashgrove Road (Laurelwood to Berryden)	1	1 traffic circulation	Retain all existing movements	Green	Green	Green	Green	Green	Green	Green	Limits the opportunity to achieve other objectives. However should be considered in combination with options on surrounding streets.
ALB	Ashgrove Road (Laurelwood to Berryden)	2	2 traffic circulation	Westbound traffic only	Green	Green	Green	Green	Green	Green	Green	This may help maximise space for placemaking and green infrastructure however through traffic, HGV and access to businesses can only be accommodated westbound. May increase through traffic on Laurelwood Avenue.
ALB	Ashgrove Road (Laurelwood to Berryden)	3	3 traffic circulation	Eastbound traffic only	Green	Green	Green	Green	Green	Green	Green	This may help maximise space for placemaking and green infrastructure however through traffic, HGV and access to businesses can only be accommodated eastbound. Increase in through traffic likely to have a negative impact on Laurelwood Avenue. Instruction from ACC is that the left turn from Berryden corridor into Ashgrove Road must be retained.
ALB	Ashgrove Road (Laurelwood to Berryden)	4	4 traffic circulation	Close Ashgrove Road to through traffic	Green	Green	Green	Green	Green	Green	Green	Through traffic, HGV, access to businesses and bus movement cannot be accommodated in either direction. Increase in through traffic likely to have a negative impact on other residential streets. Instruction from ACC is that the left turn from Berryden corridor into Ashgrove Road must be retained.
ALB	Ashgrove Road (Laurelwood to Berryden)	5	5 traffic circulation	False one-way street: Bin left turn from Ashgrove Road to Berryden Road	Green	Green	Green	Green	Green	Green	Green	Provides opportunities to reallocate space to priority users. However may have a knock-on effect on Laurelwood Avenue
ALB	Ashgrove Road (Laurelwood to Berryden)	1	1 cycling space	Shared carriageway with traffic	n/a	n/a	n/a	n/a	n/a	n/a	n/a	This may help maximise space for placemaking and green infrastructure. However it will not achieve comfortable cycling conditions for all ages and abilities and is likely to encourage cycling on footways
ALB	Ashgrove Road (Laurelwood to Berryden)	2	2 cycling space	Shared footway	Green	Green	Green	Green	Green	Green	Green	In combination with a narrow carriageway, this may help maximise space for placemaking and green infrastructure. However cycling on footways in the urban setting is not appropriate to allow all ages and abilities of pedestrian to feel comfortable. Equally it will not provide cycle users with sufficient directness and comfort and most confident cyclists will not use it
ALB	Ashgrove Road (Laurelwood to Berryden)	3	3 cycling space	Uni-directional painted lanes	Green	Green	Green	Green	Green	Green	Green	This will not achieve comfortable cycling conditions for all ages and abilities and is likely to encourage cycling on footways
ALB	Ashgrove Road (Laurelwood to Berryden)	4	4 cycling space	Uni-directional protected tracks	Green	Green	Green	Green	Green	Green	Green	The highest level of overall cycling amenity for all ages and abilities on heavily trafficked streets. This is also the most space hungry and will require the carriageway to be narrowed to 6-6.5m to be accommodated.
ALB	Ashgrove Road (Laurelwood to Berryden)	5	5 cycling space	Bidirectional protected tracks	Green	Green	Green	Green	Green	Green	Green	Bi-directional tracks are suitable for all ages and abilities and perform far better than non-protected options. In comparison with uni-directional tracks they have slight space-saving advantages, however they are typically less coherent and can create additional conflicts at junctions. It is recommended that they are only used where a space or functionality prevents the use of uni-directional tracks
ALB	Ashgrove Road (Laurelwood to Berryden)	1	1 On-street parking	Retain existing capacity	Green	Green	Green	Green	Green	Green	Green	Retaining existing capacity will impact on other objectives. Feedback from the public indicated parking impedes visibility at junctions, narrow pavements and blocks driveway access to properties.
ALB	Ashgrove Road (Laurelwood to Berryden)	2	2 On-street parking	Meet isolated residential demand	Green	Green	Green	Green	Green	Green	Green	Residential demand at flats and terraced homes indicates the need to retain some existing parking where possible. This can be used to narrow the road and create a chance effect to slow down traffic.
ALB	Ashgrove Road (Laurelwood to Berryden)	3	3 On-street parking	Remove all parking	Green	Green	Green	Green	Green	Green	Green	Residential demand at flats and terraced homes indicates the need to retain some existing parking where possible. This can also be used to narrow the road and create a chance effect to slow down traffic.

Design Objectives	
1	Traffic The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.
2	Crossings and Junctions Using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.
3	Place Quality and Greenspace The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of 'green'.
4	Walking People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.
5	Cycling People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.
6	Parking and Loading Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.

Ratings

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

- Achieves Design Objective
- Partially achieves Design Objective
- Doesn't Achieve Design Objective

Location ref	Location description	Option		Description	Objectives appraisal					Take forward to detailed assessment	Comments on filtering decision		
		Option Ref	Definition		Traffic	Crossings & junctions	Place & greenspace	Walking	Cycling			Parking & loading	
LAEP	Laurelwood Avenue/ Elm Place	1	Traffic lane widths	Retain existing carriageway space allocations	Red	Green	Green	Green	Green	Green	Green	N	Existing carriageway lane widths encourage high speed and flow and limits the opportunity to achieve other objectives.
LAEP	Laurelwood Avenue/ Elm Place	2	Traffic lane widths	Traffic movement lanes 3m each + clearance distances	Green	Green	Green	Green	Green	Green	Green	Y	Through traffic and the low levels of HGV movement can be accommodated and will allow space to be reallocated to achieve the other objectives. Narrow carriageways encourage low traffic speed. Full free-flow clearances on a through route (rather than access) recommended by the NRDG would result in a total two-lane carriageway width of 6.7m, however this assumes no mirror overhang of the kerb, full clearance from kerb and 0.3m between opposing vehicle mirrors. The heavy vehicle flows on this tertiary/ local route that is primarily for access justify a narrower assumption of 6.65m, particularly where there is clearance distance to footway infrastructure and pedestrians that would be the case with protected cycle tracks.
LAEP	Laurelwood Avenue/ Elm Place	3	Traffic lane widths	Traffic movement lanes less than 3m each + clearance distance	Red	Green	Green	Green	Green	Green	Green	Y	Lanes narrower than 3m create safety risk for these movements at the identified volume.
LAEP	Laurelwood Avenue/ Elm Place	1	traffic circulation	Retain all existing movements	Green	Green	Green	Green	Green	Green	Green	Y	Limits the opportunity to achieve other objectives. However should be considered in combination with options on surrounding streets.
LAEP	Laurelwood Avenue/ Elm Place	2	traffic circulation	Southbound traffic only	Green	Green	Green	Green	Green	Green	Green	Y	This may help increase space for placemaking, green infrastructure and cycling. Increase in through traffic likely to have a negative impact on other streets.
LAEP	Laurelwood Avenue/ Elm Place	3	traffic circulation	Northbound traffic only	Green	Green	Green	Green	Green	Green	Green	Y	This may help increase space for placemaking, green infrastructure and cycling. Increase in through traffic likely to have a negative impact on other streets. Instruction from ACC is that the right turn from Laurelwood into Berryden Road must be retained.
LAEP	Laurelwood Avenue/ Elm Place	4	traffic circulation	Close Laurelwood Avenue to through traffic	Red	Green	Green	Green	Green	Green	Green	N	This may help increase space for placemaking, green infrastructure and cycling. Increase in through traffic likely to have a negative impact on other streets. Instruction from ACC is that the right turn from Laurelwood into Berryden Road must be retained.
LAEP	Laurelwood Avenue/ Elm Place	5	traffic circulation	False one-way street/ Ban left turn from Laurelwood Avenue to Ashgrove Road	Green	Green	Green	Green	Green	Green	Green	Y	This may help increase space for placemaking, green infrastructure and cycling. Increase in through traffic likely to have a negative impact on other streets. Instruction from ACC is that the right turn from Laurelwood into Berryden Road must be retained.
LAEP	Laurelwood Avenue/ Elm Place	1	cycling space	Shared carriageway with traffic	Green	Green	Green	Green	Green	Green	Green	Y	Provides opportunities to reallocate space to priority users. However may have a knock-on effect on Laurelwood Avenue
LAEP	Laurelwood Avenue/ Elm Place	2	cycling space	Shared footway	Green	Green	Green	Green	Green	Green	Green	Y	This may help maximise space for placemaking and green infrastructure. However it will only achieve comfortable cycling conditions for all ages and abilities with traffic reduction and is likely to encourage cycling on footways. May be possible if traffic management can reduce traffic to accommodate
LAEP	Laurelwood Avenue/ Elm Place	3	cycling space	Uni-directional painted lanes	Green	Green	Green	Green	Green	Green	Green	N	In combination with a narrow carriageway, this may help maximise space for placemaking and green infrastructure. However cycling on footways in the urban setting is not appropriate to allow all ages and abilities of pedestrian to feel comfortable. Equally it will not provide cycle users with sufficient directness and comfort and most confident cyclists will not use it.
LAEP	Laurelwood Avenue/ Elm Place	4	cycling space	Uni-directional protected tracks	Green	Green	Green	Green	Green	Green	Green	N	This will not achieve comfortable cycling conditions for all ages and abilities and is likely to encourage cycling on footways
LAEP	Laurelwood Avenue/ Elm Place	5	cycling space	Bidirectional protected tracks	Green	Green	Green	Green	Green	Green	Green	Y	The highest level of overall cycling amenity for all ages and abilities on heavily trafficked streets. This is also the most space hungry and there is not enough space to accommodate this on Laurelwood Avenue without impacting on the other objectives. However a contra-flow track may be feasible if traffic can be reduced in the opposing direction.
LAEP	Laurelwood Avenue/ Elm Place	1	On-street parking	Retain existing capacity	Green	Green	Green	Green	Green	Green	Green	N	Bi-directional tracks are suitable for all ages and abilities and perform far better than non-protected options. In comparison with uni-directional tracks they have slight space-saving advantages, however they are typically less coherent and can create additional conflicts at junctions. It is recommended that they are only used where space or functionality prevents the use of uni-directional tracks
LAEP	Laurelwood Avenue/ Elm Place	2	On-street parking	Meet residential demand	Green	Green	Green	Green	Green	Green	Green	Y	Retaining existing capacity will impact on other objectives. Feedback from the public indicated illegal parking impedes visibility at junctions, narrows pavements and makes it difficult to cross the road.
LAEP	Laurelwood Avenue/ Elm Place	3	On-street parking	Remove all parking	Green	Green	Green	Green	Green	Green	Green	N	Residential demand at flats and terraced homes indicates the need to retain some existing parking where possible. This can be used to narrow the road and slow down traffic.
LAEP	Laurelwood Avenue/ Elm Place	3	On-street parking	Remove all parking	Green	Green	Green	Green	Green	Green	Green	N	Residential demand at flats and terraced homes indicates the need to retain some existing parking where possible. This can also be used to narrow the road and slow down traffic.

Appendix B

Detailed Options Assessment

Design Objectives	
1	Traffic
2	Crossings and junctions
3	Place, Quality and Greenspace
4	Walking
5	Cycling
6	Parking and Loading

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

■ Achieve Design Objective
■ Partially Achieve Design Objective
■ Do not Achieve Design Objective

Location	Code	Options	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
N. Anderson Drive Junction	M1	Do nothing	Traffic remains unaffected and remains a significant barrier to the community.	Signal timings mean limited crossing opportunities. Inadequate refuge island over south approach.	Verge on each approach to junction; notable third party greenspace on northeast corner protected by fence line.	Filter island used for making 3 of the 4 crossing movements. No guardrails / barriers. Crossing points provided with dropped kerbs, but no tactile paving.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
	M2	Tighten metrics, remove left turn filter into right lane, adjust signal timings	Updated signal timings unlikely to have impact on traffic speeds. Speeds may be reduced by tightened geometry. Traffic volume unaffected.	Revised signal timings could provide more frequent crossing opportunities. Tightened geometry would reduce crossing distances. Interventions may result in increased queuing.	Tightened geometry may allow for larger verges.	Physical alterations present opportunity to provide additional features such as guard rails and tactile paving. Tightened carriageway geometry allows for wider footway / verges.	No cycling provision	No parking or loading requirement in vicinity of junction.	Minimal impact on existing situation
	M3	Signal-controlled with parallel crossing 2 arms	Updated signal timings unlikely to have impact on traffic speeds. Speeds may be reduced by tightened geometry. Traffic volume unaffected.	Removal of filter island, reduced crossing distances and provision of suitable refuge island over North Anderson Drive will improve quality of crossings & contrary to objectives. Removing one of the North Anderson Drive crossings is contrary to objectives.	Opportunity to develop public realm spaces and gateway features to create a higher quality space. Opportunity to involve the community in these spaces to create a level of "ownership" of the space.	Can provide water footways and additional pedestrian features e.g. tactile paving. Only one crossing over North Anderson Drive would require some pedestrians to cross twice depending on configuration.	Provision of dedicated cycle track would provide a safe route for cyclists.	No parking or loading requirement in vicinity of junction.	Can be accommodated within existing available junction modelling indicates this would remain within capacity.
	M4	Signal-controlled with parallel crossing on 3 arms	Updated signal timings unlikely to have impact on traffic speeds. Speeds may be reduced by tightened geometry. Traffic volume unaffected.	Removal of filter island, reduced crossing distances and provision of suitable refuge island over North Anderson Drive will improve quality of crossings.	Opportunity to develop public realm spaces and gateway features to create a level of "ownership" of the space.	Retains direct walking routes around junction to match desire lines. Can provide water footways and additional pedestrian features e.g. tactile paving.	Provision of dedicated cycle track would provide a safe route for cyclists.	No parking or loading requirement in vicinity of junction.	Some additional land required on the west side of the junction. Junction modelling indicates this would remain within capacity.
	M5	Roundabout with parallel crossing on all arms	Represents significant change to current layout with high potential for adverse knock-on traffic impacts along corridor. Would limit options available for ongoing wider corridor study.	Carriageway zebra crossings likely to be unstable for some users. Crossings experience for vulnerable users would be considerably more uncomfortable. Why? Key portion of corridor crossings (crossings from junction) in need of approach.	Opportunity to provide green space on centre island, but this would not be accessible. Large footprint may result in loss of existing surrounding green space.	Increased junction size and less direct routing for pedestrians. Delay may reduce with priority crossings.	Provision of dedicated cycle track would provide a safe route for cyclists.	No parking or loading requirement in vicinity of junction.	Significant additional land take presents major Very High North-South (and vice versa) traffic flow compared to turning movements, make this form of junction unsuitable from a capacity standpoint.

Design Objectives	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
1	The streets are slower, quieter and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.	Junction layout is considered confusing by users. Modelling has found signal timings to be inefficient. Lack of refuge provision and long crossing distances present difficulties for vulnerable users.	No public greenspace. Greenspace and trees located in third party land to south.	Crossing points provided with tactics and signage to improve crossing safety. Crossing distances over Ashgrove Road West are relatively long (over 12m, cross four lanes of traffic). Crossings are provided over every approach.	No cycling provision	Cars parked in close proximity to junction on approach to Foresterhill West Carriageway (to east and west). Parking to east reduces queuing space. Parking on Foresterhill Road south approach reduces capacity.	No impact on existing situation
2	Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.	Minimised changes	Minimal changes	Minimal changes	Minimal changes	Minimal changes	Minimal impact on existing situation
3	The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of green.	Shorter crossing distances. Revised signal timings provide more green time for active travel.	No impact on existing greenspace. Addition of verges presents opportunity to provide greenspace.	Crossing movements revised to better cater for desire lines. Crossing distances reduced. Crossing delay to wait for signals. Can provide water footways and additional pedestrian features e.g. tactile paving.	All cycle movements catered for, and all fully segregated through the junction and on Ashgrove Road West. Medium LOS for delays due to signal control.	Minimal changes	Modelling indicates limited impact on performance, with increased capacity. Deliverable within existing highway boundary.
4	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.	Additional cycle crossings and two stage signal turns ensures all users are catered for. Significant impact on junction performance due to additional cycle stages.	No impact on existing greenspace. Addition of verges presents opportunity to provide greenspace.	Crossing movements revised to better cater for desire lines. Crossing distances reduced. Crossing delay to wait for signals. Can provide water footways.	Low LOS in terms of allability movements. High LOS in terms of delay for left/ahed movements, but low LOS for right turns. Low LOS for delays due to signal control, and delay from separate cycle staging. Updated in agreement with ACC comments	Minimal changes	Modelling indicates significant impact on performance, with increased capacity. Deliverable within existing highway boundary.
5	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. Updated in agreement with ACC comments	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	All existing movements retained. Crossing distances reduced. Carriageway zebra as a not preferred by visually impaired users. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. High LOS for delays due to zebra.	Minimal changes	Requires third party land take and removal/relocation of adjacent underground hospital water reservoir. Modelling indicates junction will be within capacity. Realignment of private accesses
6	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Updated in agreement with ACC comments	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	All existing movements retained. Crossing distances reduced. Carriageway zebra as a not preferred by visually impaired users. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. High LOS for delays due to zebra.	Minimal changes	Requires third party land take. Significant safety issues with unretained UK layout. Works in proximity to underground structure. Modelling indicates junction will be within capacity. Realignment of private accesses
7	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. Updated in agreement with ACC comments	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	Crossing movements revised to better cater for desire lines. Crossing distances reduced. Crossing delay to wait for signals. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. Medium LOS for delays due to signal control.	Minimal changes	Requires approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building.
8	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. No need to wait for signal. Significant impact on junction performance due to additional cycle stages.	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	Crossing movements revised to better cater for desire lines. Crossing distances reduced. Crossing delay to wait for signals. Can provide water footways.	Low LOS in terms of allability movements. High LOS in terms of delay for left/ahed movements, but low LOS for right turns. Significant impact on junction performance due to two-stage right turn.	Minimal changes	Requires approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building.
9	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. No need to wait for signal. Significant impact on junction performance due to additional cycle stages.	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	Crossings away from desire lines. Crossing distances reduced. Zebra as a not preferred by visually impaired users. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. High LOS for delays due to zebra.	Minimal changes	Requires approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building.
10	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. No need to wait for signal. Significant impact on junction performance due to additional cycle stages.	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	Crossings away from desire lines. Crossing distances reduced. Zebra as a not preferred by visually impaired users. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. High LOS for delays due to zebra.	Minimal changes	Requires approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building.
11	People of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic. No need to wait for signal. Significant impact on junction performance due to additional cycle stages.	Impact on third party greenspace due to land take. Opportunity to provide significant greenspace elsewhere due to size of verges created.	Crossings away from desire lines. Crossing distances reduced. Zebra as a not preferred by visually impaired users. Can provide water footways.	High LOS in terms of allability movements. All cycle movements catered for. High LOS for delays due to zebra.	Minimal changes	Requires approximately 10,000 square metres of third party land take. Works would require removal / relocation of underground hospital water reservoir, car park, tennis courts and encroachment on existing hospital building.

Ratings

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

- Achieve Design Objective
- Partially achieve Design Objective
- Do not Achieve Design Objective

Design Objectives	
1	Traffic
2	Crossings and junctions
3	Place Quality and Greenspace
4	Walking
5	Cycling
6	Parking and Loading

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

Achieve Design Objective
Partially Achieved Design Objective
Do not Achieve Design Objective

Location	Code	Options	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
Cornhill Terrace/ Cornhill Road Junction	CH1	Do nothing	No physical features to reduce traffic speeds on Ashgrove Road West. Poor visibility for vehicles emerging from side arms.	Long crossing distances over every approach. North and south approaches approximately 20m long.	No public greenspace.	Long crossing distances provided, but no tactile paving or other facilities.	No cycling provision	Parking bays on south side of west approach, driveway along north side on east and west approaches.	No impact on existing situation
	CH2	Tighten side road radii	Reduce traffic turning speeds	Slippery, narrow crossing distances. Lack of crossing opportunities likely to remain an issue. Opportunity to provide pedestrian facilities, e.g. tactile paving.	Minor opportunity to provide greenspace, seating or artwork	No improvement to existing route choice. Opportunity to provide pedestrian facilities, e.g. tactile paving.	No cycling provision	Parking bays on south side of west approach. Driveways along north side on east and west approaches.	Minimal impact on existing situation
	CH3	Close Cornhill Terrace to traffic	Reduced vehicle turning speeds. Simplified junction layout.	Shorter crossing distances over all approaches. New controlled crossing over Ashgrove Road West. New priority crossing over Cornhill Road.	Opportunity to provide linear rain gardens or other amenities. Opportunity to involve the community in these spaces to create a level of "ownership" of the space.	All existing movements retained and improved. Wider footways.	High LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Severance of traffic routes, particularly for residents, would lead to longer journey times. Deliverable within existing highway boundary. Possible refuse access issues - requires further investigation. Possible resident acceptability issues
	CH4	Continuous footway across Cornhill Terrace	Reduced vehicle turning speeds. Simplified junction layout.	Shorter crossing distances over all approaches. New controlled crossing over Ashgrove Road West. New priority crossing over Cornhill Road.	Minor opportunity to provide linear rain gardens or other amenities. Opportunity to involve the community in these spaces to create a level of "ownership" of the space.	All existing movements retained and improved. Wider footways. Bus passengers required to cross cycle track to access bus stop. Key link for access to school	High LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Deliverable within existing highway boundary.
	CH5	Close Cornhill Road to traffic	Reduced vehicle turning speeds. Simplified junction layout. Significant detour for residents driving. Would divert hospital traffic through residential streets. Bus route so would require a bus gate.	Shorter crossing distances over all approaches. New parallel crossing over Ashgrove Road West. No opportunity for vertical deflection so effectiveness limited. Would not comply with good practice	Opportunity to provide linear rain gardens or other amenities. Opportunity to involve the community in these spaces to create a level of "ownership" of the space.	All existing movements retained and improved. Wider footways. The bus stop facilities will have their own dedicated pedestrian-only surface. Bus passengers required to cross cycle track to access bus stop.	High LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Public and stakeholder acceptability is unlikely. Deliverable within existing highway boundary.
	CH6	Continuous footway across Cornhill Road	Reduced vehicle turning speeds. Simplified junction layout.	Bus route and hospital access so vertical deflection road cut	Does not present additional opportunities	More direct pedestrian routing, but not suitable for all users without vertical deflection	High LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Severance of traffic routes, particularly for residents, would lead to longer journey times. Deliverable within existing highway boundary.
	CH7	Parallel crossing of Cornhill Road	Reduced vehicle turning speeds. Simplified junction layout.	Shorter crossing distances over all approaches. New parallel crossing over Ashgrove Road West. Legal priority over turning traffic	Does not present additional opportunities	Wider footways.	High LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Deliverable within existing highway boundary. ACC advises this layout is not supported - strategies requiring agreement to implement and funding of this layout
	CH8	Cycle lane, continued over Cornhill Road, dropped kerbs with no marked priority for pedestrians	Tightened corner radii to reduce vehicle turning speeds. Simplified junction layout. Compliance with pedestrian and cycling priority can be an issue with this layout	Shorter crossing distances over all approaches. No marked or legal priority for pedestrians crossing	Does not present additional opportunities	Wider footways.	Mixed LOS in terms of all ability movements. High LOS in terms of directness (all movements). High LOS in terms of delay for east west movements.	Parking removed - limited demand. Private access retained.	Deliverable within existing highway boundary.

Design Objectives	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
1	Traffic	Using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities. The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of green.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
2	Crossings and junctions	Using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities. The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of green.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
3	Place Quality and Greenspace	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
4	Walking	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
5	Cycling	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
6	Parking and Loading	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation

These ratings are to describe, in a basic form, how the design options align with Design Objectives.

Achieve Design Objective
Partially Achieve Design Objective
Do not Achieve Design Objective

Location	Code	Options	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
Westburn Drive Junction	WB1	Do nothing	Traffic remains unaffected and remains a significant barrier to the community.	Limited crossing opportunities. Long (20m) crossing distances.	Small areas of greenspace on eastern corners of junctions.	All movements catered for. Footways more than 2m wide, but space restricted at corners.	No cycling provision	No parking or loading requirement in vicinity of junction.	No impact on existing situation
	WB2	Tighten entries & adjust signal timings	Minimal benefit from alterations to signal timings.	Unchanged.	Unchanged.	More space at corners, but otherwise unchanged.	Minimal changes	No parking or loading requirement in vicinity of junction.	Minimal impact on existing situation
	WB3	Signal-controlled (ped-sing) of cycle track partially signalised	Junction performance largely unaffected. Narrower carriageway for east-west movements may reduce vehicle speeds.	Shorter crossing distances. Increased green time for crossings.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Opportunity to provide linear rain gardens or other amenities.	All existing movements retained. Crossing distances reduced on east & west approaches. Crossing delay to wait for signals.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. High LOS for delays due to signal controls at ped crossings.	No parking or loading requirement in vicinity of junction.	Modelling indicates longer queues on each approach, but junction remains within capacity. Deliverable within existing highway boundary. Possible safety issue: fuel to two forms of crossing
	WB4	Signal-controlled (ped-sing) of cycle track unsignalised	Junction performance largely unaffected. Narrower carriageway for east-west movements may reduce vehicle speeds.	Shorter crossing distances. Increased green time for crossings.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Opportunity to provide linear rain gardens or other amenities.	All existing movements retained. Crossing distances reduced on east & west approaches. Crossing delay to wait for signals.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. Medium LOS for delays due to signal controls.	No parking or loading requirement in vicinity of junction.	Modelling indicates longer queues on each approach, but junction remains within capacity. Deliverable within existing highway boundary.
	WB5	Signal-controlled with two-stage cycling right-turn	Junction performance largely unaffected. Narrower carriageway for east-west movements may reduce vehicle speeds.	Crossing distances on north & south approaches increased. Crossing distances on east & west approaches increased. No segregated cycle crossings.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Opportunity to provide linear rain gardens or other amenities.	All existing movements retained. Crossing distances reduced on east & west approaches. Crossing delay to wait for signals.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. Low LOS for delays due to signal controls.	No parking or loading requirement in vicinity of junction.	Modelling indicates longer queues on each approach, but junction remains within capacity. Deliverable within existing highway boundary.
	WB6	Closure of ARW arm	Severance of vehicular access from Ashgrove Road. Increased journey times for rerouted residential traffic. Improved junction performance from simplified junction.	Shorter crossing distances. Increased green time for crossings. Removed conflict with traffic on west approach.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Opportunity to provide linear rain gardens or other amenities. Opportunity to provide greenspace on closed section.	All existing movements retained. Crossing distances reduced on east & west approaches. Crossing delay to wait for signals. No traffic conflict over west approach.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. Low LOS for delays due to signal controls.	No parking or loading requirement in vicinity of junction.	Junction would remain with capacity. Deliverable within existing highway boundary. Severance of traffic routes, particularly for residents, would lead to longer journey times. Low likelihood of public acceptance.
	WB7	Closure of AR arm	Severance of vehicular access from Ashgrove Road. Increased journey times for rerouted residential traffic. Improved junction performance from simplified junction.	Shorter crossing distances. Increased green time for crossings. Removed conflict with traffic on east approach.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Opportunity to provide linear rain gardens or other amenities. Opportunity to provide greenspace on closed section.	All existing movements retained. Crossing distances reduced on east & west approaches. Crossing delay to wait for signals. No traffic conflict over east approach.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. Low LOS for delays due to signal controls.	No parking or loading requirement in vicinity of junction.	Junction would remain with capacity. Deliverable within existing highway boundary. Severance of traffic routes, particularly for residents, would lead to longer journey times. Low likelihood of public acceptance.
	WB8	Closure of both ARW and AR arms	Severance of vehicular access from Ashgrove Road West & Ashgrove Road. Increased journey times for rerouted residential traffic. Improved junction performance from simplified junction.	Shorter crossing distances. Increased green time for crossings. Removed conflict with traffic on east & west approaches.	Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls. Impact on existing vegetation both within and beyond existing boundaries. Loss on east side of junction. Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls.	All existing movements retained. Crossing distances reduced. Crossings away from desire lines. Zebra crossings are not preferred by visually-impaired users. Can provide water footways.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. Low LOS for delays due to signal controls.	No parking or loading requirement in vicinity of junction.	Modelling indicates junction would be over capacity. Safety issues with unsegregated cycling. May require turning restrictions for one or two private driveways
	WB9	Compact Roundabout with segregated cycling	Narrower carriageway may reduce vehicle speeds. Roundabouts may reduce vehicle speeds.	Shorter crossing distances. Crossings further away from desire lines. Minimal crossing delay as zebra crossings have priority over traffic; no need to wait for signals.	Impact on existing vegetation both within and beyond existing boundaries. Loss on east side of junction. Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls.	All existing movements retained. Crossing distances reduced. Crossings away from desire lines. Zebra crossings are not preferred by visually-impaired users. Can provide water footways.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. High LOS in terms of delay as no signal controls.	No parking or loading requirement in vicinity of junction.	Modelling indicates junction would be over capacity. Safety issues with unsegregated cycling. Required land take, but to lesser extent compared to compact & normal roundabout options.
	WB10	Mini Roundabout with segregated cycling	Minimal carriageway may reduce vehicle speeds. No / low deflection may lead to high vehicle speeds, particularly during off-peak.	Shorter crossing distances. Crossings further away from desire lines. Crossings over traffic; no need to wait for signals.	Impact on existing vegetation both within and beyond existing boundaries. Loss on east side of junction. Opportunity to expand on existing limited greenspace within existing boundaries by opening eastern walls.	All existing movements retained. Crossing distances reduced. Crossings away from desire lines. Minimal crossing delay. Zebra crossings are not preferred by visually-impaired users. Can provide water footways.	High LOS in terms of all-ability movements. All cycle movements catered for, and all fully-segregated through the junction. High LOS in terms of delay as no signal controls.	No parking or loading requirement in vicinity of junction.	Safety issues with unsegregated cycling. Required land take, but to lesser extent compared to compact & normal roundabout options.

Design Objectives	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
1	The streets are slower, quieter and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.						
2	Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.						
3	The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of green.						
4	People of all ages and abilities can move around by bicycle safely, comfortably, and independently.						
5	Private parking and loading, within a reasonable space of homes and businesses ensuring equitable access for all.						
6							

Ratings
 These ratings are to describe, in a basic form, how the design options align with Design Objectives.

■ Achieve Design Objective
■ Partially Achieve Design Objective
■ Do not Achieve Design Objective

Design Objectives	Traffic	Crossings & Junctions	Place & Greenspace	Walking	Cycling	Parking & Loading	Deliverability
Ashgrove Road/ Laurelwood/ Elm Place Triangle Options							
Do nothing	Cars parked on carriageway act as natural traffic calming to reduce vehicle speeds.	No controlled or priority crossing provision. Dropped kerb crossings without tactile paving over side roads.	No public greenspace.	Footway width varies but generally minimum of 2m.	Low LOS as no cycling provisions are provided.	Unrestricted parking on south side of carriageway at multiple locations. Private accesses on both sides.	Deliverable within existing highway boundary.
Two-way carriageway with greenspace	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	Opportunity to provide linear rain gardens or other amenities to involve the community in these spaces to create a level of "ownership" of the space.	Footway width varies but generally minimum of 2m.	Low LOS as no cycling provisions are provided.	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Two-way carriageway with improved footways	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	No public greenspace.	Opportunity to widen footways. Opportunity to provide facilities, e.g. tactile paving.	Low LOS as no cycling provisions are provided.	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Two-way carriageway with one-way cycling	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	No public greenspace.	Footway width varies but generally minimum of 2m.	High LOS for direction of one-way segregated cycleway flow. Low LOS for opposite direction on carriageway with no formal provisions.	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Two-way carriageway with formal parking	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	No public greenspace.	Opportunity to widen footways. Opportunity to provide facilities, e.g. tactile paving.	Low LOS as no cycling provisions are provided.	Unrestricted parking replaced with formal bay/level of provision reduced. Private access retained.	Deliverable within existing highway boundary.
One-way carriageway with greenspace	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	Opportunity to provide linear rain gardens or other amenities to involve the community in these spaces to create a level of "ownership" of the space.	Opportunity to widen footways. Opportunity to provide facilities, e.g. tactile paving.	Low LOS as no cycling provisions are provided.	Parking removed. Private access retained.	Deliverable within existing highway boundary.
One-way carriageway with parking and two-way cycling	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	Opportunity to provide linear rain gardens or other amenities to involve the community in these spaces to create a level of "ownership" of the space.	Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Parking retained but likely reduced. Private access retained.	Deliverable within existing highway boundary.
One-way carriageway with two-way cycling	Narrower carriageway (with no on-road parking) may maintain reduced vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	Opportunity to provide linear rain gardens or other amenities to involve the community in these spaces to create a level of "ownership" of the space.	Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Laurelwood Avenue							
Do nothing	Cars parked on carriageway act as natural traffic calming to reduce vehicle speeds.	No controlled or priority crossing provision. Dropped kerb crossings without tactile paving over side roads.	No public greenspace, other than trees within footway.	Mixed (elm) footway on both sides, but usable with on-street reduced by trees in footway.	Low LOS as no cycling provisions are provided.	Unrestricted parking on south side of carriageway at multiple locations. Private accesses on both sides.	Deliverable within existing highway boundary.
Two-way carriageway with improved footways and on-street cycling	Cars parked on carriageway act as natural traffic calming to reduce vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	No public greenspace. Slight improvement in placemaking.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	Low LOS as no cycling provisions are provided.	Unrestricted parking on south side of carriageway at multiple locations. Private accesses on both sides.	Deliverable within existing highway boundary.
Two-way carriageway with cycle lanes and no centreline	Cars parked on carriageway act as natural traffic calming to reduce vehicle speeds.	No controlled or priority crossing provision. Opportunity to improve crossings.	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	Medium LOS with on-road cycle provision (junction lanes).	Parking removed. Residential demand not met. Private access retained.	Deliverable within existing highway boundary.
Two-way carriageway as a quiet street	Reduced vehicle speeds due to design.	Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace. Slight improvement in placemaking.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	Medium LOS with no formal provision but environment for cycling improved.	Unrestricted parking on south side of carriageway at multiple locations. Private accesses on both sides.	Deliverable within existing highway boundary.
Narrowed two-way carriageway with two-way cycle	Reduced vehicle speeds due to design.	Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Narrowed two-way carriageway with two-way cycle and parking	Reduced vehicle speeds due to design.	Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Unrestricted parking replaced with formal bay/level of provision reduced. Private accesses on both sides.	Deliverable within existing highway boundary.
Narrowed two-way carriageway with one-way cycle and parking	Reduced vehicle speeds due to design.	Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for direction of one-way segregated cycleway flow. Low LOS for opposite direction on carriageway with no formal provisions.	Unrestricted parking replaced with formal bay/level of provision reduced. Private accesses on both sides.	Deliverable within existing highway boundary.
Narrowed two-way carriageway (false one-way) with two-way cycle	Reduced vehicle speeds due to design. False one-way removes traffic emerging onto Ashgrove Road, reducing traffic volumes.	Priority crossing over lane/wood approach to Ashgrove Road junction. Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Parking removed. Private access retained.	Deliverable within existing highway boundary.
Narrowed two-way carriageway (false one-way) with two-way cycle and parking	Reduced vehicle speeds due to design. False one-way removes traffic emerging onto Ashgrove Road, reducing traffic volumes.	Priority crossing over lane/wood approach to Ashgrove Road junction. Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Unrestricted parking replaced with formal bay/level of provision reduced. Private accesses on both sides.	Deliverable within existing highway boundary.
Narrowed two-way carriageway (false one-way) with one-way cycle and parking	Reduced vehicle speeds due to design. False one-way removes traffic emerging onto Ashgrove Road, reducing traffic volumes.	Priority crossing over lane/wood approach to Ashgrove Road junction. Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace, other than trees within footway.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for direction of one-way segregated cycleway flow. Low LOS for opposite direction on carriageway with no formal provisions.	Unrestricted parking replaced with formal bay/level of provision reduced. Private accesses on both sides.	Deliverable within existing highway boundary.
One-way carriageway with two-way cycle and parking	Reduced vehicle speeds due to design. One-way flow reduces overall traffic volumes.	Priority crossing over lane/wood approach to Ashgrove Road junction. Opportunity to improve crossings (e.g. priority/raised table).	No public greenspace. Slight improvement in placemaking.	Widened and cleared footways. Opportunity to provide facilities, e.g. tactile paving.	High LOS for all ability movements	Unrestricted parking replaced with formal bay/level of provision reduced. Private accesses on both sides.	Deliverable within existing highway boundary.

Appendix C

Initial Design Ideas (consultation)



Tell us what you think of the initial designs for Ashgrove Connects

Welcome to the **Design Stage of Ashgrove Connects** where you can view and feedback on the initial designs which have been developed from what you told us is important to you.

Please have a look through this booklet to view the initial designs and feedback to us by **Sunday 17th July** either through the project website, at Cornhill Library or pop along to one of the upcoming activities detailed on page 41.

We are presenting initial design ideas and we need your feedback to help steer the development of a concept design during the next stage of the project.

If you or your neighbours need support to view or feedback on the initial designs, please contact us.

Contact Us

Tel: 0131 221 5770

Email: emily.davie@atkinsglobal.com

Website: ashgroveconnects.commonplace.is

Overview

Ashgrove Connects gets local people involved in making Ashgrove Road, Ashgrove Road West and Laurelwood Avenue work better for those who live, work, study and visit here.

This is part of a programme of improvements across the city that will help provide everyone with safer, healthier and more sustainable transport and lifestyle options.

The project considers opportunities that complement the proposed infrastructure changes along the Berryden Corridor to ensure the communities of Ashgrove Connects benefit. The initial designs assume the Berryden Corridor is in place by the time Ashgrove Connects is delivered.

Your feedback is vital to ensure we understand your priorities.

Who is involved?



Aberdeen City Council

Leading the delivery of the project.

nestrans Nestrans

Funding Stages 1-2.



ATKINS

Working on behalf of Aberdeen City Council to deliver the initial stages of the project.

Stakeholder Working Group

Providing stakeholder and community representation to help the project remain in line with community priorities.

Timeline

An indicative timeline of the key project stages is outlined below. We are currently in Stage 2.



Spring to Autumn 2022
(Atkins commission)

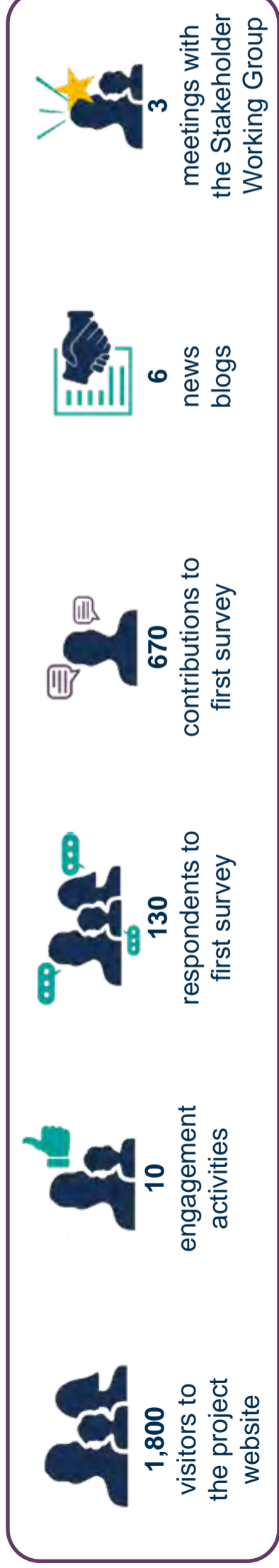
Approximately 2 to 5 years
(subject to approvals and funding)

What have we done so far?

During the first stage of the project, we asked you to share your experiences of using the streets.

Through **surveys**, we collected information on traffic speed and flow, number of people walking and cycling, public life and parking demand.

These activities have helped to build up an understanding of how the streets and public spaces are perceived and used locally to inform the development of initial designs.



What have we found out?

There was a wide range of comments submitted during the first stage of the project, reflecting the number of opportunities to improve the streets and public spaces. The **topics** people commented on were:



From the information gathered, the following **themes** emerged:

- Create a slower, quieter street environment.
- More crossings and improved junctions that feel safer to use.
- Improved place quality and better access to greenspace.
- More enjoyable and accessible for people walking and wheeling.
- Improved conditions for people cycling.
- Improved parking layout to reduce the impact on people moving around.

Overview

The emerging themes from Stage 1 were used to develop design objectives.

These set out what the project should achieve and will be used to ensure the designs remain in line with community priorities as they develop.

Design Objectives



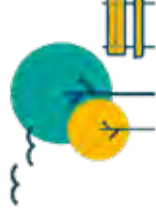
Traffic

The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.



Crossings and Junctions

Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.



Place Quality and Greenspace

The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced, and an overall net gain of 'green'.



Walking

People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.



Cycling

People of all ages and abilities are able to move around by bicycle safely, comfortably and independently.



Parking and loading

Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.

Overview

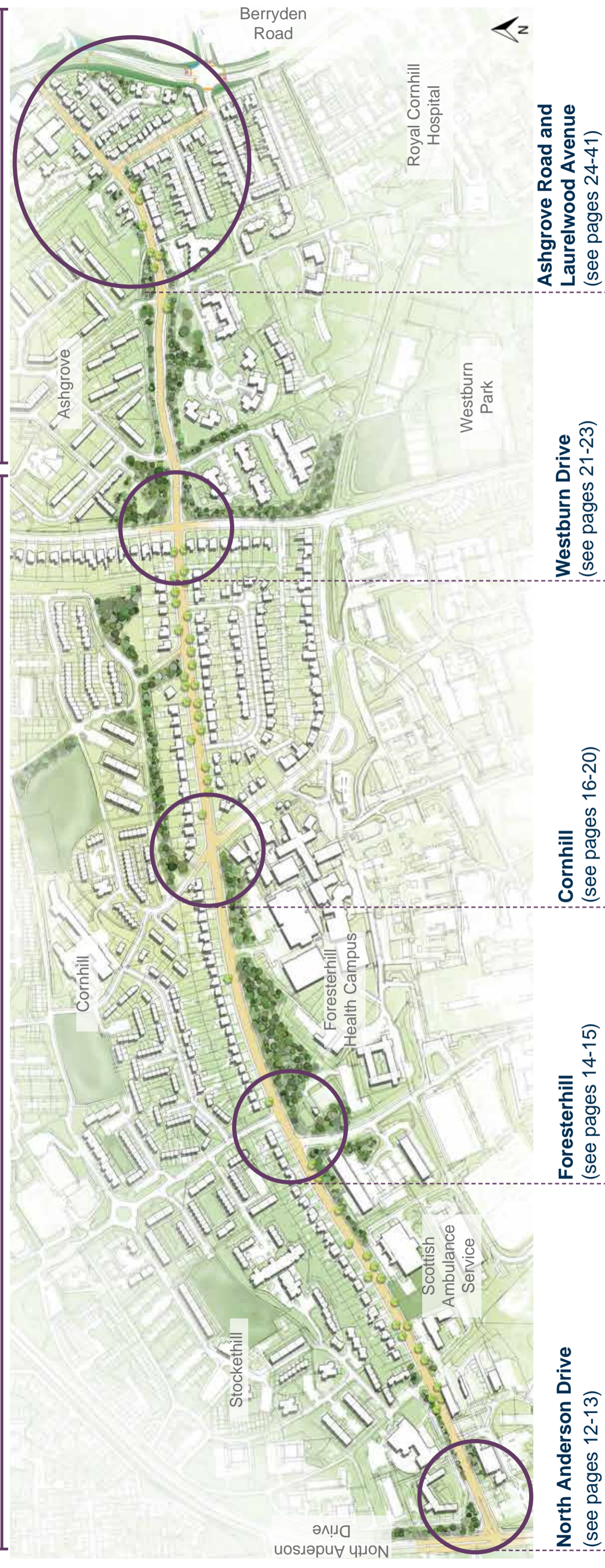
We have used the design objectives to guide the development of **initial designs**.

To present this, we have split the study area into two: Ashgrove Road West, and Ashgrove Road and Laurelwood Avenue. We have done this to ensure we respond to the different characteristics of each area. Within each area we have focussed in on key sections of the design to provide more detail. In some sections we have developed two or three ideas to show what could be possible. Elements of each design can be incorporated into different sections depending on the feedback from the community.

We are asking you to consider the different design ideas and feedback on what you like and what you would change, combine or improve. The feedback we receive will help to steer the development of a concept design for the study area.

Area 1: Ashgrove Road West (see pages 7-23)

Area 2: Ashgrove Road and Laurelwood Avenue (pages 24-41)



North Anderson Drive
(see pages 12-13)

Foresterhill
(see pages 14-15)

Cornhill
(see pages 16-20)

Westburn Drive
(see pages 21-23)

Ashgrove Road and Laurelwood Avenue
(see pages 24-41)

Overview

Throughout the design, you will read about some key features that you may not be familiar with. We have highlighted these below to provide you with a better understanding of these features with examples from other parts of the country.

20mph Speed Limit

This is where the maximum speed limit is set at 20mph and the street is designed to encourage drivers to adhere to slower speeds.



Gateway

This indicates the transition to a slower speed street. This can include features such as signage, artwork, planting and seating.



Bus stop bypass

This is an arrangement that allows people to cycle behind a bus stop while keeping the footway separate for people walking. Tactile paving is used to guide people across the cycle lane to the bus stop.



Pocket park

This is an area of greenspace that could also introduce resting places, informal play, opportunities for the local community to come together to plant flowers, plants and trees and design artwork.



Protected cycle lanes

This is a type of cycle lane that separates people cycling from traffic and those walking on the footway by using kerbs and other features as protectors. It allows people to feel safer and can either be one-way, with people cycling in the same direction as traffic, or two-way, with people cycling in two directions on the same side of the road.



Rain garden

This is an area of attractive, low maintenance, wildlife friendly space which manages surface water runoff from hard surfaces such as footways.



Parallel crossings

This is a type of crossing that provides priority to people crossing the road on foot and by bicycle. People cycling and walking have separate space and can be with traffic lights or with zebras where drivers give way.

**Modal filter**

This is used to allow the passage of people walking and cycling but not motor vehicles. This can create safe and attractive routes for people walking and cycling between residential streets.

**Continuous footway**

This is where the footway extends across a side road, giving priority to those walking and cycling. The continuous footway is set at the same level as the rest of the footway, further reducing vehicle speeds.

**Secure bicycle storage**

This provides secure cycle storage on street for those with limited space at home for bikes.

**Quiet street**

This is a type of street with low traffic speed and flow to allow cycling on the road to feel safer. Quiet streets are normally implemented with traffic calming features and with a low flow of through traffic movement.

**Informal play**

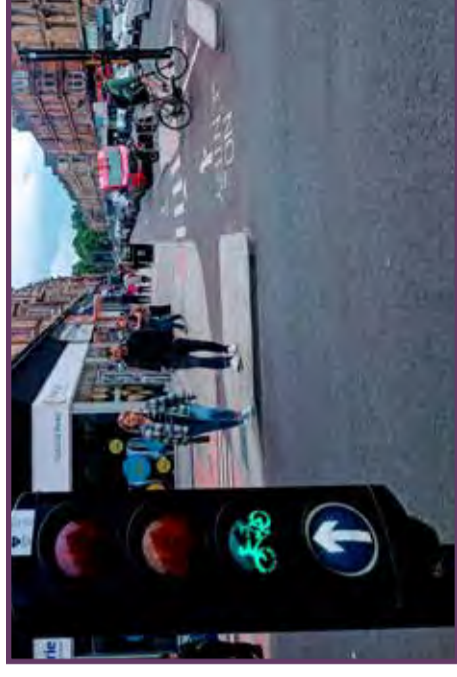
This is a space which allows people to explore and enjoy their local area in a natural setting. This can incorporate plants, trees and informal play features which encourage fun on the move.

**False one-way street**

This is a type of street that allows through traffic to flow one-way but residential access is permitted in both directions.

**Cycle signals**

At junctions with protected cycle lanes, people cycling can be provided with separate instruction to proceed. This can be run alongside people walking who are in a separate space. This helps to make all movements safer.



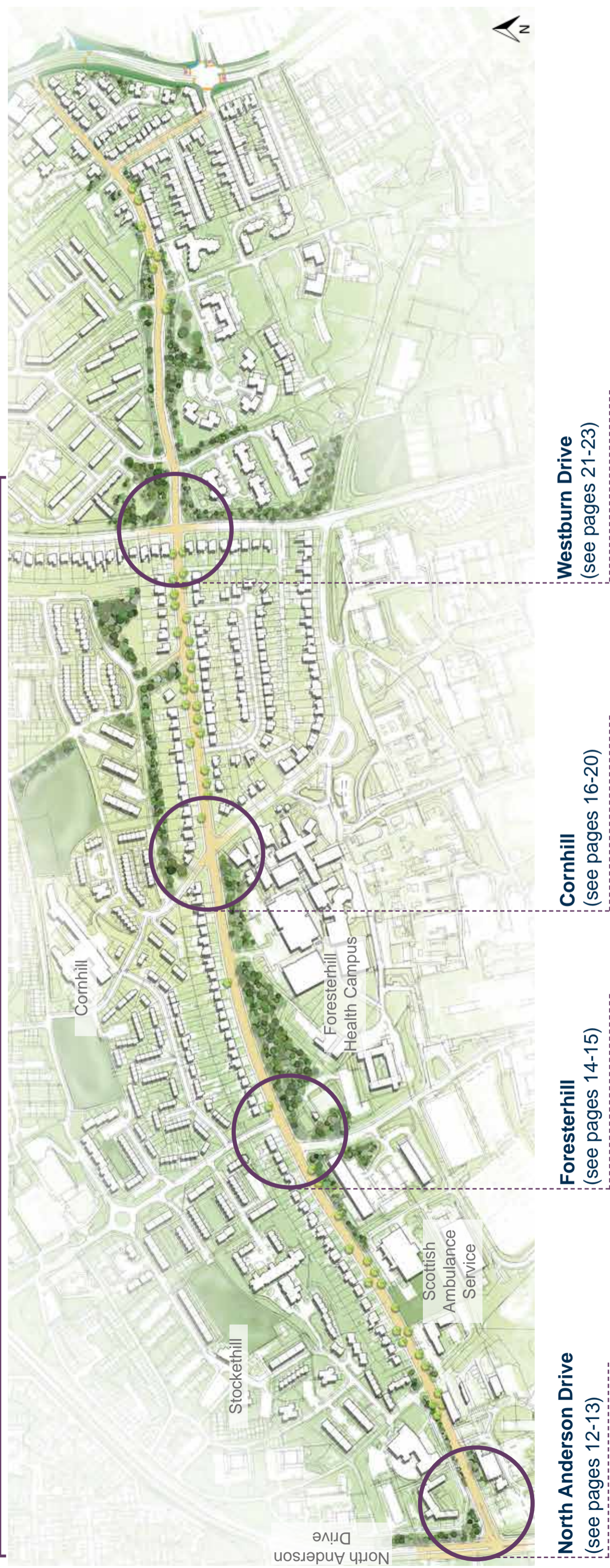
Overview

The Ashgrove Road West area incorporates the space from North Anderson Drive to Westburn Drive and the junctions of Foresterhill and Cornhill. In developing design ideas, we have considered:

- Opportunities: what can be done to deliver community priorities; and
- Constraints: factors that place a limit on what can be done

The opportunities and constraints are presented over the next two pages followed by the design ideas for the individual sections.

Area 1: Ashgrove Road West
(see pages 7-23)



North Anderson Drive
(see pages 12-13)

Foresterhill
(see pages 14-15)

Cornhill
(see pages 16-20)

Westburn Drive
(see pages 21-23)



Traffic

Opportunities:

- Reduce speed limit to 20mph
- Provide junction 'gateways' to influence driver behaviour
- Narrow the road to control speed and reduce noise
- Make the route less attractive to through traffic

Constraints:

- [Berryden Corridor Improvement Project](#) is a committed project and is assumed to be in place
- Access is retained for heavy goods vehicles and buses
- Speed humps are not favoured as this is a bus and emergency route
- We will collaborate with the team delivering the [A92 Multi-Modal Transport Study](#) (North Anderson Drive)



Crossings and Junctions

Opportunities:

- More dedicated crossings
- Reduce the width of junctions
- Prioritise people over vehicles at side streets
- Improve the layout of signalised junctions and signal times
- Vehicle access changes at some side streets

Constraints:

- Current access for heavy goods vehicles and buses must be retained
- Landowners have not yet been consulted
- Private driveway access must be retained



Place Quality and Greenspace

Opportunities:

- Direct routes into pockets of adjacent greenspace
- More green space and resting places
- More trees which will last and won't negatively impact on footways and properties
- Improve bus stop waiting environments
- Provide 'gateways' to create more of a community feel

Constraints:

- Retaining existing heavy goods access presents some limitations on space



Walking

Opportunities:

- Reduce speed limit to 20mph
- Narrow the road and add traffic calming measures
- More dedicated crossings
- Make the route less attractive to through traffic
- More green space and resting places
- Dissuade cycling on footways by providing a separate, safe space

Constraints:

- Raised crossings are not favoured as this is a bus and emergency route



Cycling

Opportunities:

- Reduce traffic on side streets to a safe level
- Provide a consistent and protected space for people to cycle on
- Separate people cycling from people walking and traffic at bus stops and through junctions
- Provide dedicated crossings
- Improve signage and cycle parking
- Consider onward travel connections to the city centre and further afield

Constraints:

- Traffic flow will remain too high for people, particularly children, to cycle on the road



Parking and loading

Opportunities:

- Only 2-3 vehicles park overnight, indicating low residential demand that could be accommodated elsewhere
- Prioritise community need over occasional parking
- Remove opportunities to park on footways and at junctions
- Ensure commuters use off-street parking
- Provide for loading access to businesses using off-street parking

Constraints:

- Resources to extend and manage Controlled Parking Zones are limited
- Providing space for community priorities means reducing the number of on street parking spaces available

Approach

The ideas for Ashgrove Road West aim to reduce traffic speed, dissuade unnecessary through traffic and provide better opportunities for people to travel sustainably and enjoy the area.

Reducing the speed limit to 20mph and re-allocating road space, as indicated in the street width diagrams (see page 11), will allow for safe space for walking and cycling by all ages, more crossings, more trees and greenspace, resting places and improved bus waiting areas. This is detailed further for each of the sections that follow.



Traffic

On average, there are over 10,000 vehicles travelling along stretches of Ashgrove Road West in a normal day (over 600 vehicles in the peak hour). 62% of vehicles travel above 30mph and almost all above 20mph.

We recommend a 20mph speed limit and a carriageway width of 6.5metres (currently between 10-12m) to better control speed and reduce noise. We have modelled the initial designs with current traffic flows to ensure this can be accommodated, although the designs aim to dissuade unnecessary through traffic.



Crossings, junctions and walking

There are currently 4 traffic signal junctions that provide opportunities to cross Ashgrove Road West.

Responding to need of the community, the initial designs propose adding an additional two parallel crossings at Castleton Drive and Cornhill Terrace.



Cycling changes

Overall traffic flow (7% of which is heavy goods vehicles) is way beyond the threshold considered appropriate for people to cycle, particularly children, on the road. This results in people cycling on the footways.

The initial designs propose a protected cycle lane on both sides of the street to enable people of all ages to cycle and keep the footway clear and safe for people walking.



Parking changes

Very few residents park on the street overnight (approximately 2-3 vehicles). A variety of other daytime users including deliveries and commuters occasionally park here but demand overall is low.

The initial designs propose no parking bays along Ashgrove Road West in order to improve junction safety and provide space for trees, greenspace, improved bus stops and protected cycle lanes. People would be required to park in off-street spaces or side streets where there is space available.



Place quality and greenspace changes

The initial designs retain space for the existing street trees while looking at opportunities for additional trees, greenspace, rain gardens, improved bus stops and resting places.

Where trees are found to be in poor health or damaging footways and properties, they would be replanted.

Existing street width looking west



Proposed street width looking west



Location of street width



Overview

You told us that the layout of this junction prioritises traffic movement and does not adequately recognise this as a gateway into the community. While North Anderson Drive will remain a significant road corridor, there are opportunities to ensure that people can move across it more easily.

For this section, we have developed an idea for you to consider and feedback on.



You said:



Wide entrance encourages high vehicles speeds and through traffic.



Difficult to cross the junction in time.



Appearance gives impression this is a through route for traffic.



Difficult to cross the junction in time.



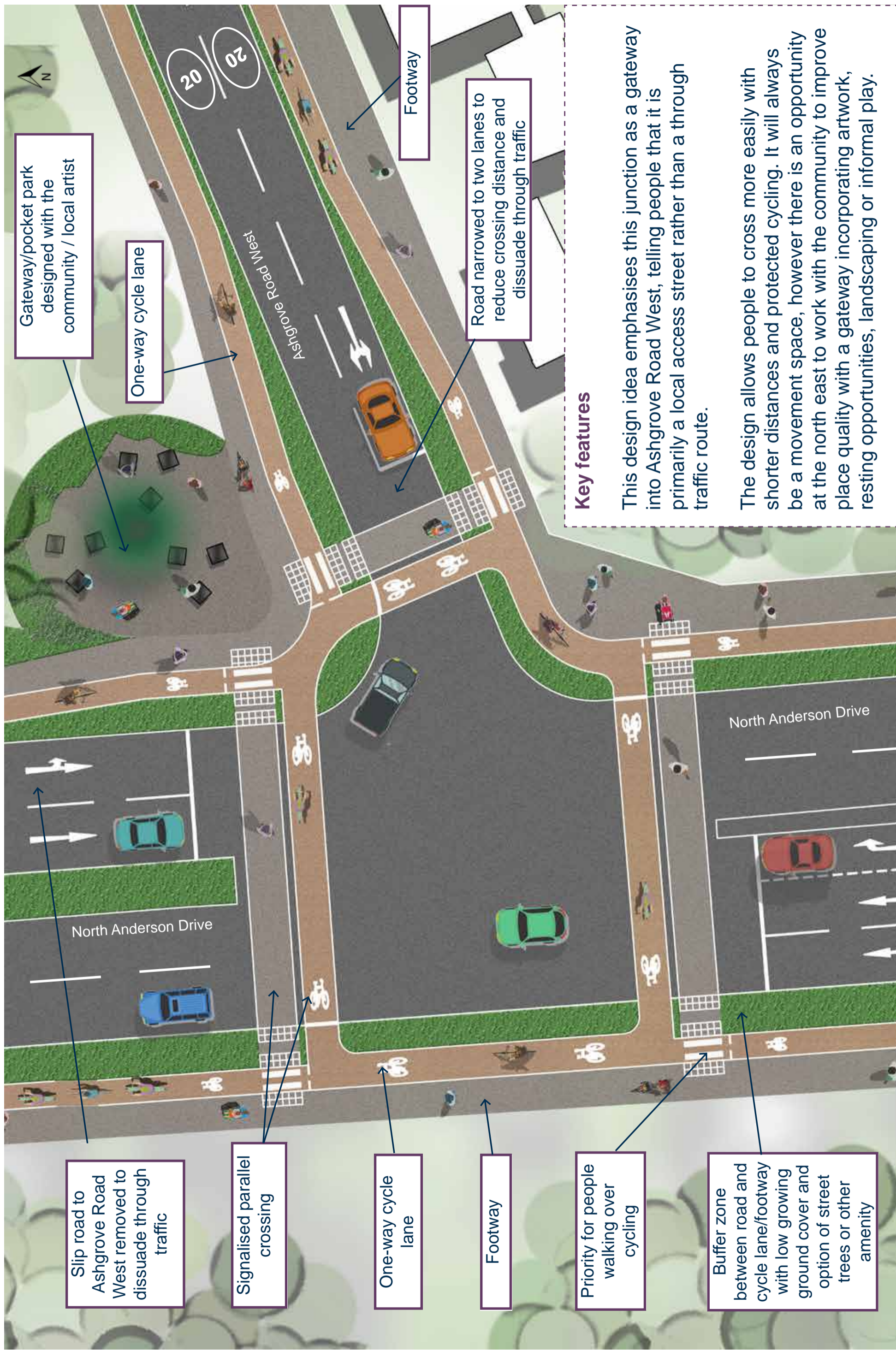
Not pleasant to cross by bike.



Parking provision is rarely used which creates the impression of a wide road.

Existing layout:





Overview

This is a key junction for people going to the Foresterhill Health Campus, Stockethill and Cornhill and for emergency access. There is an opportunity to simplify the signalised junction to make this feel safer to use by all modes of travel.

For this section, we have developed an idea for you to consider and feedback on.



You said:



Congested environment with high traffic speeds.



Confusing and complicated staggered traffic lights with poor signal times for all users.



Trees are much loved but negatively impact the footway.



Slow to cross the road in all directions.



Difficult environment to cycle in.



Parked vehicles cause confusion on western approach to traffic lights.

Existing layout:

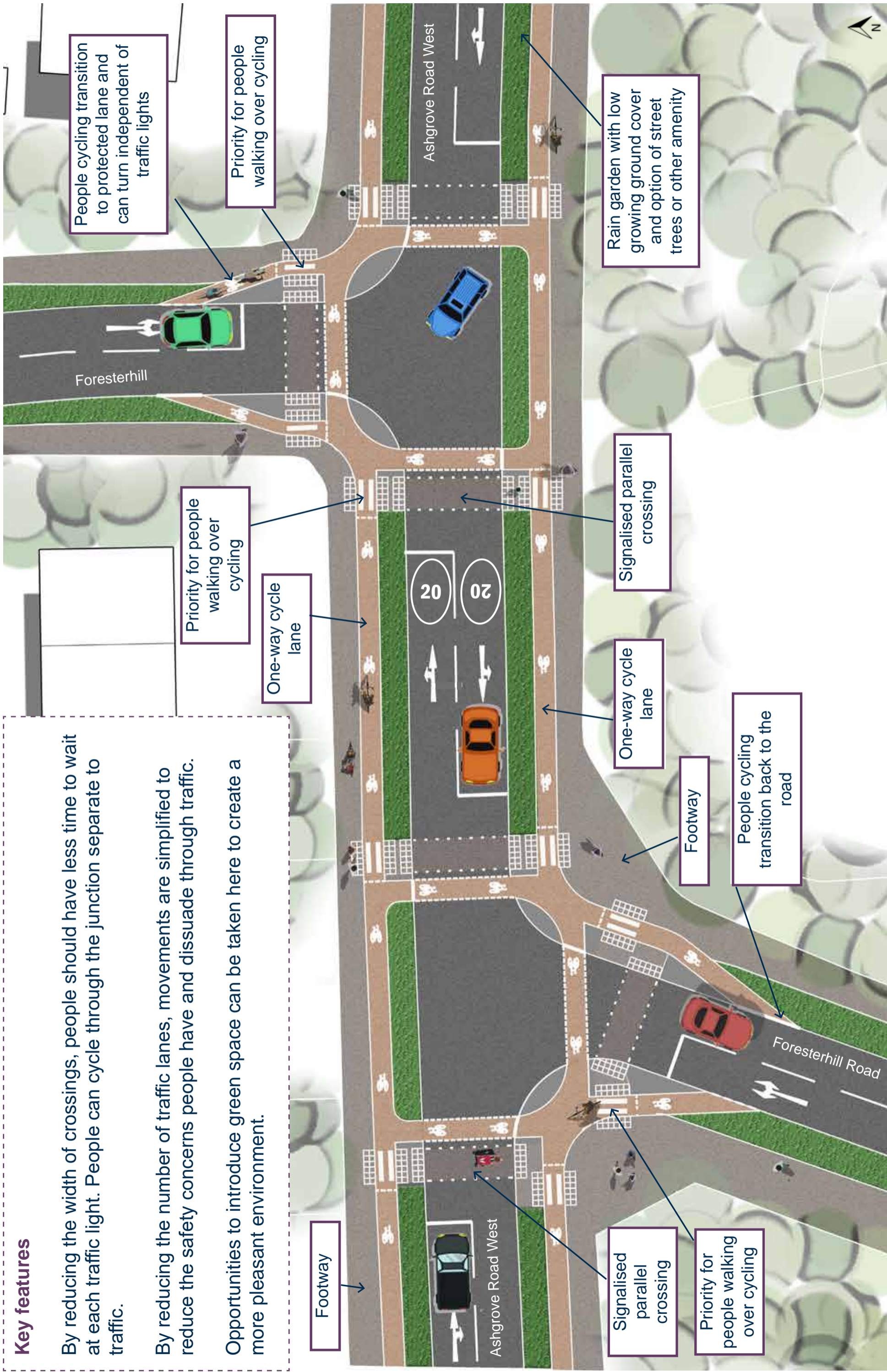


Key features

By reducing the width of crossings, people should have less time to wait at each traffic light. People can cycle through the junction separate to traffic.

By reducing the number of traffic lanes, movements are simplified to reduce the safety concerns people have and dissuade through traffic.

Opportunities to introduce green space can be taken here to create a more pleasant environment.



Overview

This is a key junction for children going to school and students to the university campus. There is an opportunity to change the layout to enable people to cross the road, make the junction feel safer and more attractive.

For this section, we have developed two ideas for you to consider and feedback on.



You said:



Confusion over right of way from Cornhill Terrace onto Ashgrove Road West causes accidents.



No crossing for the popular route between Cornhill Terrace and Cornhill Road.



Poor street lighting and no resting places.



Difficult to cross the road and poor footway conditions.



Difficult environment to cycle in.



Signage for Controlled Parking Zone causes confusion.

Existing layout:

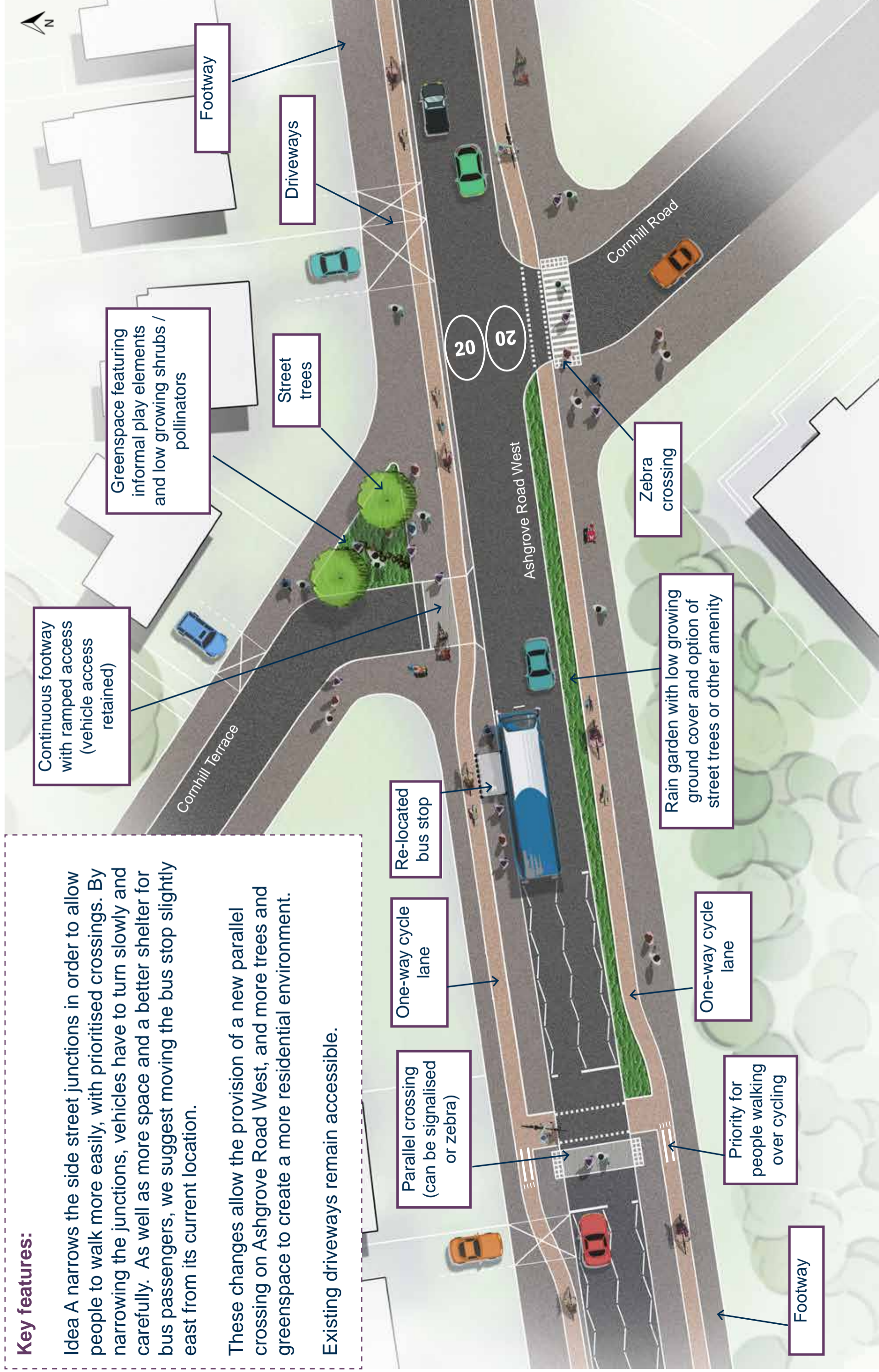


Key features:

Idea A narrows the side street junctions in order to allow people to walk more easily, with prioritised crossings. By narrowing the junctions, vehicles have to turn slowly and carefully. As well as more space and a better shelter for bus passengers, we suggest moving the bus stop slightly east from its current location.

These changes allow the provision of a new parallel crossing on Ashgrove Road West, and more trees and greenspace to create a more residential environment.

Existing driveways remain accessible.

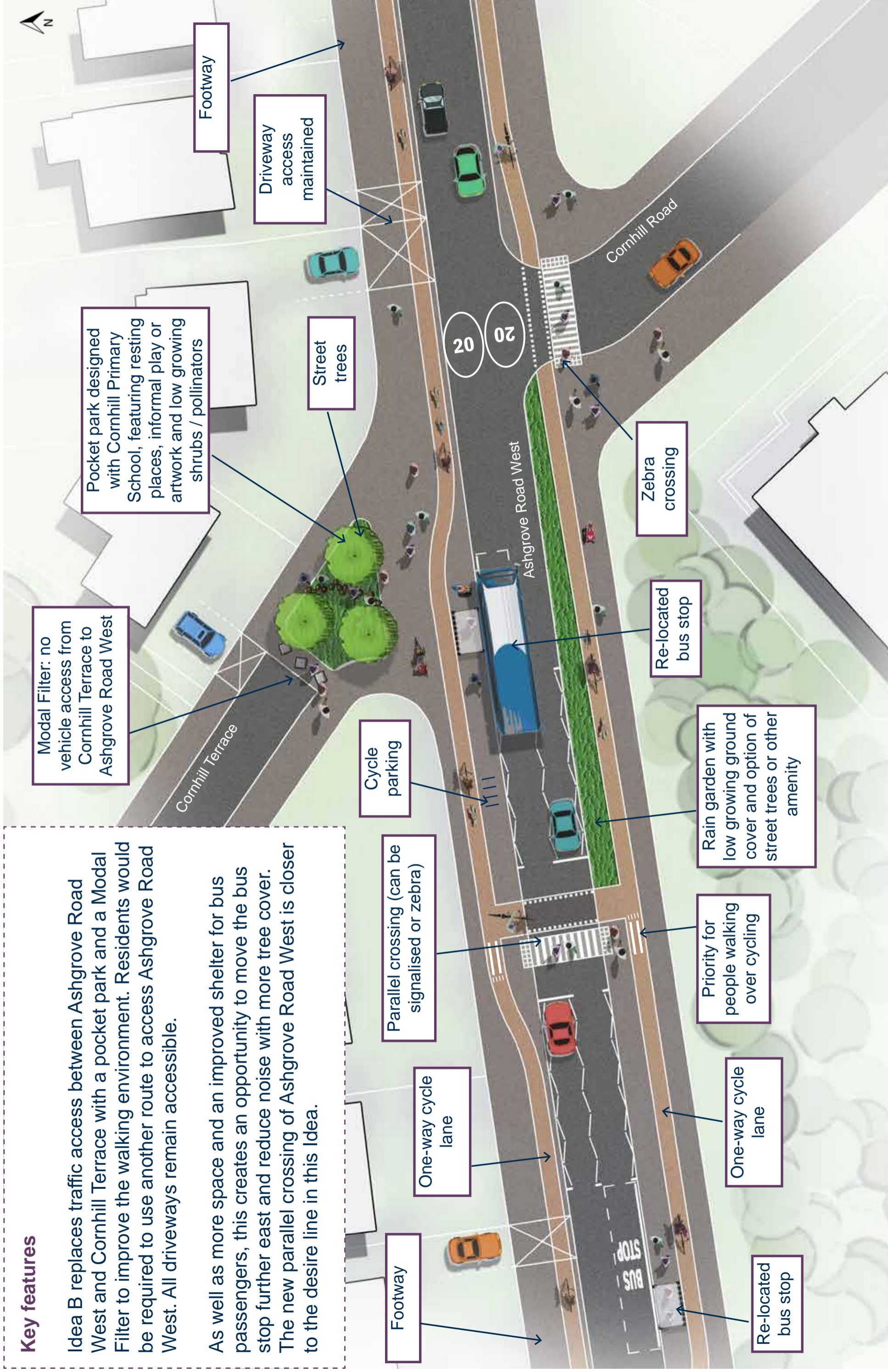




Key features

Idea B replaces traffic access between Ashgrove Road West and Cornhill Terrace with a pocket park and a Modal Filter to improve the walking environment. Residents would be required to use another route to access Ashgrove Road West. All driveways remain accessible.

As well as more space and an improved shelter for bus passengers, this creates an opportunity to move the bus stop further east and reduce noise with more tree cover. The new parallel crossing of Ashgrove Road West is closer to the desire line in this Idea.





Overview

This is a key junction linking Ashgrove Road West and Ashgrove Road with Westburn Drive. There is an opportunity to change the layout of this signalised junction to provide more priority to people walking and cycling and make the junction feel safer for all travel modes.

For this section, we have developed two ideas for you to consider and feedback on.



You said:



High vehicle speeds attempt to beat the traffic lights.



Not enough time between traffic lights changing with drivers jumping red lights.



Underutilised greenspace and high walls can feel intimidating to some.



High vehicle speeds can make walking feel unsafe.

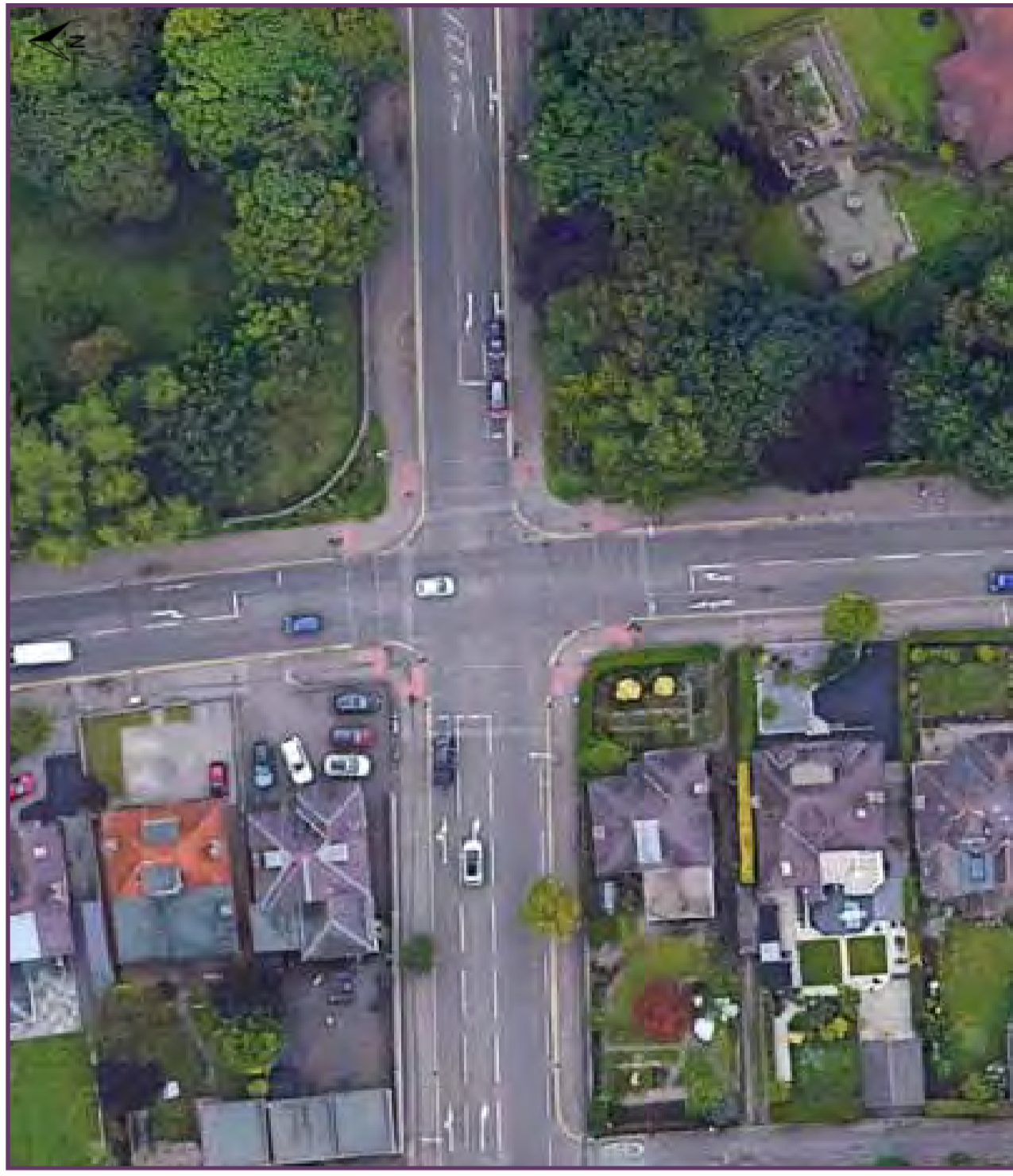


Difficult environment to cycle in.



Signage for Controlled Parking Zone causes confusion.

Existing layout:



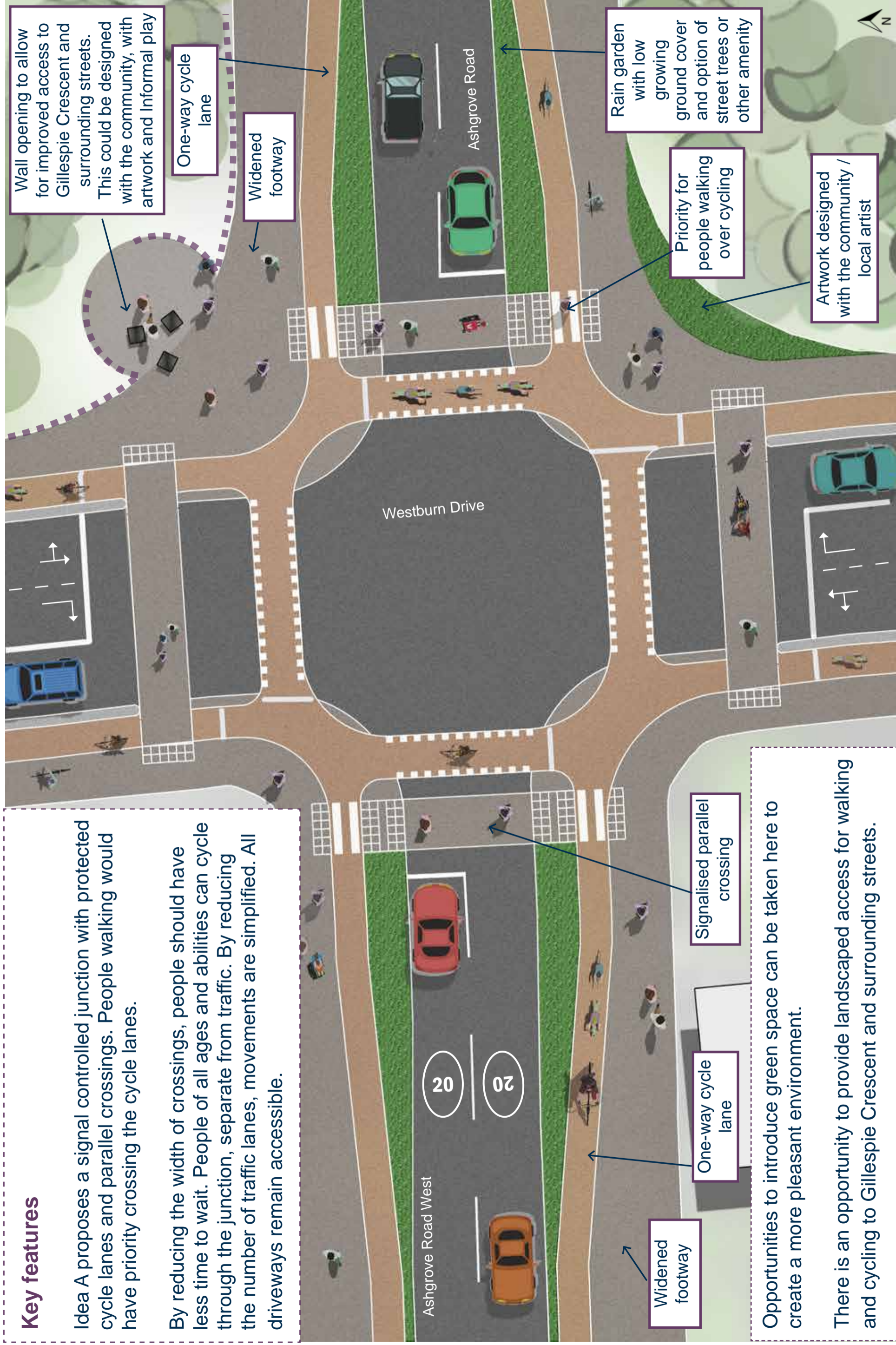
Key features

Idea A proposes a signal controlled junction with protected cycle lanes and parallel crossings. People walking would have priority crossing the cycle lanes.

By reducing the width of crossings, people should have less time to wait. People of all ages and abilities can cycle through the junction, separate from traffic. By reducing the number of traffic lanes, movements are simplified. All driveways remain accessible.

Opportunities to introduce green space can be taken here to create a more pleasant environment.

There is an opportunity to provide landscaped access for walking and cycling to Gillespie Crescent and surrounding streets.



Wall opening to allow for improved access to Gillespie Crescent and surrounding streets. This could be designed with the community, with artwork and informal play

One-way cycle lane

Widened footway

Rain garden with low growing ground cover and option of street trees or other amenity

Priority for people walking over cycling

Artwork designed with the community / local artist

Signalised parallel crossing

One-way cycle lane

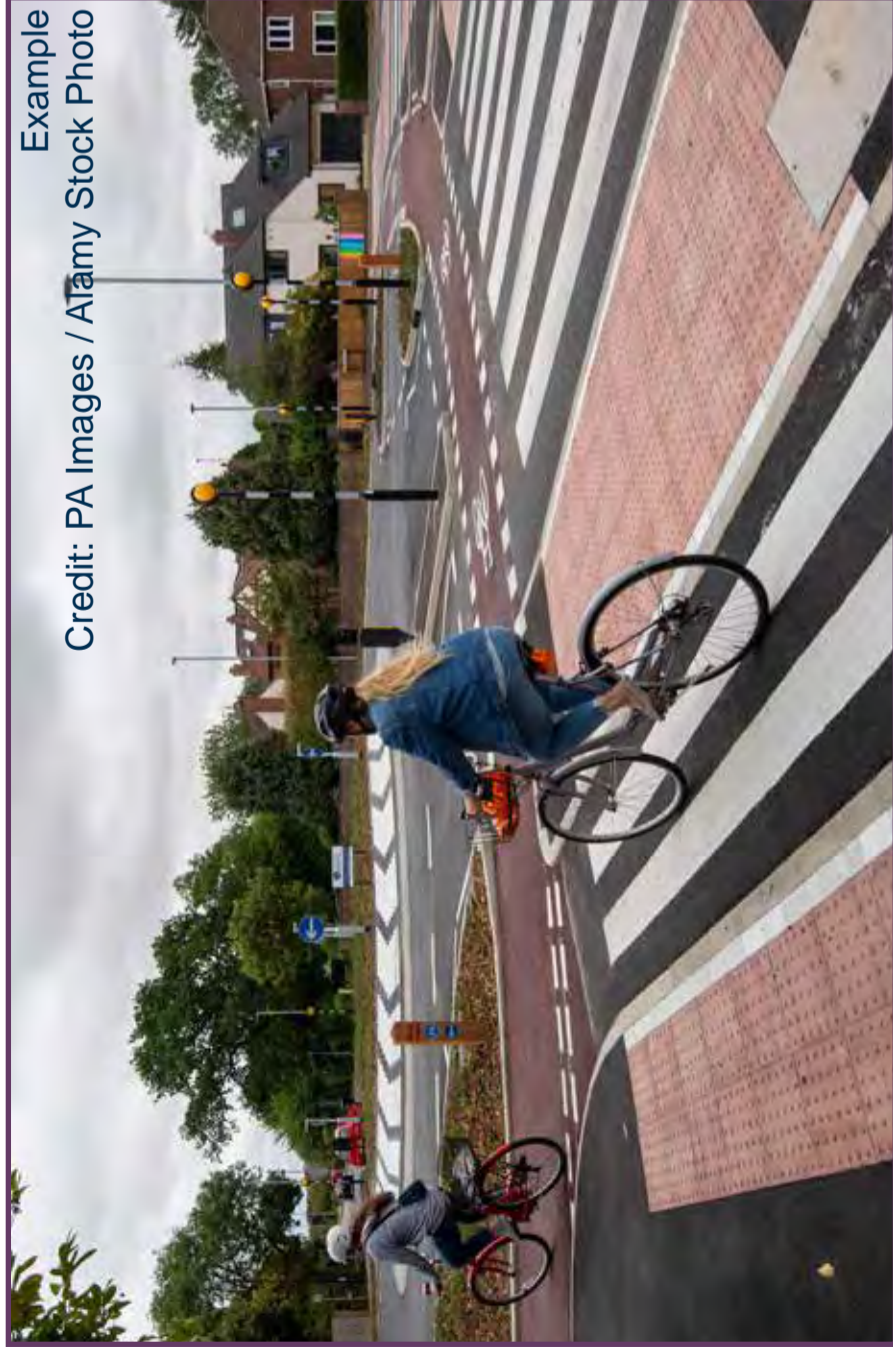
Widened footway

Key features

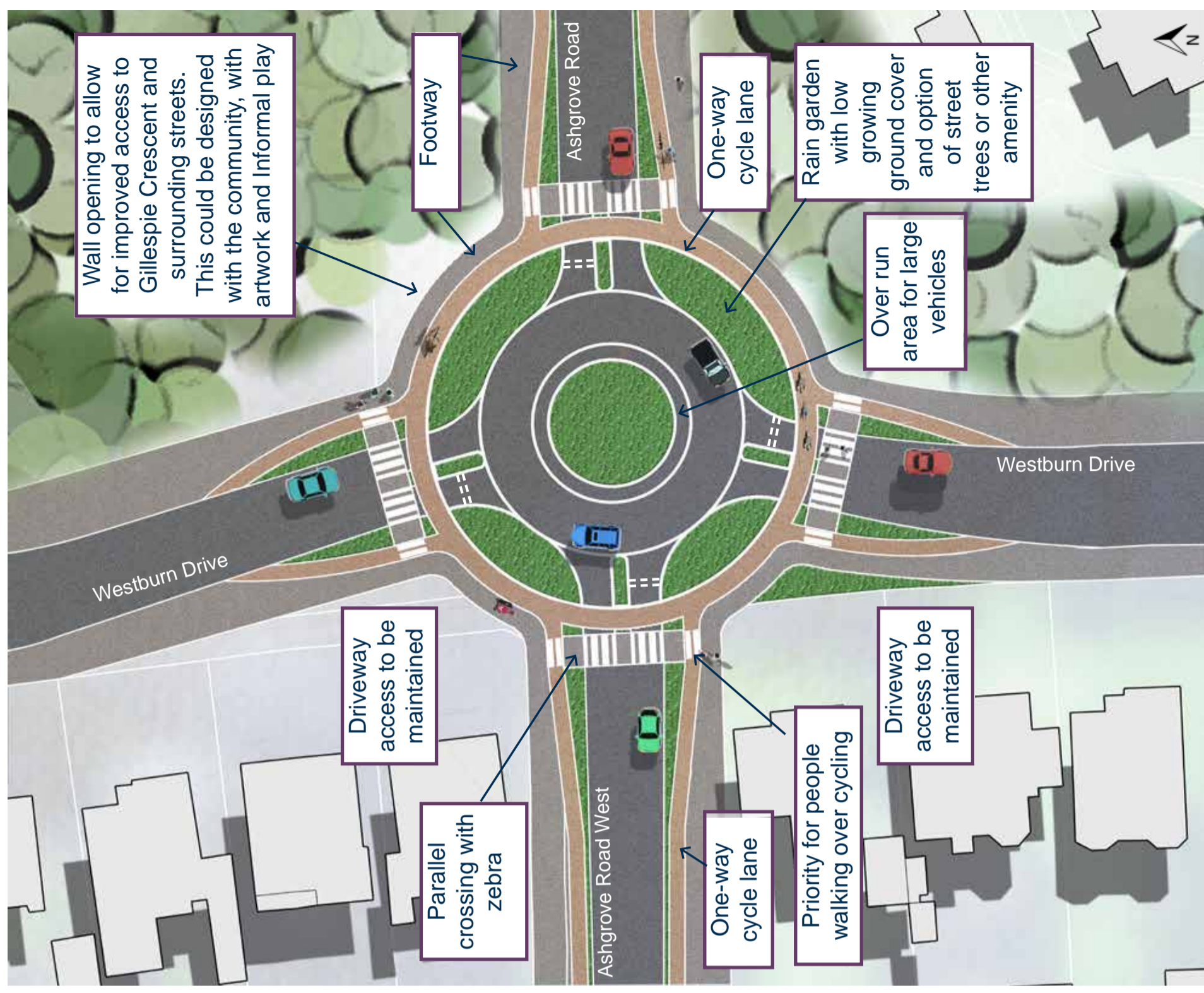
Idea B proposes a roundabout that provides priority over traffic for people walking and cycling through the junction using parallel crossings. This concept is common in other countries but relatively new to the UK.

Many people walking and cycling prefer the immediate priority over traffic so that they have less time to wait. People walking have priority over those cycling. Drivers are required to drive more slowly than at a traditional roundabout, but would experience less delay than at traffic signals.

This Idea requires more land than traffic signals and negotiations would be required with landowners to the north-east and south-east if this was something the community was interested in progressing at this location. We do not anticipate this would require land purchase to the north-west or south-west, however in these locations, arrangements to maintain driveway access would require consideration with those residents.



Example
Credit: PA Images / Atamy Stock Photo



Wall opening to allow for improved access to Gillespie Crescent and surrounding streets. This could be designed with the community, with artwork and informal play

Footway

One-way cycle lane

Rain garden with low growing ground cover and option of street trees or other amenity

Over run area for large vehicles

Driveway access to be maintained

Parallel crossing with zebra

One-way cycle lane

Priority for people walking over cycling

Driveway access to be maintained

Overview

The Ashgrove Road and Laurelwood Avenue area incorporates the space from Berryden Road to Westburn Drive. We have particularly focussed in this section on the area to the east of May Baird Avenue. In developing design ideas we have considered:

- Opportunities: what can be done to deliver community priorities; and
- Constraints: factors that place a limit on what can be done

The opportunities and constraints are presented over the next two pages followed by three design Ideas for this area.

Area 2: Ashgrove Road and Laurelwood Avenue
(pages 24-40)



Ashgrove Road and
Laurelwood Avenue



Traffic

Opportunities:

- Reduce speed limit to 20mph
- Traffic circulation patterns can be adapted to reduce traffic flow
- Provide junction 'gateways' to influence driver behaviour
- Narrow the road to control speed and reduce noise
- Traffic calming measures at junctions
- More greenspace to 'absorb' noise

Constraints:

- [Berryden Corridor Improvement](#) is a committed project and is assumed to be in place
- The right turn for traffic from Elm Place to Berryden Road (south) must be retained
- The left turn for traffic from Berryden Road into Ashgrove Road must be retained
- While unnecessary through traffic can be dissuaded, full removal of through traffic is not being considered



Crossings and Junctions

Opportunities:

- More dedicated crossings
- Reduce the width of junctions
- Prioritise people over vehicles at side streets
- Vehicle turning restrictions can be introduced to restrict through traffic within the constraints noted under 'Traffic'

Constraints:

- Private driveway access to be retained



Place Quality and Greenspace

Opportunities:

- More green space and resting places
- More trees which will last and won't negatively impact on footways and properties
- Provide 'gateways' to create more of a community feel

Constraints:

- Retaining existing heavy goods vehicle access presents some limitations on opportunities



Walking

Opportunities:

- Reduce speed limit to 20mph
- Narrow the road and add traffic calming measures
- More dedicated crossings
- Make the route less attractive to through traffic
- More green space and resting places
- Dissuade cycling on footways by providing a separate, safe space

Constraints:

- Vertical traffic calming is not favoured as this is an emergency route



Cycling

Opportunities:

- Reduce traffic below 200 per hours (two way) or provide a consistent and protected space for people of all ages to cycle on
- Separate people cycling from people walking and traffic
- Provide dedicated crossings
- Improve signage and cycle parking
- Consider onward travel connections to the city centre and further afield

Constraints:

- Current traffic flow



Parking

Opportunities:

- Define designated bays for parking
- Prioritise residential needs over occasional parking use
- Remove opportunities to park on footways and at junctions
- Ensure commuters use off-street parking
- On-street parking can be moved within a reasonable distance from those homes without off-street options

Constraints:

- Provide for loading access to businesses using off-street parking
- Resources to extend and manage
- Controlled Parking Zones may be limited
- Providing space for other community priorities means reducing the number of on street parking spaces available
- Discussion will be required with the community to determine the correct balance of priorities

Overview

The primary functions of Ashgrove Road and Laurelwood Avenue are residential streets, connections to and from other parts of the area, and in the case of Ashgrove Road access to businesses. In the future we have assumed that the committed Berryden Corridor Improvement project is in place.

You told us that speed and flow of traffic is too high and walking and cycling in the area is difficult, particularly at junctions. There is an opportunity to consider changing traffic circulation and to adapt street layouts and junctions, within the context of the Berryden Corridor. By making such changes, there are different trade-offs to be made for the use of space, which we introduce here and develop within three design Ideas.



Traffic

On average, there are over 6,000 vehicles travelling along stretches of Ashgrove Road in a normal day. The diagram indicates (black arrows and boxes) the existing maximum hourly traffic flow (500 in the peak hour) in a normal day. This assumes the Berryden Corridor Improvement project has been implemented. The opportunities and constraints for changing traffic movements are listed on page 25.

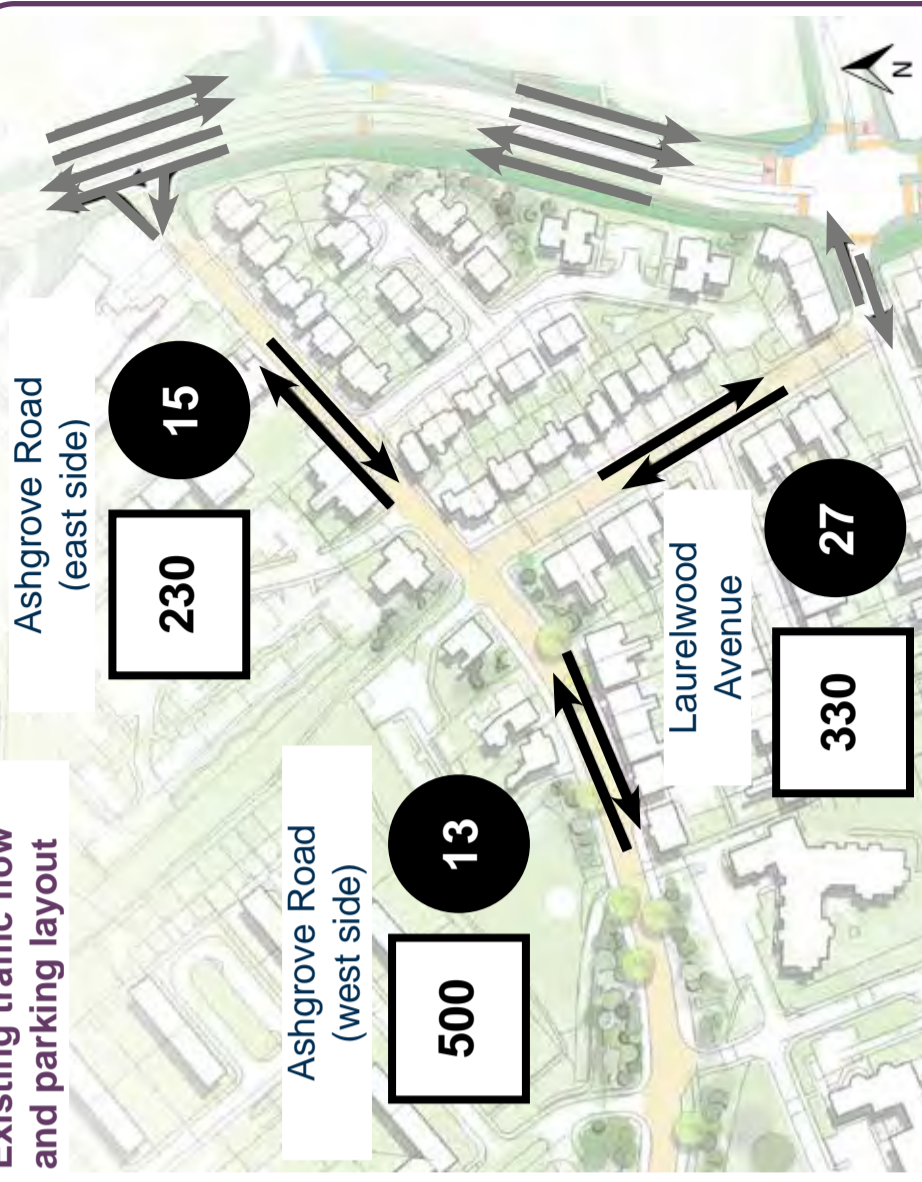
A 20mph speed limit and traffic calming is already in place on Laurelwood Avenue.



Parking

On Ashgrove Road and Laurelwood Avenue, many properties have driveways and/or garages. Although there are no designated on-street bays, parking is permitted on multiple sections on both streets. On both streets, parking on the footway is also common, restricting the space for people walking and damaging footways. On Laurelwood Avenue, parking itself can have a traffic calming effect, however when cars are not parked, this effect is lost and through traffic speeds up. The number of vehicles that can legally park on these streets is indicated in the diagram (black circles). The majority of these spaces are occupied in the late evening, most likely by residents. Short stays are common in the daytime, indicating use by commuters and customers.

Existing traffic flow and parking layout



Key

500
Approx number of vehicles per hour

330
Approx number of vehicles per hour

13
Number of parking spaces

27
Number of parking spaces

→ Traffic direction

→ Traffic direction

→ Traffic direction (Berryden Road Corridor Improvement project)

Notes on traffic flows:

Existing traffic flows are based on counts from this project and models from the Berryden Corridor Improvement Project



Cycling

When two-way traffic flow is over 200 vehicles per hour (100 vehicles in each direction), cycling with traffic is uncomfortable and perceived as unsafe for many people, including most children. People will therefore tend to cycle on the footway or not at all.

The presence of heavy goods vehicles also deters a lot of people and currently around 5% of traffic on Ashgrove Road is heavy goods vehicles. The diagram indicates (red arrows) that, on Ashgrove Road and Laurelwood Avenue, the traffic flow is beyond this comfort threshold for people.



Crossing, junctions and walking

People told us it was difficult to cross Ashgrove Road and Laurelwood Avenue, in particular for people with restricted mobility and buggies/prams.

The Berryden Corridor Improvement project will reduce traffic queuing and the initial designs identify additional crossing opportunities.

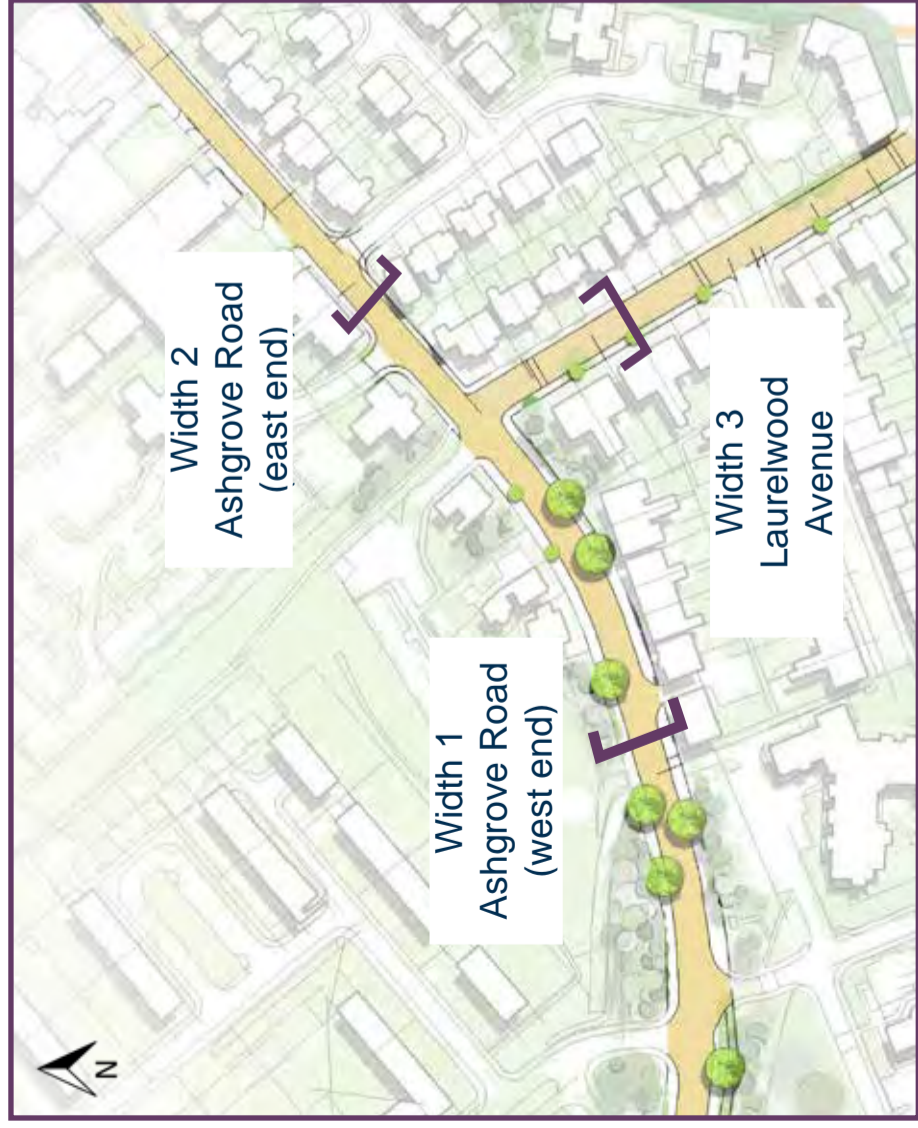


Place quality and greenspace

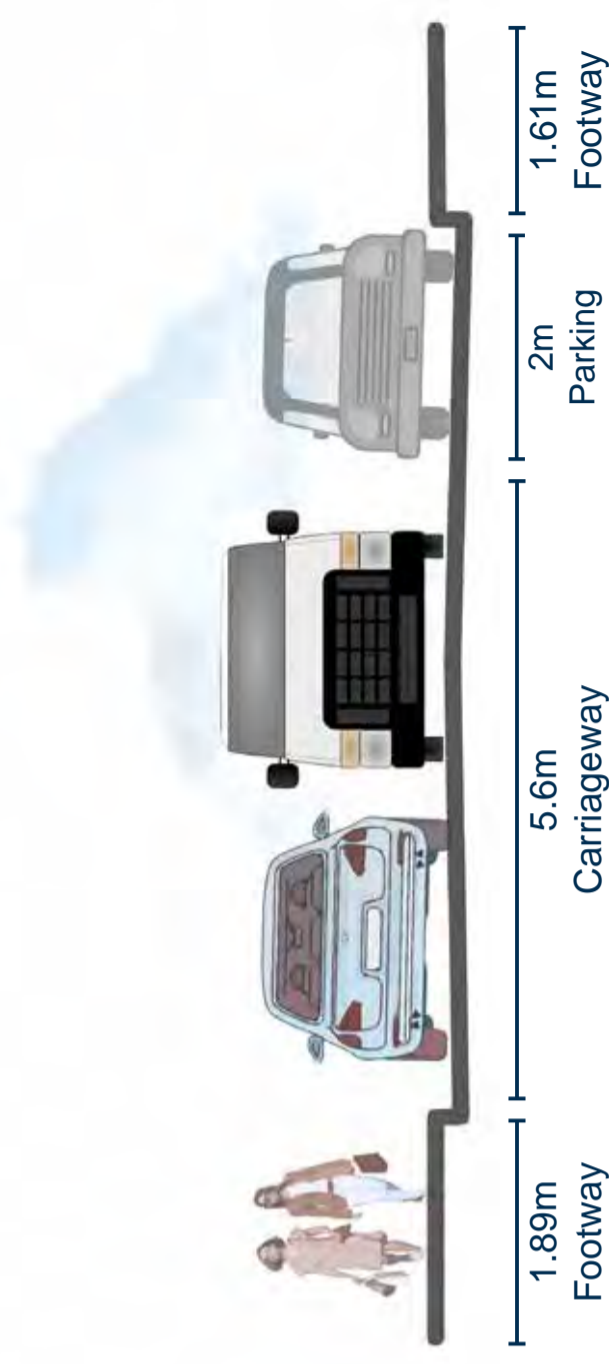
There are currently 12 trees on Ashgrove Road and Laurelwood Avenue between May Baird Avenue and Berryden Road. The initial designs aim to retain existing street trees and provide more trees where possible. We have indicated any change in numbers in the Design Ideas.

Where trees are found to be in poor health or damaging footways and properties, they would be replanted

Location of existing street widths



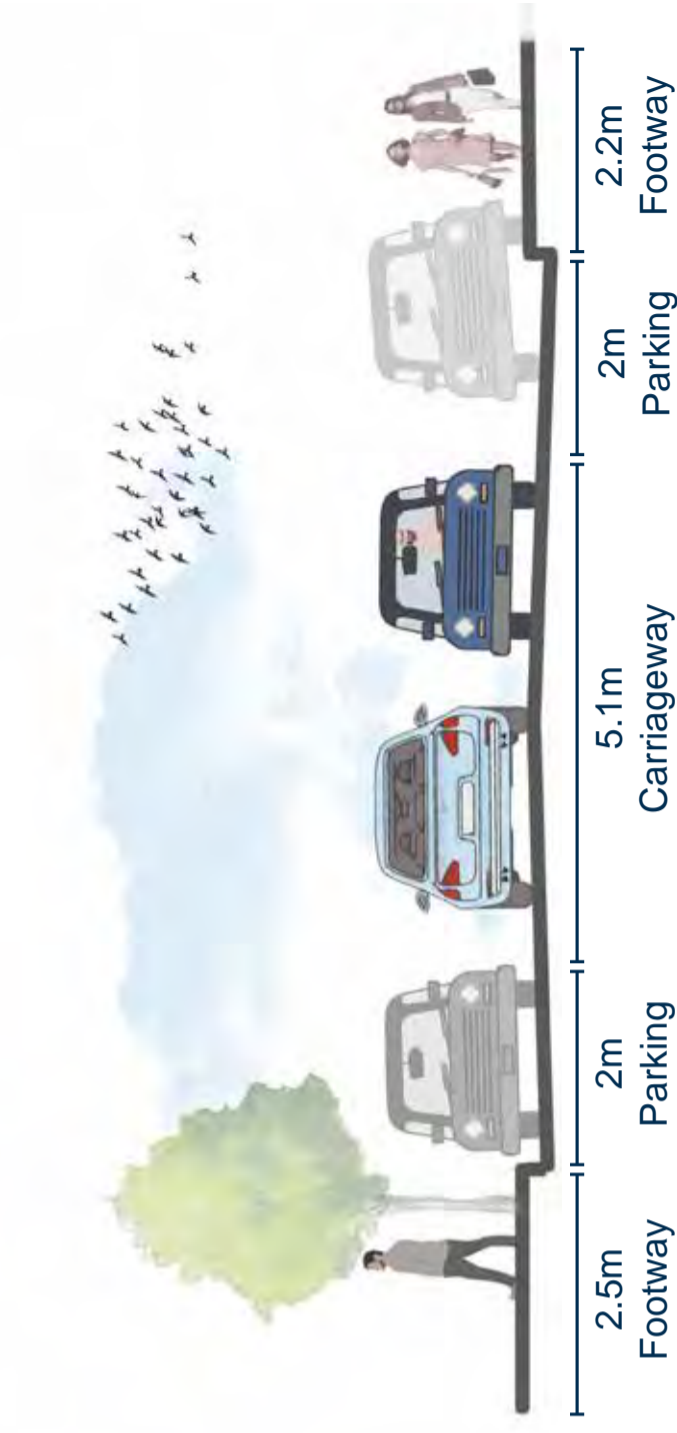
Width 2: Ashgrove Road looking east between Laurelwood Avenue and Berryden Road

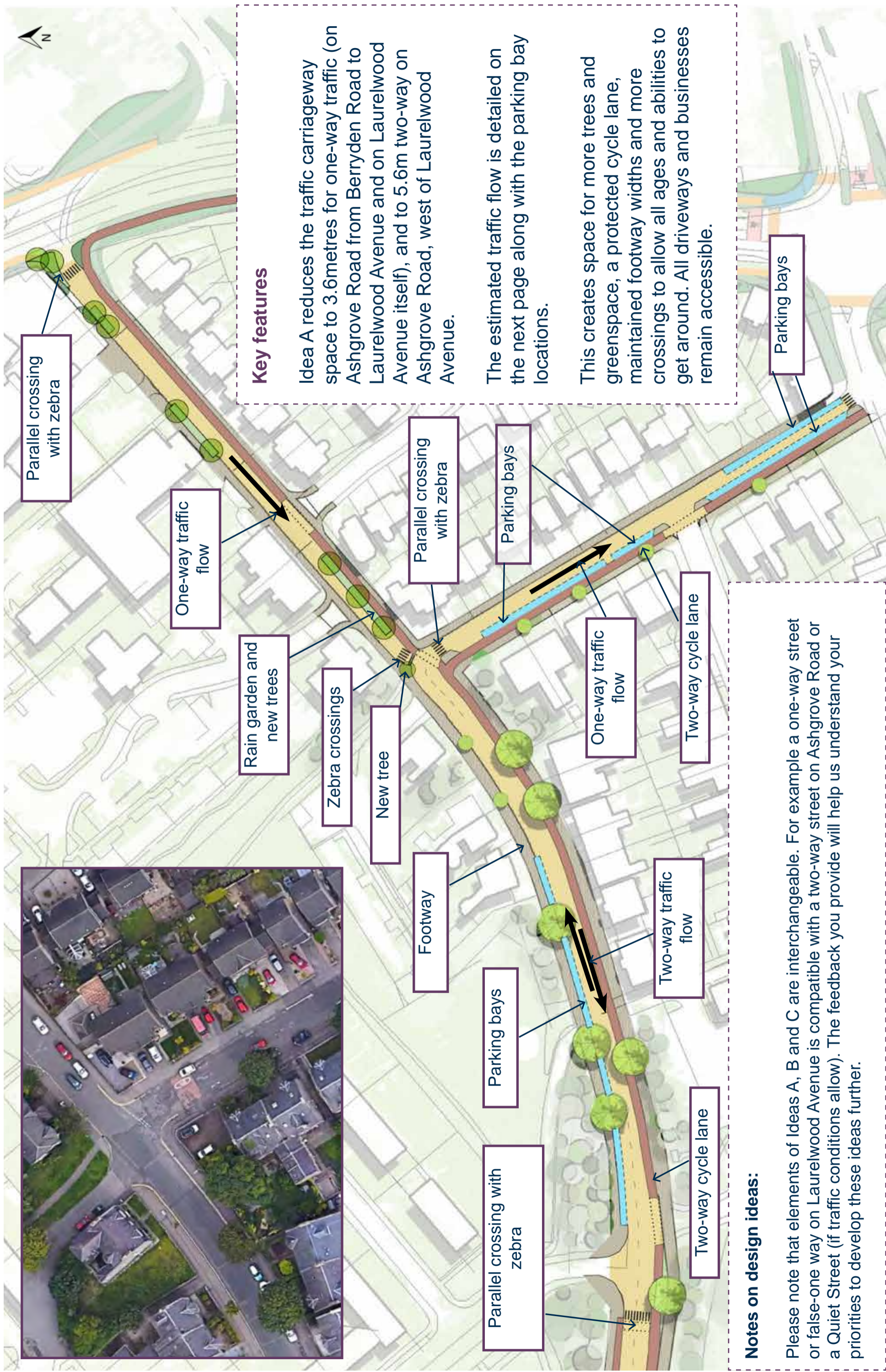


Width 1: Ashgrove Road looking east between May Baird Avenue and Laurelwood Avenue



Width 3: Laurelwood Avenue looking north







Traffic

This idea proposes the following arrangement for traffic circulation:

- Two-way traffic remains on Ashgrove Road between May Baird and Laurelwood Avenue;
- One-way traffic on Ashgrove Road from Berryden Road to Laurelwood Avenue (westbound);
- One-way traffic on Laurelwood Avenue to Elm Place (southbound).

The diagram on the right indicates our estimate of the likely worst case traffic flow on each street with these changes (see diagram notes). It indicates a reduction on Ashgrove Road (east side). A slight increase on Laurelwood Avenue overall is estimated, however because all the Laurelwood Avenue traffic would be travelling south, there would be less conflicts. The carriageway width and existing speed cushions will help to control speed.

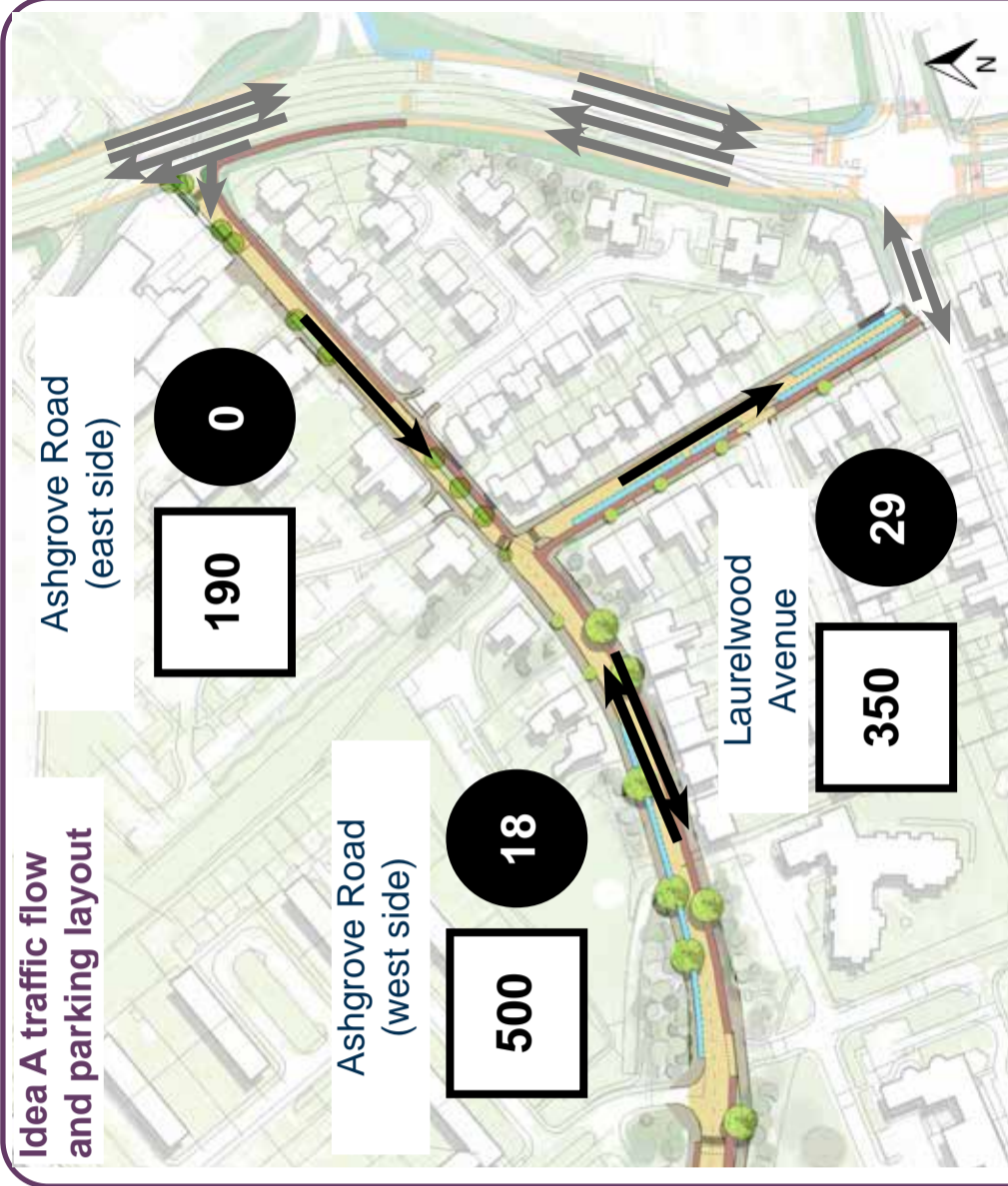


Parking

By providing a single two-way cycle lane instead of cycle lanes on both sides, we can maintain 47 of the existing 55 spaces and formalise these into bays.

The changes would be as follows:

- Ashgrove Road (May Baird to Laurelwood Avenue): From 13 to 18 spaces, located on the north side of the road;
- Ashgrove Road (Laurelwood Avenue to Berryden Road): From 15 to 0 spaces and with the opportunity for pavement parking removed, requiring residents to use driveways or park further along Ashgrove Road;
- Laurelwood Avenue: From 27 to 29 spaces, formalised in bays and with the opportunity for pavement parking removed.



Key

500

Approx number of vehicles per hour

18

Number of parking spaces



Traffic direction



Traffic direction (Berryden Road Corridor Improvement Scheme)

Notes on traffic flows:

Existing traffic flows are based on counts from this project and models from the Berryden Corridor Improvement Project

We have used worst case traffic flow numbers. Our aim is to propose changes that will make Laurelwood Avenue and Ashgrove Road less attractive for through traffic. If this is successful, it is likely and that the overall flows will be lower than those shown because some of those vehicles will route elsewhere.



Cycling

As traffic flows would still be uncomfortable for many people to cycle on Ashgrove Road and Laurelwood Avenue, Idea A includes a two-way protected cycle lane connecting with the cycling provision on Berryden Road.

However, should future analysis indicate that traffic can be reduced still further, the lessened need for a protected cycle lane on those streets could introduce the opportunity for a Quiet Street (Idea C, see page 40).



Crossings junctions and walking

With narrower road space and a 20mph speed limit, the environment will be more appropriate for a residential street. New crossings will help to slow traffic and make it easier to get around on foot:

- Ashgrove Road: three new crossings at May Baird Avenue, Laurelwood Avenue and Berryden Road; and
- Laurelwood Avenue: one new crossing at the junction with Ashgrove Road.

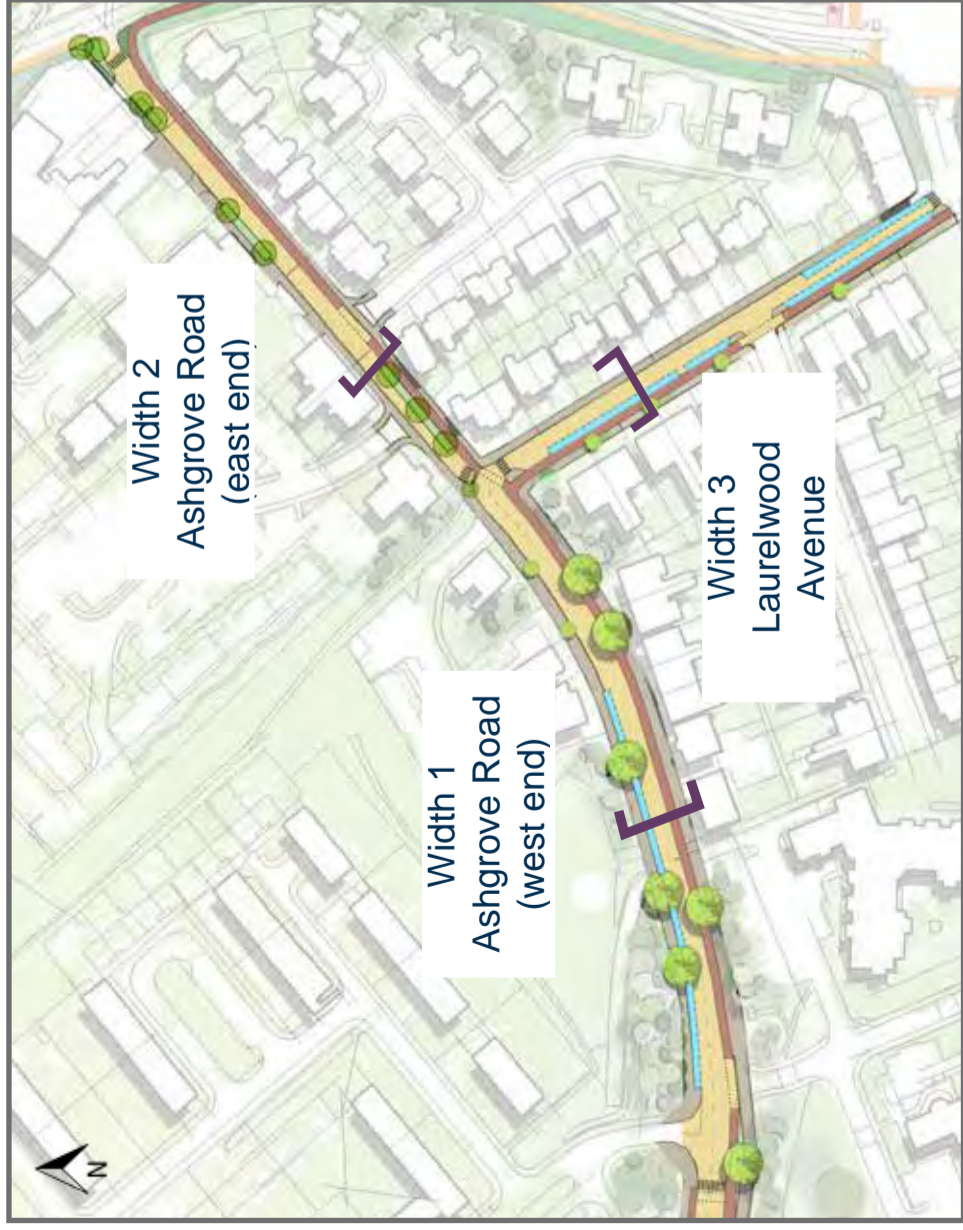


Place quality and greenspace changes

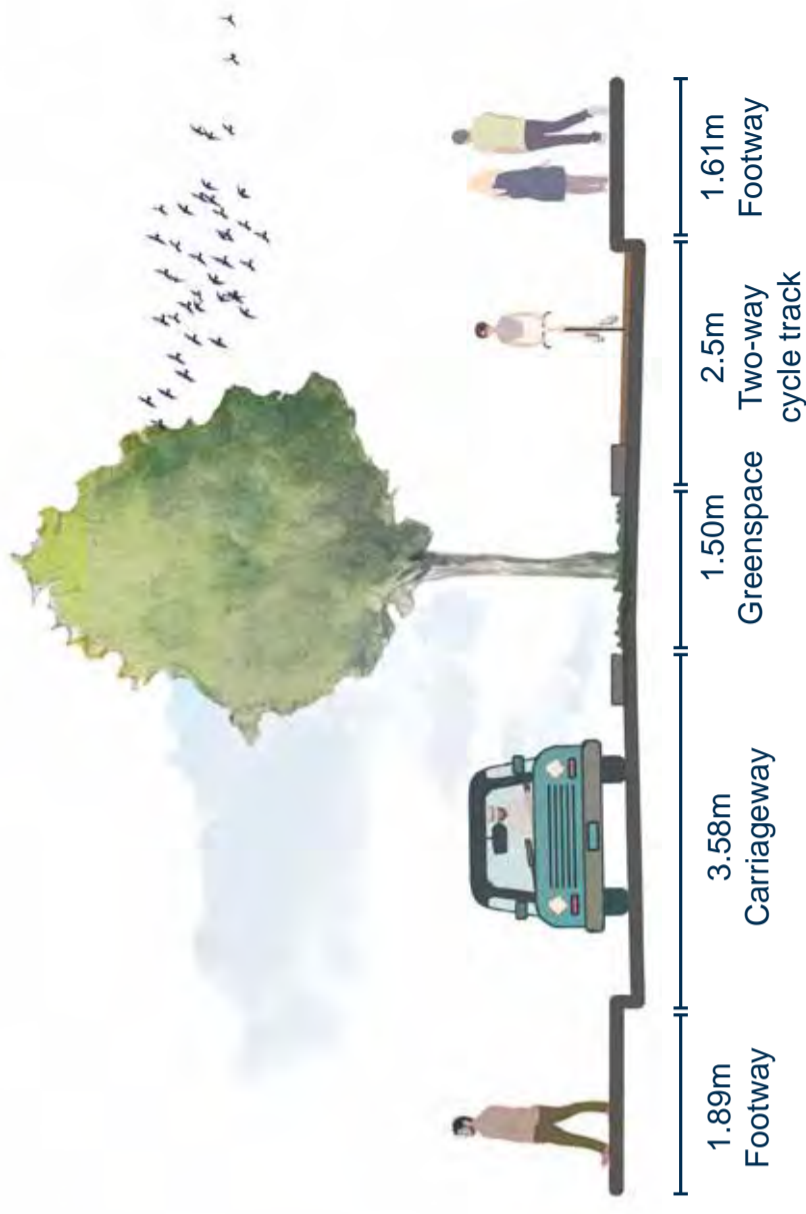
This idea could introduce up to 10 new trees on Ashgrove Road, to increase the total number of trees from 12 to 20, with small opportunities for low growing greenspace or rain gardens.

The location and mix of flora could be designed with the community.

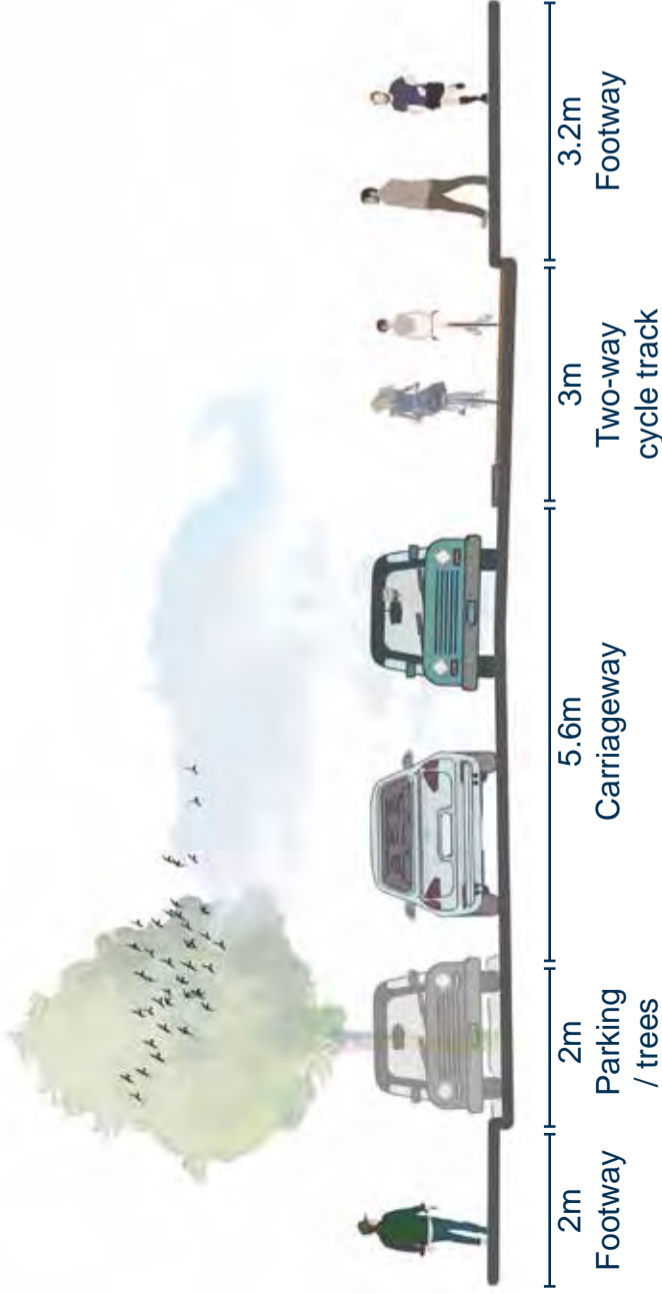
Location of street widths



Width 2: Ashgrove Road looking east between Laurelwood Avenue and Berryden Road. One-way traffic flow with improved public realm and two-way cycle lanes on south side and no parking.



Width 1: Ashgrove Road looking east between May Baird and Laurelwood Avenue. Two-way traffic flow with a two-way cycle lane on south side and parking retained on north side only.



Width 3: Laurelwood Avenue looking north. One-way traffic flow with two-way cycle lane and parking retained.



Existing street view



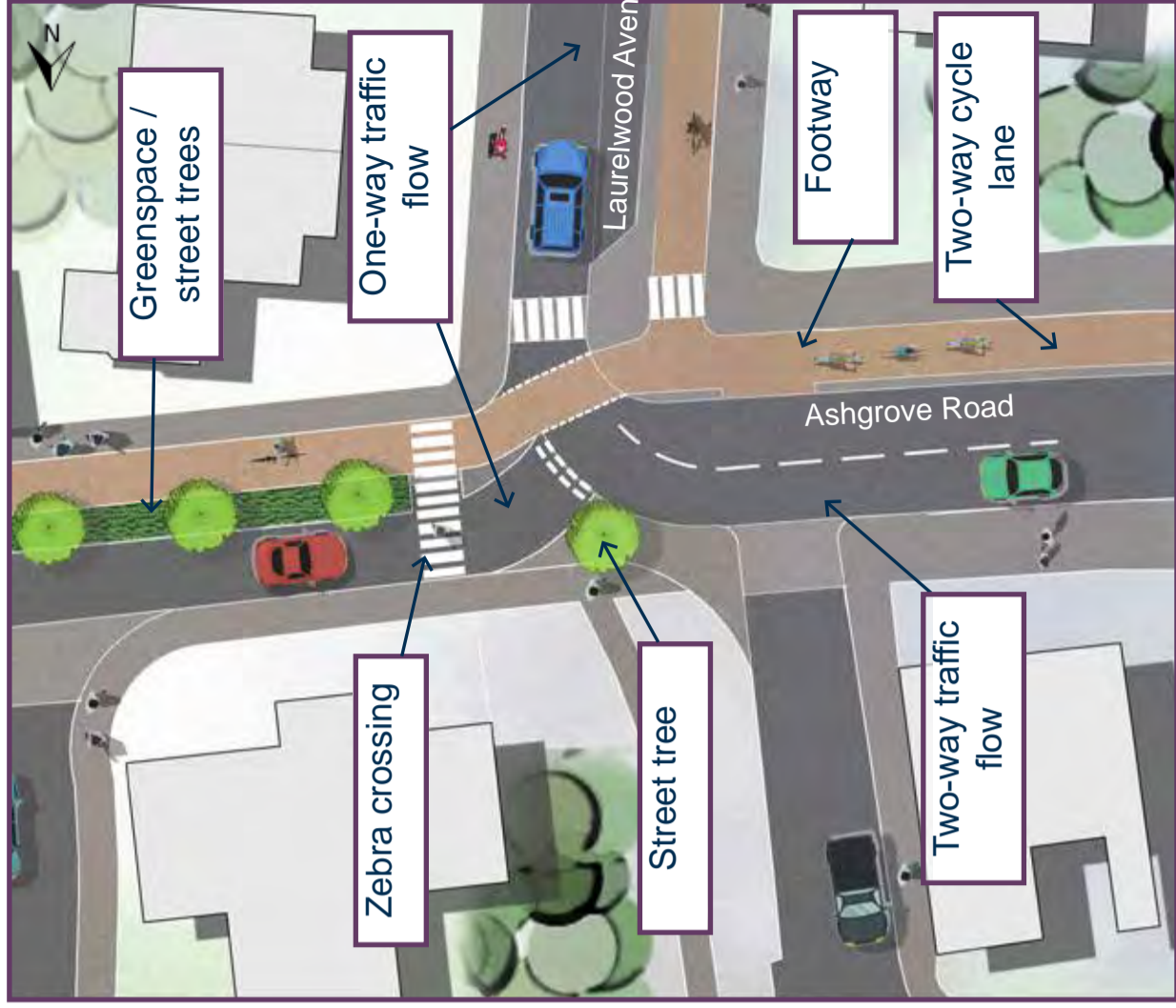
Existing layout

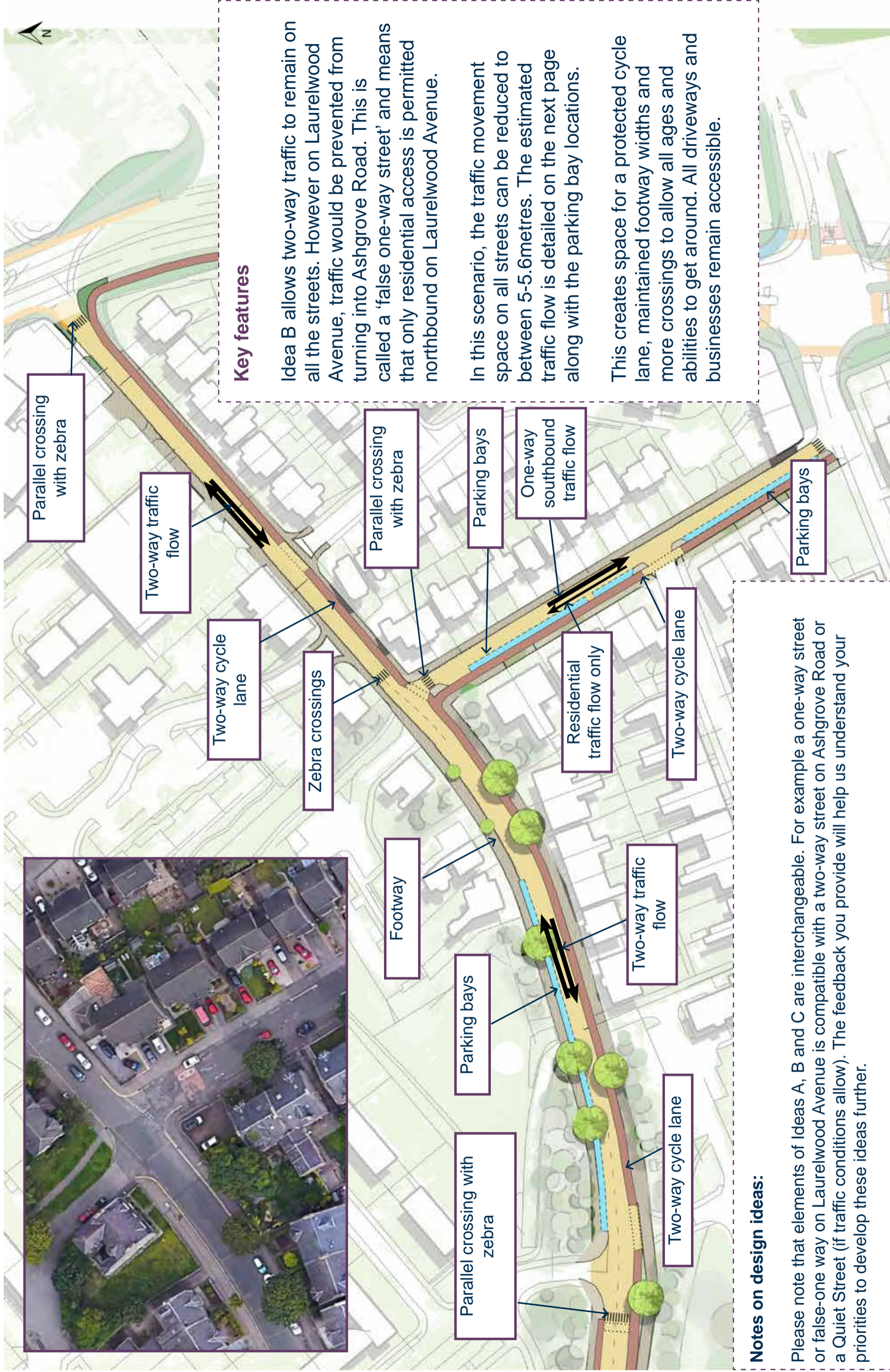


Idea A street view



Idea A layout





Key features

Idea B allows two-way traffic to remain on all the streets. However on Laurelwood Avenue, traffic would be prevented from turning into Ashgrove Road. This is called a 'false one-way street' and means that only residential access is permitted northbound on Laurelwood Avenue.

In this scenario, the traffic movement space on all streets can be reduced to between 5-5.6metres. The estimated traffic flow is detailed on the next page along with the parking bay locations.

This creates space for a protected cycle lane, maintained footway widths and more crossings to allow all ages and abilities to get around. All driveways and businesses remain accessible.

Notes on design ideas:

Please note that elements of Ideas A, B and C are interchangeable. For example a one-way street or false-one way on Laurelwood Avenue is compatible with a two-way street on Ashgrove Road or a Quiet Street (if traffic conditions allow). The feedback you provide will help us understand your priorities to develop these ideas further.



Traffic

This idea proposes the following arrangement for traffic circulation:

- Two-way traffic remains on Ashgrove Road;
- Traffic can still drive on Laurelwood Avenue to Elm Place (southbound)
- Only residents and visitors can drive from Elm Place to Laurelwood Avenue (northbound)

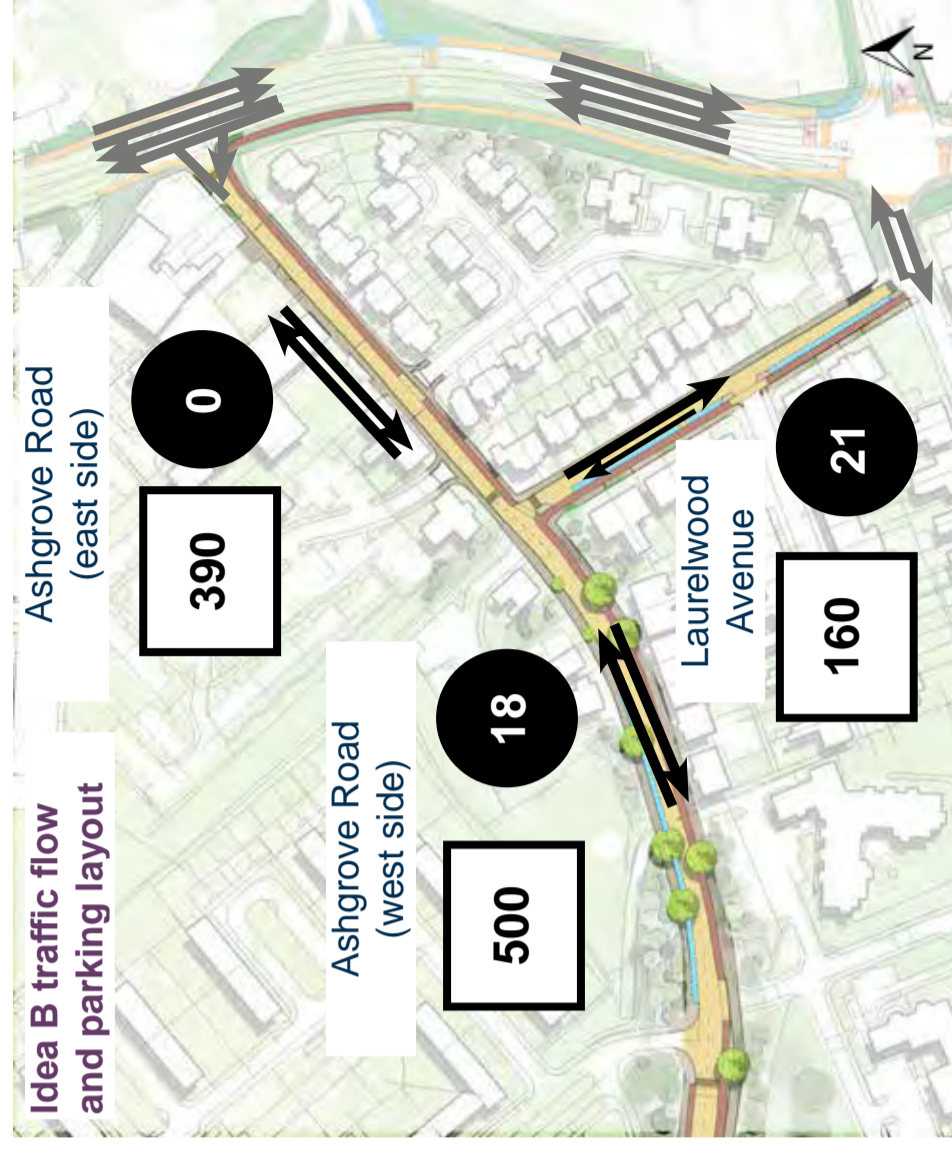
The diagram on the right indicates our estimate of the likely worst case traffic flow on each street with these changes (see diagram notes). It indicates a reduction on Laurelwood Avenue. A slight increase on Ashgrove Road overall is estimated. The carriageway width on both streets and speed cushions on Laurelwood Avenue will help to control speed.



Parking

By providing a single two-way cycle lane instead of cycle lanes on both sides, we can maintain 39 of the existing 55 spaces and formalise this into bays. The changes would be as follows:

- Ashgrove Road (May Baird to Laurelwood Avenue): From 13 to 18 spaces, located on the north side of the road;
- Ashgrove Road (Laurelwood Avenue to Berryden Road): From 15 to 0 spaces and with the opportunity for pavement parking removed, requiring residents to use driveways or park further along Ashgrove Road;
- Laurelwood Avenue: From 27 to 21 spaces, formalised in bays and with the opportunity for pavement parking removed.



Key

500

Approx number of vehicles per hour

18

Number of parking spaces



Traffic direction

Traffic direction (Berryden Road Corridor Improvement Scheme)



Traffic direction (residential access only)

Notes on traffic flows:

Existing traffic flows are based on counts from this project and models from the Berryden Corridor Improvement Project

We have used worst case traffic flow numbers. Our aim is to propose changes that will make Laurelwood Avenue and Ashgrove Road less attractive for through traffic. If this is successful, it is likely and that the overall flows will be lower than those shown because some of those vehicles will route elsewhere.



Cycling

Because traffic flows would still be uncomfortable for many people to cycle on Ashgrove Road and Laurelwood Avenue, Idea A includes a two-way protected cycle lane connecting with the cycling provision on Berryden Road.

However, should future analysis indicate that traffic can be reduced still further, the lessened need for a protected cycle lane on those streets could introduce the opportunity for a Quiet Street design (Idea C, see page 41).



Crossings junctions and walking

With narrower road space and a 20mph speed limit, the environment will be more appropriate for a residential street. New crossings will help to slow traffic and make it easier to get around on foot:

- Ashgrove Road: three new crossings at May Baird Avenue, Laurelwood Avenue and Berryden Road; and
- Laurelwood Avenue: one new crossing at the junction with Ashgrove Road.

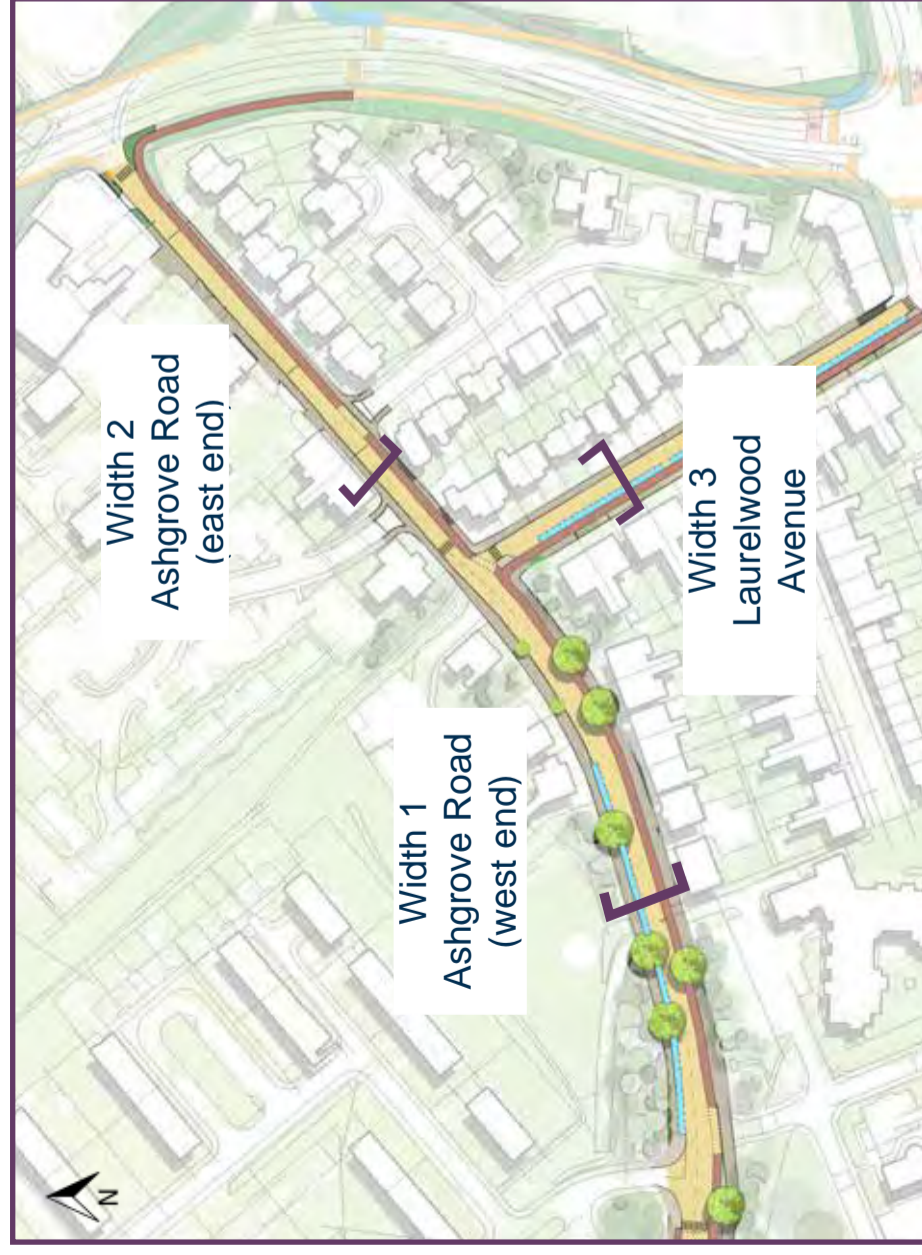


Place quality and greenspace changes

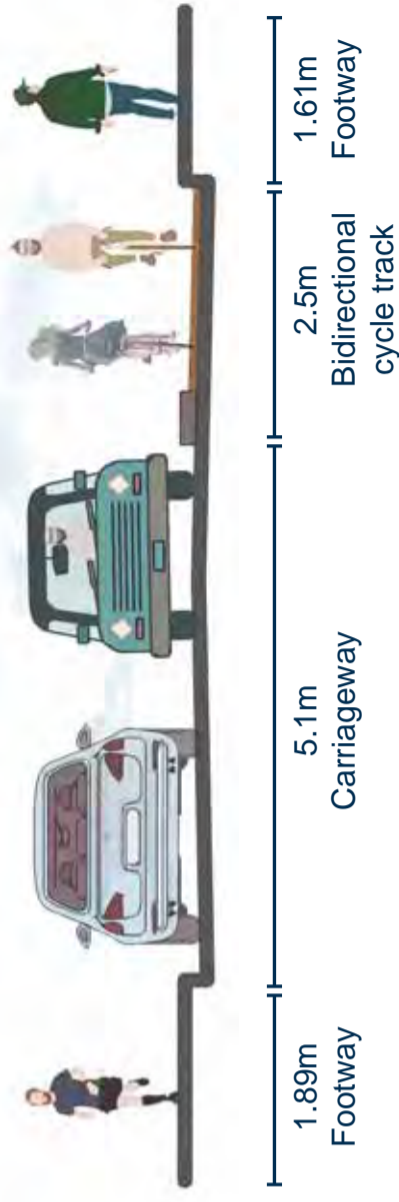
This Idea would maintain the same number of trees (8) on Ashgrove Road, however the trees on Laurelwood Avenue would likely require to be removed, with limited if any opportunities for low growing greenspace or rain gardens.

Overall, by reducing traffic the place quality on Laurelwood Avenue and Ashgrove Road is likely to improve.

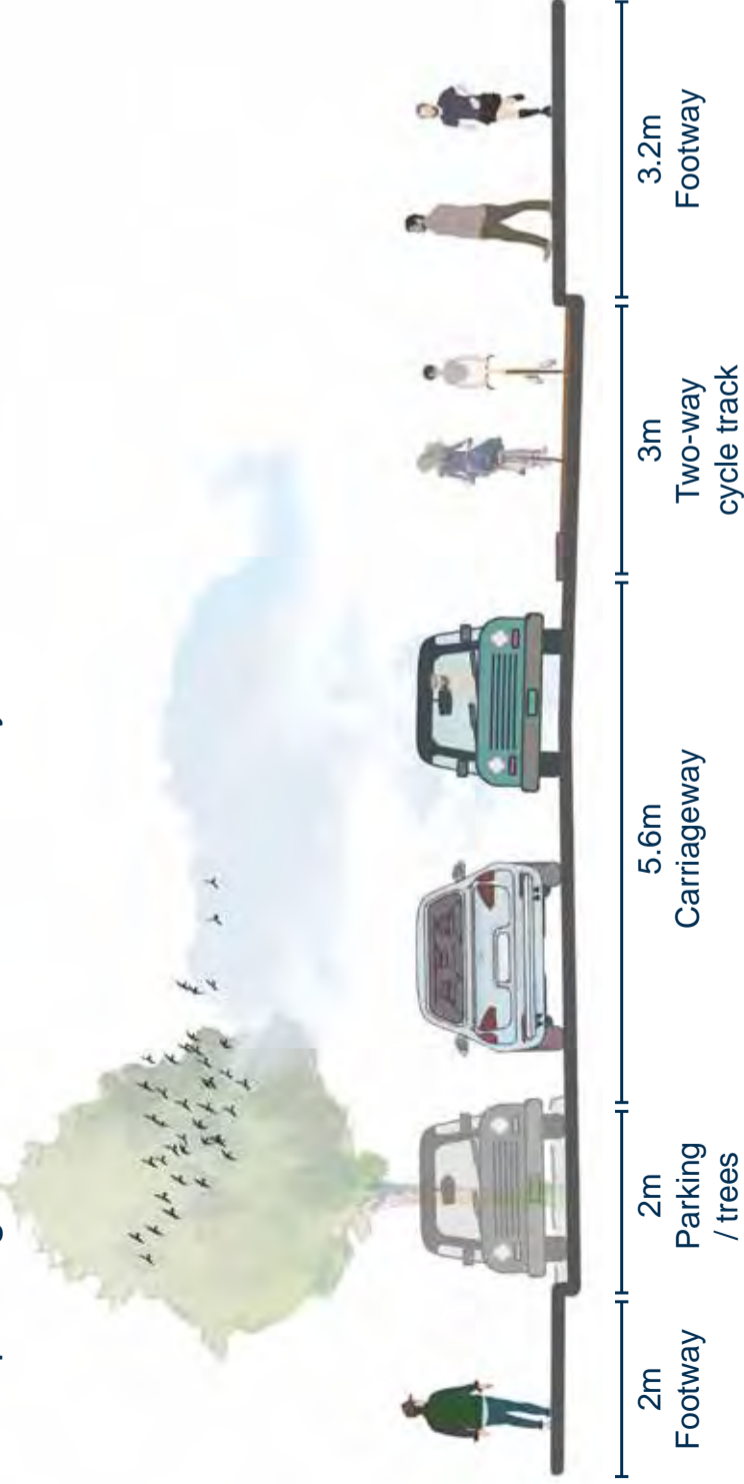
Location of street widths



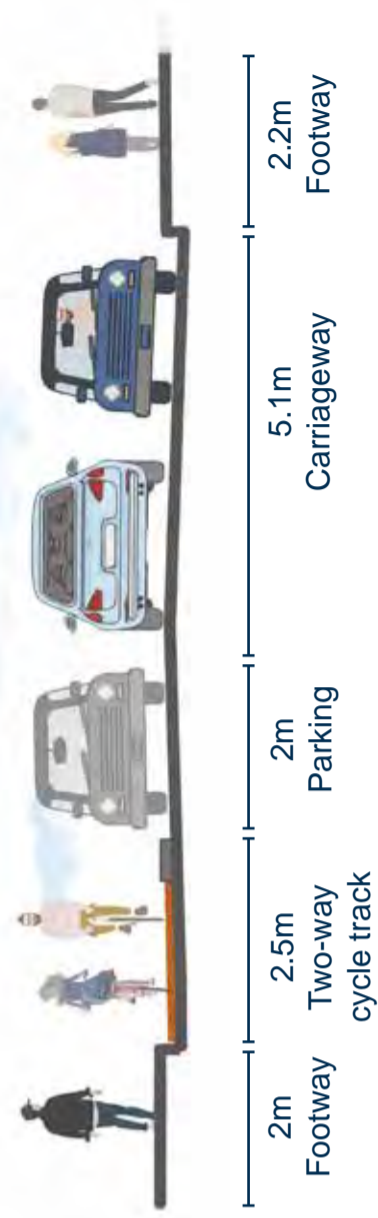
Width 2: Ashgrove Road looking east between Laurelwood Avenue and Berryden Road. Two-way traffic with protected cycle track and no parking.



Width 1: Ashgrove Road looking east between May Baird Avenue and Laurelwood Avenue. Two-way traffic flow with a two-way cycle lane on south side and parking retained on north side only.



Width 3: Laurelwood Avenue looking north. Two-way street with protected cycle track and parking retained on west side.





Key features

Idea C may be possible should future analysis indicate that traffic can be reduced still further to below 200 vehicles per hour (100 vehicles in each direction).

In this case, the lessened need for a protected cycle lane on those streets could introduce the opportunity for a Quiet Street design.

Quiet Streets use road narrowing, road surface and creative traffic calming features to give people of all ages confidence that they can cross the street and cycle on it without fear of traffic. We have shown some examples from other places and how the street widths could look on Laurelwood Avenue.

Typical features of this type of street include:

- Gateway features into the street, which can include artwork, trees and false one-way streets;
- Coloured carriageway surfaces to signal to drivers that they don't have priority;
- Speed cushions in the street to encourage people to cycle in the middle of the traffic lane;
- Central surface materials to discourage drivers from overtaking people cycling and control speed; and
- Defined parking bays.

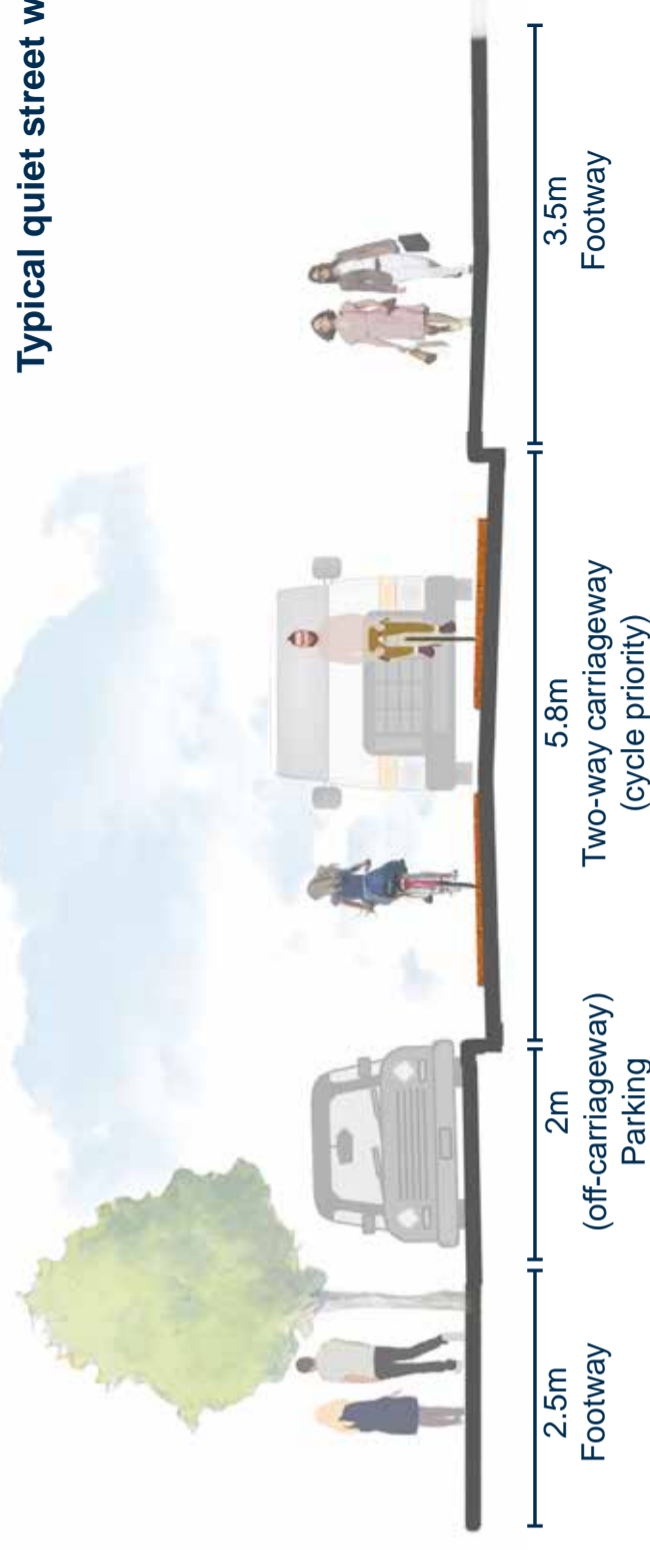
This situation could allow for the existing number of parking bays to be formalised and the possibility that the existing number of street trees can be retained or increased, because a protected cycle lane would not be required.

Idea C may be dependent on broader restrictions on traffic access and it may not be possible. However we would welcome your feedback on this idea to understand if this is something we should explore further as a possibility on Laurelwood Avenue and/or Ashgrove Road (between Laurelwood Avenue and Berryden Road)

Examples of Quiet Streets



Typical quiet street width



Overview

Thank you for taking the time to view the initial design ideas for Ashgrove Connects. We now encourage you to feedback to us on what you like and what you would change, combine or improve.

How you can get involved

You can feedback on the initial designs through the following activities:

- **Visit** the project website or display in Cornhill Library*
- **Join** the live webinar on Tuesday 28th June between 7-8pm to find out more
- **Drop-in** to Cairncry Community Centre, anytime between 10-1pm, or Westburn Outdoor Centre, anytime between 4-7pm, on Tuesday 5th July to meet the team. Refreshments will be provided

*Opening hours: Tuesday/Wednesday/Thursday/Saturday: 10-1pm and Tuesday/Wednesday/Thursday: 2-5pm

Please feedback before Sunday 17th July. Your feedback will steer the development of a concept design during the next stage of the project.



Cornhill Primary School Walking Audit

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Appendix C

Ashgrove Connects Business Case

Outline Business Case

Project Name	Ashgrove Connects		
Author	Liam Gleeson	Date	09/09/2022
Sponsoring Cluster	Capital	Version	1

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1. Introduction and Project Overview

1.1 Context

The existing Berryden corridor facilitates journeys between the city centre, the north of Aberdeen, and beyond. The Berryden Corridor Improvement (BCI) project will provide two lanes in both directions throughout the length of the corridor, widening the existing road between Skene Square and Ashgrove Road and creating a new road between Ashgrove Road and St Machar Drive. Alongside the new carriageway there will be segregated infrastructure for pedestrians and cyclists along the majority of its length. The BCI project will provide improved, continuous, and dedicated infrastructure for active travel modes along its length. This active travel infrastructure will provide a step change in provision, encouraging modal shift and improving perceptions of safety. It will also provide a significant opportunity to further expand the provision of high-quality infrastructure on the surrounding network connecting neighbourhoods to the city centre.

During the consultation process for the Berryden Corridor Improvement project it was highlighted that the proposed off-carriageway cycle infrastructure should extend further. This would allow the full benefits of the new infrastructure for cycle traffic to be achieved. It would provide continuity of provision for likely journeys, with a suggested link between the NHS Foresterhill Campus and the city centre cited as a specific example. Cycle infrastructure provided by the BCI project is being developed to address these demands on roads covered by the project, however, much of what was identified is outwith the BCI project's scope.

The connection routes identified as important to onward travel from the Berryden Corridor were:

- Kittybrewster Roundabout to Haudagain Roundabout (A96 Great Northern Road);
- Kittybrewster Roundabout to Tillydrone Avenue/ Diamond Bridge (St Machar Drive);
- Skene Square to City Centre; and
- Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West).

The Kittybrewster Roundabout to Haudagain Roundabout (A96 Great Northern Road) and Kittybrewster Roundabout to Tillydrone Avenue/ Diamond Bridge (St Machar Drive) routes will be considered as part of the Inverurie to Aberdeen Multi-Modal corridor transport study forming a part of the programme of work funded by the Transport Scotland Bus Partnership Fund.

The Skene Square to City Centre and Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West) routes are included Berryden Corridor Active Travel Connections Programme. The Berryden Corridor Active Travel Connections Programme has, in parallel with the BCI and with funding from Nestrans, considered options for the development of connections from BCI cycle infrastructure which would maximise active travel opportunities on the corridor, leveraging the maximum active travel benefits of the BCI project.

Berryden Corridor to Cornhill/ Foresterhill/ Mastrick (Ashgrove Road & Ashgrove Road West) route is also known as Ashgrove Connects for consultation and project purposes.

1.2 Project overview

This proposal is for the redesign of the streets of Ashgrove Road, Ashgrove Road West, Laurelwood Avenue and Elm Place from North Anderson Drive to Berryden Road.

The purpose of the scheme is to make Ashgrove Road, Ashgrove Road West, and Laurelwood Avenue work better for all ages and abilities of people who use these streets to move around their communities, to access employment and take advantage of leisure opportunities. The proposal intends to maximise the benefits of the Berryden Corridor Improvements (BCI) project in line with the roads hierarchy.

The scope of the proposal includes physical improvements on the streets between North Anderson Drive and Berryden Road (including some connecting side streets) and a behaviour change plan. Proposals include traffic speed reduction measures, protected cycling tracks, improved footways and crossing facilities, enhanced bus stop facilities, and placemaking and greenspace improvements.

1.3 Business case development

Ashgrove Connects will be funded by the public sector. Accordingly, Aberdeen City Council is required to prepare a business case which demonstrates that value for money is being achieved and that risks have been considered and are managed appropriately.

This business case has been prepared in accordance with HM Treasury Green Book guidance. This business case was prepared by Atkins on behalf of Aberdeen City Council.

2. Executive Summary

2.1 Project overview

During the consultation process for the Berryden Corridor Improvement project it was highlighted that for the full benefits of the new infrastructure for cycle traffic to be realised, the proposed off-carriageway cycle infrastructure should extend further, providing continuity of provision for likely journeys. Ashgrove Connects is one of four such extension opportunities currently being progressed to meet this demand.

Options for improvements to the transport network on Ashgrove Road and Ashgrove Road West and Laurelwood Avenue/ Elm Place, to connect the BCI proposals with Mastrick at North Anderson Drive have been assessed.

Designs have been developed to a feasibility level with initial design ideas presented to the public and stakeholders following options assessment against the design objectives. Following this, concept design proposals were prepared following community feedback and further detailed options assessment.

The key features of the proposals are:

- 20mph speed limit on Ashgrove Road and Ashgrove Road West;
- Reduced carriageway width and crossing distances;
- Continuous footways at side roads to provide design priority for pedestrians;
- One new controlled crossing of Ashgrove Road West;
- A net increase in the number of street trees and green infrastructure;
- Two new opportunities for public realm features as gateways into the community;
- Protected cycle tracks on Ashgrove Road West, Ashgrove Road between Westburn Drive and Laurelwood Avenue, Laurelwood Avenue, and Elm Place.
- Enhanced bus stop facilities and cycle bypasses of bus stops; and
- Reduction in available on street parking commensurate with providing for residential need where required.

Implementation alongside the BCI will seamlessly join the infrastructure together, creating a, much enhanced, cohesive active travel network for communities in the north of the city.

2.2 Costs and funding

The total capital cost of the project is estimated as £15.685 million, inclusive of optimism bias. If the project is progressed swiftly alongside the delivery of the Berryden Corridor Improvement, there is an opportunity for this cost to be fully met by external funding.

The source of third-party funding that this project is primarily aligned with is Transport Scotland/ Sustrans Places for Everyone fund. This offers 100% design funding and 70% construction funding. The next window for applications closes on 18th October 2022 for funding decisions in December 2022.

The project with aim to use the BCI as match funding to cover the remaining 30% construction funding provided the projects are delivered at least partly in the same construction year. This project is being prepared at pace to meet this requirement. Commencement BCI construction is currently targeted in 2023-24.

2.3 Strategic fit

The adopted policy framework in Aberdeen, through approved ACC commitments including the Local Outcome Improvement Plan, Local Transport Strategy, Active Travel Action Plan, Climate Change Plan, the Aberdeen Roads Hierarchy, Aberdeen City Central Locality Plan, and the Regional Transport Strategy, set a clear direction towards:

- More active travel, public transportation, and improved multi-modal accessibility;
- Locking in the benefits of strategic network changes by reducing traffic volumes and providing improved networks for walking, cycling and public transport;
- Greater prioritisation of space for people and community activities rather than traffic; and

- The need to take net zero and climate mitigation opportunities in all new schemes.

Ashgrove Connects has been developed in direct response to these policies. It will deliver on two relevant commitments in the adopted Active Travel Action Plan 2017-2021:

- To work towards a road network where all users are safe from the risk of being killed or seriously injured, and the injury rate is much reduced; and
- To ensure that all young people have the opportunity to travel to school by active and/or sustainable modes of transport and are equipped with the necessary knowledge, skills and infrastructure to allow them to undertake local journeys safely and independently.

2.4 Project benefits

Ashgrove Connects will deliver a wide range of health benefits as increasing walking and cycling trips is a cost effective and practical way to improve public health. There is a clear link between increased physical exercise and reduced risk of chronic conditions like type 2 diabetes, heart disease, many types of cancer, depression and anxiety, and dementia.

Health benefits will even accrue to people who do not travel using the new active travel infrastructure. An increased mode share to walking and cycling will improve air quality across the project area. This will complement the Council's LEZ (Low Emission Zone) strategy, which was developed in response to dangerous levels of air pollution (mainly nitrogen dioxide – NO₂) mostly caused by road traffic.

Ashgrove Connects will make the road a better place to live, work, study, and visit. It will improve the quality of the pedestrian environment and deliver new places to rest and dwell leading to amenity and recreational benefits along the project area. This will increase local levels of economic activity, boost property values, and make an area more attractive to potential investors.

Ashgrove Connects will facilitate more accessible neighbourhoods. Compact communities improve the accessibility of key amenities and services for non-motorised users. This will also allow people to travel actively in support of their health and well-being, without access being limited by the cost of transport.

Walking, wheeling, and cycling provide affordable and reliable transport. Investment in areas of multiple deprivation can promote differential equity impacts by improving access to services and employment opportunities for those on a low income. Further, projects which reduce car dependency may free up additional disposable income for impacted households.

Active travel projects encourage modal shift from the private car. By reducing the need to travel unsustainably, active travel projects can help meet transport planning objectives to reduce traffic congestion, energy consumption, and carbon emissions.

Finally, Ashgrove Connects will make active travel more safe, reliable, and, crucially, fun. Walking, wheeling, and cycling is already less stressful than driving, but improved infrastructure will enhance the quality of any journey and deliver enjoyment and wellbeing benefits to those who use it.

2.5 Deliverability and next steps

A number of package options were appraised for alignment with policy, objectives, and deliverability. The options considered ranged from do nothing (behaviour change and engagement only) to full implementation of the proposed scheme.

Full implementation (Option 2) offers the greatest maximisation of benefits and alignment with policy and objectives, particularly if delivered prior to or alongside the BCI utilising external funding.

At this stage, the preferred delivery mechanism is to implement the entire scheme at once. The Council is aspiring to deliver the full scheme and a phased implementation may risk existing funding arrangements. Careful project management will minimise any short-term disruption during the construction phase, and early design work will ensure appropriate interfaces with the BCI project.

Ashgrove Connects is still in its early phases of development. With technically feasible concept designs prepared, the next phase for the project is to develop a detailed design. The next step is to seek funding for further scheme development for Transport Scotland/ Sustrans Places for Everyone fund.

3. Strategic Fit

3.1 Overview

Ashgrove Connects is not specifically mentioned within the Local Outcome Improvement Plan (LOIP) 2016-26 (refreshed July 2021), however the benefits it will provide contribute directly and indirectly to many of the plan's desired outcomes.

The LOIP's stated collective vision is for Aberdeen to be a place where all people can prosper. It notes that how "we travel, shop...and our relationship with our place of work all provide us with opportunities to promote healthy lifestyles and make communities more self-sustaining. Giving citizens ready access to schools, amenities and employment could liberate them in new ways. Economic and environmental success must be translated into social success – lifting people out of poverty, offering equal opportunities for everyone to prosper."

The Project will contribute towards realising this vision by:

- Making active travel a viable mode of travel to access local schools, community amenities, medical services, and businesses in the immediate vicinity of Cornhill, Westburn, and Foresterhill.
- Providing a key strategic east-west link as part of a network of onward connections to the City Centre, Old Aberdeen, and the University of Aberdeen, Kittybrewster, Mastrick, Northfield and Sheddocksley.
- Extending the active travel network from the Berryden Corridor to North Anderson Drive, ensuring no gap in provision which may discourage travel.

This will help deliver low-cost travel options to education, employment, and services throughout the city.

In addition, bus stop waiting environments and facilities will be upgraded to improve the attractiveness of bus travel. Overall it is anticipated that the scheme will encourage more trips by active and sustainable transport modes and improve access, particularly for those without access to a car.

Prosperous Economy

The LOIP notes that, "...the city has strong economic foundations and should maintain its focus on repositioning for the long-term including investment in key infrastructure...". The active travel enhancements are such an investment. The Proposals support Stretch Outcomes 1-3: Stretch Outcome 1 - No one will suffer due to poverty by 2026, Stretch Outcome 2 - 400 unemployed Aberdeen City residents supported into Fair Work by 2026, and Stretch Outcome 3 - 500 Aberdeen City residents upskilled/ reskilled to enable them to move into, within and between economic opportunities as they arise by 2026. As a good transport network and infrastructure provision means anyone regardless of their social status/ economic means can choose a sustainable mode of travel for commuting. A reliable transport network supports economic growth and movement.

3.2 Prosperous Place

The LOIP notes that "The place where we live significantly influences the ability of individuals and communities to live in healthy, sustainable ways."

Improving active travel infrastructure can significantly influence the ability and desire for individuals to consider travelling in healthy sustainable ways. This is particularly the case when such measures can be implemented on a wider basis. At the same time, it can also reduce road congestion, climate change emissions, local toxic air pollution, noise, and road danger, improve social cohesion and create a better street environment.

Over the length of the corridor, Ashgrove Connects will provide improved, continuous, and dedicated infrastructure for active travel modes, improving the environment for active travel on a key route. The Project will contribute to Stretch Outcome 13 - Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate and Stretch Outcome 14 - Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.

Prosperous People (Children and Young People)

The LOIP notes that "We want Aberdeen to be a city where there is equality of outcomes and opportunities for all our children and young people and that children's circumstances and aspirations are not limited by their background or current environment."

Improving active travel infrastructure can significantly increase opportunities for people to walk or cycle for everyday journeys, providing free access to physical activity which can improve mental health and wellbeing through increased physical activity, contributing to Stretch Outcome 5.

Prosperous People (Adults)

The LOIP notes "...we need to ensure the right environment is also available to facilitate and support people to make the right behavioural choices." And "All people in Aberdeen are entitled to live within our community in a manner in which they feel safe and protected from harm." Segregated cycling and pedestrian facilities enables better decision making which leads to improved lifestyle choices in areas such as physical activity contributing to improved health and wellbeing. Reducing vehicular traffic and decreasing speed limits on the road network can also lead to a reduction of serious road traffic collisions. The Ashgrove Connects project supports Stretch Outcome 11 - Healthy life expectancy (time lived in good health) is five years longer by 2026. Encouraging the adoption of healthier lifestyles through the provision of active travel infrastructure.

4. Business Aims, Needs & Constraints

4.1 Strategic and policy context

The initial appraisal work is being sponsored by the Chief Officer of Strategic Place Planning. The Detailed design and construction phases will be sponsored by the Chief Officer of Capital.

The initial appraisal work has been funded by Nestrans. There is currently no dedicated budget for the next stages of work. The intention is that the Council will apply to the Transport Scotland/ Sustrans, Places for Everyone fund. The aim of Places for Everyone is to create safer, more attractive, healthier, and inclusive places which are enjoyed equitably by increasing and diversifying the number of trips made by walking or cycling for everyday journeys. It is funded by the Scottish Government through Transport Scotland and is administered by Sustrans. The fund can provide up to 100% of design work costs and 70% of the construction costs. The final 30% of construction costs need to be secured through match funding. Ongoing conversations with Sustrans are being held to determine if proposed BCI project infrastructure, already funded as part of the capital plan, can be considered as the Council match funding contribution. If applications are successful, all development and implementation costs will be met from external funders.

Adopted policies point towards a future direction for Aberdeen of more walking, cycling, bus travel and improved accessibility as well as local priorities for places where people activities have greater prominence. The Project is intended to support many local and regional strategies & plans and be delivered in line with current policies.

Table 1 below summarises the relevant aims of each of the reviewed local and regional policy documents and highlights how they support the strategic aims of Ashgrove Connects.

Table 1: Strategy & Policy Context Summary

Document	Summary of policy	Synergy with Ashgrove Connects
Local Outcome Improvement Plan 2016 to 2026 (2017, refreshed 2021)	The LOIP is a document which sets out how Community Planning Aberdeen will improve outcomes for and with local people and communities. The vision set out in the LOIP is that Aberdeen will be 'a place where all people can prosper' by 2026.	Links reduced car usage with various issues such as net zero, connectivity, and employment Sets percentage targets for increasing walking and cycling as main mode of travel by 2026
Climate Change Plan (2021)	The purpose of the Council climate change plan is to set out the Council's approach, pathway, and actions towards net zero and climate resilient Council assets and operations, by 2045. The plan sets out the scope of the City Council's ambitions with net zero and interim targets for a reduction in carbon emissions.	Sets out scope of ACC's net zero ambitions, with interim targets Note that Council General Fund Revenue Budget and Capital Programme has funding commitment for initiatives that will support development of net zero
Nestrans Regional Transport Strategy for the North East of Scotland (2021).	The RTS for the NESTRANS area is a statutory document covering Aberdeen City and Aberdeenshire Council areas. The RTS focusses less on the provision of new infrastructure and more on optimising infrastructure to influencing behaviours.	Aims include enhancing travel opportunities, reducing number and severity and casualties, increasing use of active travel, reducing proportion of journeys by car

NE Scotland Roads Hierarchy Study (2019)	The purpose of this document was to develop options for the updated roads hierarchy and to identify possible levels of intervention that could be implemented to support the delivery of the updated hierarchy.	Led to the reclassifying Ashgrove Road West as a C-class road / tertiary route
Local Transport Strategy (2016-2024) (2016)	The vision for the Local Transport Strategy (LTS) is to develop “a sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment”	Increase no. people walking / cycling / using public transport Improve public realm by prioritising pedestrians, cyclists, public transport
Aberdeen City Central Locality Plan 2021-26 (2021)	The plan links to the re-refresh of the City’s Local Outcome Improvement Plan (LOIP) which highlights the breadth of work taking place and aims to utilise our assets to their full potential by working together.	Identifies Ashgrove and Stockethill as priority neighbourhoods. Aims include creating employment opportunities, improving access to services, create opportunities for people to connect and increase physical activity
Aberdeen Active Travel Action Plan 2017-2021 (2017)	This Action Plan identifies the policies and design principles that Aberdeen City Council will abide by and a series of actions and interventions that will be pursued in order to increase the proportion of journeys undertaken in our City by active travel.	Delivers on the Council’s commitment to “identify and implement projects that prioritise sustainable transport movements in the City” and “ensure that new cycling infrastructure adheres to best practice guidelines”
Aberdeen Sustainable Urban Mobility Plan (2019)	Aberdeen City Council has developed a Sustainable Urban Mobility Plan (SUMP) for the city centre. A SUMP is a transport strategy for a specific area which identifies projects that could be delivered by the Council and partners to enable and encourage users of that area to travel on foot, bike, public transport, or other low-emission forms of transport more often.	Key principle is to lock in benefits of AWPR to prioritise movement of active and sustainable travel through the reallocation of carriageway space and other prioritisation and traffic management measures

The project could contribute to the delivery of the Council’s Local Transport Strategy, particularly the following objectives:

- *To implement a programme of road improvement schemes to complement the AWPR in order to facilitate a restructuring of the roads hierarchy, minimising through traffic in the City Centre whilst reducing congestion, improving connectivity and addressing air quality concerns;*
- *To improve the condition of the road, footway and cycle networks; and*
- *To foster a cycling culture in Aberdeen by improving conditions for cycling in Aberdeen so that cycling becomes an everyday, safe mode of transport for all.*

The project could contribute to the delivery of the Council’s Active Travel Action Plan, particularly the following policies:

- *Continue to identify and implement projects that prioritise sustainable transport movements in the City leading up to and following the opening of the Aberdeen Western Peripheral Route.*
- *Improve and increase pedestrian facilities in Aberdeen, including footways and appropriate crossing provision with all new road and road improvement schemes, as well as new footpaths, pedestrianised or part-pedestrianised areas and improved lighting of key pedestrian routes*
- *Improve and increase segregated cycling facilities in the City particularly where road conditions are likely to deter less confident cyclists.*
- *Ensure that new cycling infrastructure adheres to best practice guidelines identified in the Sustrans Handbook for cycle-friendly design, Transport Scotland’s Cycling by Design and, where relevant, the trunk road Design Manual for Roads and Bridges (DMRB).*

- *Continue to take advantage of external funding opportunities to implement and/or improve local and strategic walking and cycling routes within the City as they arise*

The project could also support the following Stretch Outcomes (SOs) within the Local Outcome Improvement Plan (LOIP):

- *SO11: Healthy life expectancy (time lived in good health) is five years longer by 2026.* Active travel can provide an opportunity to include exercise within an individual's daily route assisting them to achieve minimum recommended levels of physical activity for good health;
- *SO14: Addressing climate change by reducing Aberdeen's carbon emissions by 42.5% by 2026 and adapting to the impacts of our changing climate,* in that measures to increase active travel and public transport will also reduce carbon emissions; and
- *SO15: 38% of people walking and 5% of people cycling as main mode of travel by 2026,* in that it aims to improve opportunities and conditions for walking and cycling along the corridor.

The project could also support delivery of:

- Regional and National Transport Strategies, both of which aim to deliver fewer miles travelled by private car and a cleaner transport system which results in fewer emissions;
- The Net Zero Vision for Aberdeen, the Air Quality Action Plan, and the potential Low Emission Zone (LEZ) by looking to improve opportunities for travel by low/zero emission forms of transport.

A full policy review is presented in Appendix C of the Ashgrove Connects Scheme Assessment report.

The Project could also complement the delivery of other Council projects. These are summarised by Table 2 below.

Table 2: Complementary Projects

Project	Summary of project	Synergy with Ashgrove Connects
A944/A9119 multi-modal study	Improving active travel and public transport connections between Westhill and Aberdeen City Centre. The project focuses on the key western approaches to the city, the A944 and A9119 (formerly B9119) corridors, and other roads used by public transport services serving the west of the city, reflecting the status of these corridors within the North East Scotland Roads Hierarchy.	The Ashgrove Connects project area is a short distance from the A944. Delivering both projects will greatly increase the scale of the active travel network in Aberdeen, making it easier for pedestrians and cyclists to travel safely, comfortably, and sustainably.
Berryden Corridor Improvement	The Berryden Corridor Improvement will provide two lanes in both directions, widening the existing road between Skene Square and Ashgrove Road and creating a new road between Ashgrove Road and St Machar Drive. Alongside the new carriageway there will be segregated infrastructure for pedestrians and cyclists along the majority of its length	The proposal intends to maximise the network benefits of the Berryden Corridor Improvements scheme in line with the Roads Hierarchy. The project will improve the streets between North Anderson Drive and Berryden Road, including some connecting side streets.
A92 (S) Bridge of Don to Bridge of Dee multi-modal study	Aberdeen City Council is undertaking a STAG appraisal of options for improving transport connections, in particular public transport and active travel (walking, wheeling, and cycling) along and across the A92 corridor (Anderson Drive and the Parkway) between Bridge of Don and Bridge of Dee.	Ashgrove Road West links directly onto the A92, meaning each project could physically extend the improved active-travel environment of the other.
Low Emission Zone	To protect public health and improve air quality, Aberdeen City Council is introducing a Low Emission Zone (LEZ) across the city centre. Aberdeen's LEZ has been introduced in response to dangerous levels of air pollution (mainly nitrogen dioxide – NO2) mostly caused by road traffic.	One of the key objectives of the LEZ is to encourage active travel. The Ashgrove Connects project supports this objective by providing the necessary infrastructure to encourage residents to take up sustainable modes.

4.2 Case for Change

The Ashgrove Connects Scheme Assessment sets out the purpose of the project, why it is needed, and establishes a compelling case for change. The rationale for investment is multi-faceted and relates to:

- **Links to employment opportunities:** car ownership and travel to work data for the area surrounding the street suggests that there is an opportunity to improve employment opportunities for some residents by enhancing lower cost travel links to employment destinations.
- **Multiple deprivation:** the project streets is adjacent to some areas within the most deprived quintile of all areas in Scotland, as measured by the Scottish Index of Multiple Deprivation (SIMD). Interventions which target increases in active travel will have a disproportionately positive effect on communities experiencing health deprivation.
- **Placemaking:** the project area is disjointed and does not have one single identity. The look and feel changes a lot and there are no single typologies of housing or frontage to tie the area together. Placemaking opportunities exist in several locations. Some unused or underused greenspaces around Ashgrove Road West could be improved to offer opportunities for rest or play or will be used as small activity hubs around for example bus stops. Adding seating or informal opportunities to rest will also provide places to rest for people who want to walk but may not be physically able to do long routes without rest.
- **Transport network improvements:** existing provision for active travel is piecemeal and does not provide the opportunity for door-to-door walking, cycling, and wheeling. The project will provide better active travel solutions for all ages and abilities and unlock suppressed demand for these modes.

Ongoing community engagement has highlighted support for less motor vehicle traffic and at lower speeds. The lack of continuous provision for walkers, cyclists, and wheelers is well-recognised. The community is frustrated by difficulties accessing local amenities, and at the lack of action to respond to these issues to date.

4.3 Existing arrangements

Atkins has undertaken a preliminary review of existing arrangements along Ashgrove Road West. This has considered both the infrastructure conditions and network performance. This section summarises the key findings of this review. Further detail can be found in the Ashgrove Connects Scheme Assessment report.

Infrastructure conditions

The infrastructure conditions review sets out the existing engineering conditions along the Ashgrove Connects project area and explores design opportunities for enhancement. The existing arrangements are summarised by Table 3 below.

Table 3: Infrastructure conditions

<p>Walking provision</p>	<p>A footway is provided on both sides of most of the carriageway. There is limited provision between North Anderson Drive and Castleton Drive and the footways narrows on Ashgrove Road between Laurelwood Road and Great Northern Road.</p> <p>A pedestrian phase is provided at the signal-controlled junctions at North Anderson Drive with Ashgrove Road West, Foresthill Road with Ashgrove Road West, and Westburn Drive with Ashgrove Road West/ Ashgrove Road.</p>
<p>Inclusivity</p>	<p>There is limited provision for vulnerable or impaired pedestrians on the corridor. Dropped kerbs and tactile paving are provided at the signal-controlled junctions of Foresthill Road with Ashgrove Road West, and Westburn Drive with Ashgrove Road West/ Ashgrove Road. Outwith these locations dropped kerb provision is inconsistent, and tactile paving is not provided at the formalised uncontrolled crossings on either Ashgrove Road or Ashgrove Road West.</p>
<p>Cycling provision</p>	<p>Cycling provision is on-carriageway alongside vehicular traffic. On Ashgrove Road West there are sections of advisory cycle lane marked on both sides of the carriageway, approximately 1m wide. The cycle lanes are not continuous and are frequently interrupted by on-road parking bays.</p>
<p>Public transport</p>	<p>On Ashgrove Road West, six bus stops are provided. 5 are marked with a flag only with no shelter provided. At Cornhill Terrace, the eastbound bus stop has a cantilever shelter. No bus boarder kerbs to assist access/ egress of the bus by passengers. There are no bus laybys along the route.</p>

<p>Parking</p>	<p>Formalised cycle parking is provided at the University of Aberdeen Foresterhill Campus, the NHS Foresterhill Health Campus Hospital, and Aberdeenshire Council's Headquarters Woodhill House. Along Ashgrove Road / and Ashgrove Road West there is no formalised cycle parking provision.</p> <p>Ashgrove Road West is within the Controlled Parking Zone Z; therefore, all lengths of road are covered by a restriction or control. There is capacity for approximately 112 spaces within the marked lengths of parking.</p> <p>Parking in the bays is restricted to those in possession of a valid resident's permit, vouchers or have paid by phone; the same restrictions apply to every bay. Parking surveys showed that occupancy levels were low both during the day and in the evening.</p> <p>Parking on Ashgrove Road is prohibited between Westburn Drive and May Baird Avenue, and there are uncontrolled sections on the south side of the carriageway to the east of May Baird Avenue. Junctions are protected by 'no waiting at any time' restrictions. Overnight occupation was high, whilst daytime occupation was observed to reduce to 50%.</p>
<p>Alignment and cross section</p>	<p>The full route follows a generally straight alignment, although there is a gentle curve Ashgrove Road West between Foresterhill Road and Westburn Drive, however this is likely to be barely notable to road users and unlikely effects traffic speeds. The corridor follows a generally west – east orientation, although the western and eastern extents follow a more pronounced southwest – northeast orientation.</p> <p>The cross-section of the Ashgrove Road West is a two-lane single carriageway route which is subject to a 30mph speed restriction. However, the carriageway width varies between 11m – 13m, far in excess 6m – 7.3m width typical of a standard urban residential route. At signal-controlled junctions the carriageway is sub-divided into several lanes to separate designated movement.</p> <p>Similarly, Ashgrove Road, between Westburn Drive and Laurelwood Avenue is generally 9m – 10m, narrowing east of Laurelwood Avenue to 7m – 8m</p>
<p>Junctions and accesses</p>	<p>Five junctions are situated directly on the route. Ashgrove Road West forms priority junctions at least seven side roads excluding commercial, third party, unadopted, and residential accesses. No dedicated right turn facility is provided at priority junctions; however, this is unnecessary due to the road width. The majority of residencies alongside the road have private driveways accessed via footway crossovers. It is a similar situation with Ashgrove Road, where it also junctions with seven side roads.</p>
<p>Traffic signals</p>	<p>At North Anderson Drive, traffic is controlled by traffic signals. Ashgrove Road West is a minor arm. Two lanes are provided on the approach to the junction and two on the exit arm. Ashgrove Road West has a long central island which separates traffic flows. Traffic approaching from the north and turning left into the corridor, do so via a filter lane. Pedestrians are provided an all-green phase, however, due to the filter lane all crossings involve two stages.</p> <p>Foresterhill Road and Ashgrove Road West form a signal-controlled staggered crossroads. Like North Anderson Drive pedestrians have an all-green phase, which due to the complexity of the junction can take some time to appear.</p> <p>Westburn Drive is a typical signal-controlled crossroads, with an all-pedestrian phase. All controlled crossings are push button activated.</p>
<p>Lighting</p>	<p>Ashgrove Road West is illuminated by LED street lighting with columns provided on alternating sides of the carriageway at intervals of 30-40m and situated to the front of the footway. The bases of the columns are approximately 350mm by 400mm which significantly reduced the actual and effective footway widths. Furthermore, to allow a 450mm offset from the carriageway the posts can effectively impact approximately 1m of the footway cross-section.</p> <p>On Ashgrove Road the columns are mostly slender and generally situated in grass verges. Between May Baird Avenue and Laurelwood Avenue the columns were predominantly on the southern side of the carriageway and further east on the northern side. The footways are narrower at these locations therefore the columns are situated to the rear of the footway to minimise impacts on effective widths.</p>
<p>Drainage</p>	<p>Through the corridor, surface water is generally removed from the carriageway through carriageway edge drainage. Visually there appears to be a shallow camber applied to the road and footways gently fall towards the carriageway. No obvious SuDS provision was noted within the corridor.</p>
<p>Pavement</p>	<p>No cores or intrusive carriageway surface surveys have been undertaken. Visually the carriageway is constructed of asphalt. The condition is reasonable and most wear observed around patches and other localised carriageway works.</p>

Play and leisure

Along the corridor play and leisure facilities are limited to Beattie Avenue playpark, however there is considerable amount of outdoor space dedicated for play and leisure within a short distance of the corridor at Westburn and Victoria Parks.

Transport network

Ashgrove Road West is a wide two-lane single carriageway to the west of Aberdeen City Centre. It is positioned to the north of the A944 Westburn Road, the east of A92 North Anderson Drive and west of the A96 Great Northern Road. While it is not intended to serve an arterial / distribution function, its proximity to the key routes does make it vulnerable to through traffic.

Ashgrove Road West generally lies on a west – east axis and is generally residential in nature. The road also provides access to a number of health, civic and commercial properties. The road is subject to a 30mph restriction and situated within a Controlled Parking Zone.

Ashgrove Road is predominantly a wide single carriageway which narrows east beyond the Laurelwood Avenue side road junction. The western section of the road has minimal direct frontages, with residencies and health facilities setback via sideroads. The eastern side of the road is predominantly fronted by flatted residential properties.

Traffic flows

Summary data for automated traffic counter surveys suggests that traffic flows at the weekend are significantly lower than those during the week. Wednesday and Thursday tend to be the busiest days. Table 4 below presents the movements per day at three count sites, alongside the road hierarchy thresholds.

Table 4: Road hierarchy thresholds and traffic volumes

Mode	Movements per Day				
	Priority	Secondary	Site 1	Site 2	Site 3
Cars	> 10,000	> 3,000	6,269	9,674	5,760
Freight (LGVs / HGVs)	1,500+	> 450	503	889	369
Buses	100	< 100	114	27	0
Cycles	100	< 100	33	45	67

The observed movement for cars falls within the threshold for a secondary road, as do the freight movements at two of the three count sites. The bus movements would class just one of these sites as a priority route, one as a secondary, and no bus activity occurs at the third.

Speeds

Average speeds were observed to be in excess of the posted 30mph speed limit on Ashgrove Road West but were within the limit on Ashgrove Road. The 85th percentile speeds were observed to range between 32-35mph.

Parking

All of the marked bays on Ashgrove Road West fall within a controlled parking zone (CPZ) and are signed as “*Mon – Fri, 10am – 4pm, voucher parking and residents permits only*”. When surveyed, the majority of vehicles parking in the designated CPZ parking bays did so without the required permits, indicating that there is minimal enforcement of restrictions.

Two surveys of car parking occupancy were undertaken in April 2022, including one on a Tuesday and another on a Saturday. This suggests that there is excess capacity in the route corridor, with a maximum occupancy of just 55 of the 155 spaces (35.5%). Most of this excess capacity is due to the excess capacity along Ashgrove Road East, where demand appears to be primarily driven by employment uses. During the Tuesday morning peak, just 34 of the 112 spaces were occupied.

Complementary projects

Particular to the study area, key complementary schemes all aim to deliver improvements to bus operations and conditions for people walking, wheeling, and cycling as well as keeping strategic traffic on the routes intended for it:

- A96 Berryden Corridor Improvement (BCI),
- A96 Inverurie to Aberdeen Multi-Modal Corridor Study;
- A944 / A9119 Westhill to Aberdeen Multi-modal Corridor Study

- A92 Bridge of Don to Bridge of Dee Multi-modal Corridor Study

The A96 BCI scheme identified the need to develop strategically important cycle links along and across the road to maximise the mode shift benefits of the BCI investment as part of developing a network of connections. Delivery of these is outside the scope of the BCI project and are being developed separately by ACC. This scheme proposal is for one of these branches, and in full they are:

- St Machar Drive (Berryden Corridor to Tillydrone Avenue)
- Ashgrove Road & Ashgrove Road West (Berryden Corridor - Mastrick)
- Skene Square & Gilcomston Steps, (Berryden Corridor - City Centre)
- A96 Great Northern Road Berryden to Haudagain

Ashgrove Connects has been developed to complement all these schemes.

Business impact of project delivery

The Project will require input from staff across ACC including Strategic Place Planning, Operations, Estates, Capital, Procurement and Legal teams. Input will be required at different levels and different stages throughout. Such tasks will include, but are not limited to, land and property acquisition / management, contract document preparation and tendering, contract administration and site supervision as well as operational input / management upon delivery.

Constraints

Ashgrove Road West currently has a 12m wide carriageway with the restrictions located in the footways, trees, utility infrastructure, private property entrances. Working within the current carriageway boundaries allow for a number of opportunities due to the width available without having to deal with the constraints. These opportunities may include widening existing footways, introducing cycling facilities suitable for all ages and abilities, while achieving a reduction in carriageway width available to motor vehicles.

Ashgrove Road has a narrower 7.5m-9m wide carriageway with similarly located constraints within the footways. Due to the narrower carriageway opportunities are limited within the current width and would potentially require reduction to the space available on footways and verges. These options then must deal with the restrictions within the footways. The opportunities described above are still available within this zone, but the width restrictions would require trade-offs to be made between different uses of the street.

There are businesses and services located along the length of the corridor, key ones being the hospital, University of Aberdeen, the ambulance service, the Post Office, and the Spar. These all come with their own restrictions, primarily accessibility. They all require good and clear access for non-motorised, public vehicle and private vehicle users.

Historical restrictions are also located along the corridor with the Rosemount and Westburn conservation area being the only conservation area with a number of listed buildings within. There are a few other listed buildings out with that are in proximity to the corridor, though are unlikely to cause any restrictions to the current scope.

Table 5 below summarises other constraints which act on the project.

Table 5: Constraints

Topography	Ground levels along the corridor gently rise from the east extents of the corridor, where Ashgrove Road is approximately 38m above sea level, to a height of approximately 101m at North Anderson Drive. Ground levels to the south of the route corridor are either level or fall gently from the roadside. Land to the north of the corridor rises with varying degrees of severity. Ground level variations are less pronounced east of Westburn Drive.
Space	The corridor does not contain any obvious vacant brownfield space. There are significant areas of grassed land sited adjacent to the road corridor.
Flooding	The project area is situated outside of the flood risk area of any waterway in Aberdeen. The study area is susceptible to small, isolated areas of surface water flooding. The likelihood of river and surface water flooding across the study area is highly unlikely to adversely impact any proposed active travel route alignments.
Utilities	A C2 notification was issued to statutory undertakers and 13 confirmed they had apparatus within the corridor. Most significantly, Scottish Gas Networks maintain low and medium pressure gas mains below Ashgrove Road West and Ashgrove Road.

5. Objectives

The project has six interrelated objectives developed from their fit with policy and strategy, network requirements and demonstrable public demand:

Traffic: the street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.

Crossings and Junctions: using junctions and crossing is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.

Place Quality and Greenspace: the street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced and an overall net gain of 'green'.

Walking: people of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.

Cycling: people of all ages and abilities are able to move around by bicycle safely, comfortably, and independently.

Parking and Loading: provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.

6. Scope

6.1 Overview

A feasibility study has been undertaken considering the options for active travel, landscaping and placemaking and bus stop improvements along the route. As part of the Ashgrove Connects project, the community was approached with a blank canvas so that any design proposals could be directly influenced by those who live/work in the area and/ or use the route. Public, school children, and other stakeholder consultations online and face to face were undertaken and asked participants for their comments on the existing infrastructure and what improvements they would like to see.

Following the completion of the initial concept designs further consultations have been undertaken. The comments from both consultations were analysed and incorporated into the design where appropriate. The key features of the resulting proposals are:

- 20mph speed limit on Ashgrove Road and Ashgrove Road West;
- Reduced carriageway width and reduced crossing distances;
- Footway priority at minor side roads to provide design priority for pedestrians;
- One new controlled crossing of Ashgrove Road West;
- A significant net increase in the number of street trees and amount of green infrastructure;
- Two new opportunities for public realm features as gateways into the community;
- Protected cycle tracks between North Anderson Drive and Berryden Road (BCI) on Ashgrove Road West, Ashgrove Road, Laurelwood Avenue and on Elm Place.
- Enhanced bus stop facilities; and
- Reduction in available on street parking commensurate residential demand.

In all cases the Emergency Services have been consulted and the Ambulance Service in particular has responded constructively. Their contribution has informed the proposals.

6.2 Ashgrove Road West

The proposed movement corridor between North Anderson Drive and Westburn Drive consists of a central carriageway with segregated stepped cycle tracks, footways and interspersed greenspaces. The width of the carriageway is shown significantly reduced to underline the change to a 20mph zone.

All existing driveways and accesses have been accommodated in the concept design.

No on-street parking will be permitted, and a TRO will be advanced to enforce this.

In all cases the Emergency Services have been consulted and the Ambulance Service in particular has responded constructively. Their contribution has informed the proposals.

There are three key junctions on Ashgrove Road west that the proposals intend to improve.

6.3 North Anderson Drive signal-controlled junction

The preferred concept design is to retain signal-control, with the addition of cycle track crossings and upgraded pedestrian crossings to comply with guidance and standards:

- Parallel cyclist and pedestrian crossings;
- Uni-directional cycle tracks on the Ashgrove Road arm;
- A bi-directional cycle track on the west side of North Anderson Drive (pending tie-ins with the A96 multi-modal study);
- Removal of the left turn filter lane to discourage high speed through traffic onto Ashgrove Road;
- Retention of the two lane exit of Ashgrove Road in response to Emergency Service consultation;
- A community 'gateway' public realm area to the north-east side of the junction;

- All traffic movements are retained.

This option may require some increase in overall carriageway footprint.

6.4 Foresterhill Road/ Foresterhill Junction

Two concept design options have been progressed for further assessment at Stage 3 design. These options are a staggered signal controlled junction and a double compact roundabout design.

Staggered Signal-controlled junction option

This proposal is to retain signal-control with the following changes:

- Parallel cyclist and pedestrian crossings;
- Uni-directional cycle tracks on the Ashgrove Road arms;
- Removal of the filter lanes to simplify and improve junction operation;
- Reduction of pedestrian crossing distances;
- All traffic movements are retained.

This option can be delivered within the existing carriageway footprint.

Double Compact Roundabout option

This option proposes to convert this junction into a double compact roundabout with the following features:

- Conversion of the Foresterhill Road and Foresterhill junctions into two roundabouts;
- Parallel cyclist and pedestrian zebra crossings on all arms;
- Uni-directional cycle tracks on the Ashgrove Road arms;
- All traffic movements are retained.

This option will require some land purchase to the south of Ashgrove Road.

6.5 Westburn Drive Junction

Two concept design options have been progressed for further assessment at Stage 3 design. These options are a signal controlled junction and a compact roundabout design.

Signal-controlled junction option

This proposal is to retain signal-control with the following changes:

- Parallel cyclist and pedestrian crossings;
- Uni-directional cycle tracks on the Ashgrove Road arms;
- Reduction of pedestrian crossing distances;
- All traffic movements are retained.

This option can be delivered within the existing carriageway footprint.

Compact Roundabout option

This option proposes to convert this junction into a compact roundabout with the following features:

- Conversion of the junction into a roundabout;
- Parallel cyclist and pedestrian zebra crossings on all arms;
- Uni-directional cycle tracks on the Ashgrove Road arms;
- All traffic movements are retained.

This option will require some land purchase to the south-east and north-east of Ashgrove Road.

6.6 Ashgrove Road (Westburn Drive to Laurelwood Avenue)

The proposed movement corridor between Westburn Drive and Laurelwood Avenue consists of a central carriageway with segregated stepped cycle tracks, footways and interspersed greenspaces. The width of the carriageway is shown significantly reduced to underline the change to a 20mph zone.

The proposal includes for uni-directional cycle tracks between Westburn Drive and May Baird Avenue. Between May Baird Avenue and Laurelwood Avenue the cycle track will be bi-directional on the south side of the carriageway only.

All existing driveways and accesses have been accommodated in the concept design.

On-street parking will be permitted in nine bays on the north side of the carriageway. A TRO will be required to supersede the existing order.

6.7 Ashgrove Road (Laurelwood Avenue to Berryden Road)

The proposed movement corridor between Laurelwood Avenue and Berryden Road consists of a central carriageway of no narrower than the existing movement space .

The design proposes two pinch points to control traffic speed, with the addition of trees within the design.

All existing driveways and accesses have been accommodated in the concept design.

On-street parking will be permitted in 11 bays in total, alternately on the north side and south side of the carriageway. A TRO will be required to supersede the existing order.

The design will tie into the emerging Berryden Corridor Improvement design at Ashgrove Road/ Berryden Road junction.

6.8 Laurelwood Avenue

The proposal is to facilitate active travel and reduce through traffic volume and speed on Laurelwood Avenue with the following changes:

- changing it to a 3.7m wide one-way southbound only lane for vehicular traffic;
- a bi-directional cycle track on the west side of the carriageway;
- enhanced traffic calming measures and pedestrian crossing opportunities within the street

All existing driveways and accesses have been accommodated in the concept design.

On-street parking will be permitted in 20 bays on the east side of the carriageway.

A TRO will be required to supersede the existing order.

6.9 Elm Place

The proposal is to facilitate active travel and reduce through traffic volume and speed on Elm Place by introducing a bi-directional cycle track on the north side of the carriageway between Laurelwood Avenue and Berryden Road.

All existing driveways and accesses have been accommodated in the concept design.

6.10 Materials, Placemaking, landscape, drainage and trees

The concept design identifies the following opportunities:

- Space to develop placemaking and landscaping approaches to create a consistent look and feel for the streets;

- From discussions with ACC Operations it is understood that there are emerging materials palette policies that this project should be cognisant of to maintain city-wide consistency;
- There may be sustainable urban drainage opportunities for some of those landscaped areas to be delivered as rain gardens to capture run-off and discussions with ACC Flooding and Coastal Engineering are at an early stage and should continue at Stage 3 design;
- Overall there will be a significant net gain in trees and landscaped area;
- Strong community support was forthcoming, partly due to the holistic approach to design. This should be built upon as the proposals develop.

6.11 Handover period

Design and construction services will likely be procured from the private sector. The contract terms will include the requirement to engage effectively to ensure that the infrastructure handover is in line with the requirements of ACC Operations to ensure ongoing maintenance costs are in line with expectations for public infrastructure.

6.12 Success criteria

Success criteria for the project will be:

- Delivery of the scheme within the construction window of the Berryden Corridor Improvement;
- Delivery at no additional cost to the Council
- Continued community support for the emerging design;
- More people of all ages walking, cycling, wheeling and taking the bus;
- Lower speeds and no increase through traffic on inappropriate routes ;
- Enhanced community wellbeing, health outcomes and low cost access to employment.

6.13 Out of Scope

The following items are out of the scope of the proposed Project:

- Increase in general traffic capacity
- Amendments to the BCI design
- Follow on cycle route infrastructure outside of the project area

7. Options Appraisal

7.1 Option 1 – Do Nothing

Description	No change to junction and link capacity on Project roads.
Expected Costs	No significant capital investment will be required. Routine investment in the roads and landscape maintenance of existing infrastructure will likely be necessary.
Expected Benefits	The main benefit of this option is reduced expenditure and network disruption associated with construction.

Risks Specific to this Option	<p><u>Should the Project be delayed or stopped:</u></p> <ul style="list-style-type: none"> • Risk of continuation of current mode share, contributing to local authority area emissions. • Risk of reputational damage given the involvement with the public. • The Council will also suffer reputational damage considering the level of expenditure incurred to develop the Project to its current position.
Advantages & Disadvantages	<p>The main advantage of this option is no immediate no public capital expenditure and short-term disruption associated with construction.</p> <p>The main disadvantages of this option are the lack of improvement to existing infrastructure and the lack of improvement to the wider active travel network. The gap in provision identified during the BCI consultation process would remain, discouraging active travel journeys. Traffic volume and speed would continue to be issues for the local community.</p> <p>Without the Project's dedicated active travel infrastructure, walking and cycling will continue to be unattractive modes of travel through the northern network. This will impact on the authority's ability to meet outcome 14 of the LOIP. (Increase sustainable travel:38% of people walking and 5% of people cycling as main mode of travel by 2026).</p>
Other Points	N/A

7.2 Option 2 – Full implementation	
Description	Detailed development and full implementation of the Project.
Expected Costs	£15.685 million (see section 9)
Expected Benefits	<p>This option would significantly improve the streets of Ashgrove Road, Ashgrove Road West, and Laurelwood. This area will be better for people of all ages and abilities who use these streets to move around their communities, to access employment and take advantage of leisure opportunities. The proposal intends to maximise the benefits of the Berryden Corridor Improvements (BCI) scheme in line with the Roads Hierarchy.</p> <p>It will also improve and extend active travel links on a wider network basis. There are significant existing junction capacity issues and gaps in the provision of facilities for pedestrians and cyclists, particularly along the Project corridor. The Project goes some length to reduce these gaps.</p> <p>The Project will significantly extend the active travel network in the north of the city. It will link the infrastructure delivered through the BCI scheme westwards towards North Anderson Drive. Over the length of the Project will be continuous and dedicated infrastructure for active travel modes.</p> <p>The improved standard of design will increase road user safety and the perception of safety along the corridor. This is particularly the case for people who do not currently feel that cycling is a safe or viable mode of travel.</p>
Risks Specific to this Option	<ul style="list-style-type: none"> • Lack of internal resources could lead to a delay in the delivery programme or increase reliance on external support which will increase costs. • Normal construction risks apply which include but are not limited to the risk of contractual claims arising from unforeseen events on site which may lead to contract cost increases. • Construction price inflation associated with the COVID-19 pandemic increases/ sustained in the medium term increasing works costs.

Advantages & Disadvantages	<p>Provides improved, continuous, and dedicated infrastructure for active travel modes.</p> <p>Improves connectivity for pedestrians and cyclists living and traveling through the north of the city.</p> <p>Improves road user safety and the perception of safety along the corridor.</p>
Other Points	N/A.

7.3 Option 3 – Phased implementation

Description	<p>As Option 2, but the project will be delivered in two phases alongside the BCI.</p> <p>Improvements at Ashgrove Road, Laurelwood Avenue, and Elm Place would be delivered first. Following this, the improvements at the east end of the study area between Westburn Drive and Berryden Road would be implemented.</p>
Expected Costs	<p>The project costs in section 9 suggest an estimate of £15.685 million for a full implementation. A phased implementation is highly likely to be more costly due to the additional preliminaries and fees involved.</p>
Expected Benefits	<p>This scheme may enable faster delivery of the eastern portion of the scheme. This would complement the BCI scheme and respond to community priorities alongside BCI implementation.</p> <p>There is potential to make the delivery of the second phase conditional on the benefits realisation of the first.</p>
Risks Specific to this Option	<ul style="list-style-type: none"> • Lack of internal resources could lead to a delay in the delivery programme or increase reliance on external support which will increase costs. • Normal construction risks apply which include but are not limited to the risk of contractual claims arising from unforeseen events on site which may lead to contract cost increases. • Construction price inflation associated with the COVID-19 pandemic increases/ sustained in the medium-term increasing works costs. • A longer overall delivery period may risk value for money and benefits realisation. • Longer delivery timescales may risk funding options
Advantages & Disadvantages	<p>As this option is delivered through two smaller works packages, it has the advantage of being easier to manage by the Council's internal programme management team. However, it is envisioned that much of the project will be funded and managed externally, negating the benefits of this somewhat.</p> <p>Splitting the works package into two may make this option more flexible should the interface with the BCI contract require combining the contract with the eastern phase of Ashgrove Connects.</p> <p>This option has the disadvantage of representing a change in scope relative to existing Places for Everyone funding applications. Potential reductions in scope and increase in timescales may risk external funding of the project.</p>
Other Points	As per Option 2

7.4 Option 4 – Do Minimum	
Description	Detailed development and implementation of only the eastern portion of the Project, between Westburn Drive and Berryden Road.
Expected Costs	Costs have not been estimated in detail. It is anticipated this would cost in the range of £5 - £10 million.
Expected Benefits	This option would complement the BCI scheme and respond to community priorities alongside BCI implementation. This option would improve the streets between Westburn Drive and Berryden Road. This area will be slightly improved for people of all ages and abilities who use these streets to move around their communities, to access employment and facilities to the south and east.
Risks Specific to this Option	<ul style="list-style-type: none"> • Risk of reputational damage resulting from the reduction in scope given the involvement with the public and that cycling infrastructure is disjointed and not coherent; • Future delivery of the Ashgrove Road West section will not be linked to delivery of the BCI. This will remove the opportunity to secure match funding alongside Sustrans Places for Everyone fund, increasing delay and cost to ACC; • Normal construction risks apply which include but are not limited to the risk of contractual claims arising from unforeseen events on site which may lead to contract cost increases; and • Construction price inflation associated with the COVID-19 pandemic increases/ sustained in the medium term increasing works costs.
Advantages & Disadvantages	<p>The primary advantage of this option is reduced public capital expenditure. It would also be simpler to deliver than the full scheme. The reduced scope would still meet key objectives around BCI integration.</p> <p>It is likely that this option could still attract external funding, however match funding against the BCI would not be possible, potentially resulting in additional public expenditure.</p> <p>This option would fail to connect the residential communities in the western end of the project area and beyond, missing the opportunity for the most significant benefits of the scheme. It would omit key destinations from the active travel network, including the Royal Infirmary, businesses, local parks, schools, and communities around Cornhill. The active travel network would remain fragmented. This option would forego opportunities to connect with future schemes at North Anderson Drive and the A944.</p>
Other Points	During this stage of project development, consideration was given to other approaches to the partial delivery of the Project. The most logical of these is the delivery of the eastern end of the scheme only, described above.

7.5 Recommendation
<p>This business case considers the options for continued development and implementation of the preferred option for the Ashgrove Connects project, including a refreshed cost estimate and programme.</p> <p>This business case has highlighted the Project's sustained linkage to the Authority's strategies, policies & plans, progress made to date, high levels of anticipated operation, and a wide range of health, social, and economic benefits.</p> <p>The new active travel and community-focussed infrastructure will provide a step change in provision encouraging model shift and improving perceptions of walking, cycling and wheeling safety for all ages and abilities. It will also provide a significant opportunity to further expand this quality of provision on the surrounding network connecting neighbourhoods in the north of the city.</p>

It is recommended that Option 4 – Do Minimum is discounted. While it represents a deliverable scheme which could attract external funding, it fails to extend the benefits of the BCI scheme fully westward to the residential communities along Ashgrove Road West. It would leave a gap in the active travel network and forego the opportunity to connect with future schemes at North Anderson Drive and the A944. Although the cost is lower, the current availability of external funding means that full implementation will be capital cost-neutral for the Council. Whereas in this scenario the future funding of the west of the site will be significantly less certain and is likely to cost the Authority more. This negates the primary benefit of this option.

It is recommended that Option 2 be selected as the preferred delivery mechanism with the Ashgrove Connects project implemented in full and through one works contract. In this option the estimated cost of the scheme is lower as the construction works will be procured as a single contract. Furthermore, potential reductions in scope and increase in timescales associated with Option 3 may risk external funding of the project.

As the design process progresses, this may be reconsidered should a phased implementation provide significant advantages.

8. Benefits

8.1 Overview of active travel benefits

Ashgrove Connects will make the road a better place to live, work, study, and visit. While primarily a roads scheme, the Project is also a placemaking one. The pedestrian environment – including pavements, paths, and squares – make up a lot of the public realm. By improving the quality of this area, and by delivering new places to rest and dwell, Ashgrove Connects will deliver amenity and recreational benefits along the corridor. Public realm improvements have been shown to increase local levels of economic activity, boost property values, and make an area more attractive to potential investors.¹

ACC is seeking to deliver on local and national commitments to accessible neighbourhoods.² Compact communities improve the accessibility of key amenities and services for non-motorised users. This would also allow people to travel actively in support of their health and well-being, without access being limited by the cost of transport.³

Walking, wheeling, and cycling provide affordable and reliable transport.⁴ Investment in areas of multiple deprivation can promote differential equity impacts by improving access to services and employment opportunities for those on a low income. Further, projects which reduce car dependency may free up additional disposable income for impacted households.⁵

There are also wider benefits of the scheme which need to be considered. Such impacts are increasingly given greater weight in transport policy. The Scottish Government's new *National Transport Strategy* places walking and wheeling at the top of the sustainable transport hierarchy, followed directly by cycling.⁶

Active travel projects encourage modal shift from the private car. By reducing the need to travel unsustainably, active travel projects can help meet transport planning objectives to reduce traffic congestion, energy consumption, and carbon emissions.⁷ The *Council Climate Change Plan 2021 – 2025* states that ACC will promote active travel for these reasons to help tackle the climate emergency.⁸ Encouraging people to walk and cycle also means lower roads maintenance costs to the Council,⁹ as well as fewer accidents and collisions.

The health benefits of active travel are well-established. Increasing walking and cycling trips is a cost effective and practical way to improve public health as it gets more people out exercising more often.¹⁰ GPs in some parts of the UK are now prescribing walking and cycling to patients as a way to improve public health and reduce costs to the NHS.¹¹ There is a clear link between increased physical exercise and reduced risk of chronic conditions like type 2 diabetes, heart disease, many types of cancer, depression and anxiety, and dementia.

Health benefits will even accrue to people who do not travel using the new active travel infrastructure. An increased mode share to walking and cycling will improve air quality across the project area. This will complement the Council's LEZ (Low Emission Zone) strategy, which was developed in response to dangerous levels of air pollution (mainly nitrogen dioxide – NO₂) mostly caused by road traffic.

¹ Living Streets (2018). *The Pedestrian Pound: the business case for better streets and places*.

² The Scottish Government committed to this concept in the *2020-21 Programme for Government*.

³ ClimateXChange (2021). *walkable and cyclable neighbourhoods in a Scottish context*.

⁴ World Health Organisation (2022). *Walking and cycling: latest evidence to support policy-making and practice*.

⁵ Scottish Government (2022). *Reducing car use for a healthier, fairer, and greener Scotland*.

⁶ Scottish Government (2020). *National Transport Strategy*.

⁷ Christian Brand, et al. (2022). *The Climate Change Mitigation Effects of Daily Active Travel in Cities*

⁸ Aberdeen City Council (2021) *Council Climate Change Plan 2021 – 2025*.

⁹ Relative to the equivalent journey by car. See: Todd Litman (2016), *Transportation Cost and Benefit Analysis Guidebook*, Section 5.6.

¹⁰ Scottish Government (2019). *National Walking Strategy: Action Plan 2016-2026*.

¹¹ HM Government (2022). *Walking, wheeling and cycling to be offered on prescription in nationwide trial*.

Finally, projects like Ashgrove Connects make active travel more safe, reliable, and, crucially, fun. Walking, wheeling, and cycling is already less stressful than driving,¹² but improved infrastructure will enhance the quality of any journey and deliver enjoyment and wellbeing benefits to those who use it.¹³

The wide range of benefits anticipated through the Ashgrove Connects scheme is summarised below.

Community impacts	<ul style="list-style-type: none"> • Enables walkable and cyclable neighbourhoods • Greater accessibility of amenities and services • Differential equality impacts for people on low incomes • Reduced car dependence 	Amenity value and public realm	<ul style="list-style-type: none"> • Improved accessibility for non-motorised users • Transport cost savings • Open space preservation • Improved quality of life
Modal shift from the private car	<ul style="list-style-type: none"> • Reduced carbon emissions • Reduced traffic congestion • Lower road maintenance costs • Fewer road accidents • Improved local air quality - reduction in congestion and polluting fumes 	Health impacts	<ul style="list-style-type: none"> • Higher levels of physical activity • Improved health • Fewer sick days – economic growth • Reduced costs to the NHS • Less likelihood of serious road traffic collisions
Journey quality benefits	<ul style="list-style-type: none"> • Improved user convenience, comfort, and safety • Enjoyment and wellbeing impacts 		

Ashgrove Connects will have further benefits specific to Aberdeen given the synergies between it, the BCI project, the CCMP, and other complementary initiatives. The Project will help extend the active travel network delivered by other public investments, making it easier to get to and from many different places in the city. It will therefore maximise the benefits of committed investment at Berryden.

¹² Alexander Legrain, Naveen Eluru, and Ahmed M. El-Geneidy (2015). *Am Stressed, Must Travel: The Relationship between Mode Choice and Commuting Stress*

¹³ Leonhard K. Lades, Andrew Kelly, and Luke Kellehera (2020). *Why is active travel more satisfying than motorized travel? Evidence from Dublin.*

8.2 Monetising active travel benefits

Active travel, walkable and cyclable neighbourhoods, and the sustainable transport hierarchy have been established as policy priorities by the Scottish Government. A wealth of academic and grey literature supports this view, demonstrating the net positive impact of related projects at a macro level. ACC has accordingly focused on how best to deliver on these priorities by consulting our communities and businesses and designing schemes to a high quality, rather than directing resource to indicative monetary estimates.

Transport appraisal guidance in Scotland and the UK focuses largely on motor traffic. The primary benefits of transport investments, in the view of transport economists, are journey time savings. Such savings are valued because they allow more productive work to be carried out or more leisure to be enjoyed, at least in the short-run.¹⁴ Consequently, there has been little space, historically, for the ‘slow modes’ – as walking, wheeling, and cycling were once described.

The UK Department for Transport (DfT) has now developed an approach for active travel schemes.¹⁵ This allows the health benefits of walking and cycling to be considered, and benefit–cost ratios for such schemes can be much higher than for conventional road improvements.¹⁶ Yet such appraisals rely on resource-intensive demand forecasts which are inherently uncertain. The DfT notes that due to relatively low scheme costs, cost-benefit analysis is highly sensitive to the findings of these forecasts.¹⁷

This points to the paradox in active travel appraisal. The extensive evidence base – government policy, academic literature, and climate and health data – all point to the benefits of sustained investment in active travel schemes. At the same time, evidencing the benefits of a specific scheme is resource intensive and fraught with uncertainties. Decision makers across Europe have often therefore relied on the larger evidence base alone to make the case for local cycling schemes. The focus is often instead on the outcomes which will contribute to wider mode shift at regional or national levels.

For example, the Parisian municipal government published its *Plan Vélo 2021-2026* in December 2021.¹⁸ The new plan aims to make the city ‘100% cyclable’ by constructing over 112 miles of segregated cycle lanes. The city committed to this €250 million investment in cycling infrastructure but has chosen not to advance a traditional cost-benefit analysis to justify this investment. Instead, the positive impact of cycling was established at a national level by the French government.¹⁹

Similarly, Copenhagen has excellent cycling infrastructure with segregated cycle lanes on every main road. Over a quarter (28%) of all trips and almost half (49%) of commutes to work or education were taken by bike in 2018.²⁰ At the publication of its first bicycle account in 1996 and later when the city launched its ambitions to become the “best cycling city of the world” in 2006, no cost-benefit analysis underpinned the business case for cycling infrastructure.²¹ Instead, the city has focused on directly measurable indicators, such as trip numbers, the length of the cycle network, and budget allocations, as well as regular surveys of cyclists.²²

¹⁴ David Metz (2016). *Travel Fast or Smart?: A Manifesto for an Intelligent Transport Policy*. London Publishing Partnership.

¹⁵ Department for Transport (2020). *TAG UNIT A5.1 Active Mode Appraisal*.

¹⁶ Department for Transport (2014). *Value for Money Assessment for Cycling Grants*

¹⁷ Department for Transport (2020). *TAG UNIT A5.1 Active Mode Appraisal*. para. 2.1.4.

¹⁸ Ville de Paris (2021). *Plan Vélo 2021-2026*.

¹⁹ République française (2021). *Impact économique et potentiel de développement des usages du vélo en France en 2020*.

²⁰ City of Copenhagen (2019). *The Bicycle Account 2018*.

²¹ COWI (2009). *Economic evaluation of cycle projects - methodology and unit prices*.

²² City of Copenhagen (2011). *Good, Better, Best The City of Copenhagen's Bicycle Strategy 2011-2025*.

Oslo undertook extensive consultation before the publication of its city cycling strategy in 2015.²³ Once again, instead of focusing on notional benefits derived from models, the city is targeting measures around travel behaviour, journey quality, and user safety. Regular surveys of the communities affected forms an integral part of monitoring and evaluation, rather than ex post measurements of economic impact.²⁴

This approach can even be found in the UK. The Mayor of London introduced the Mini-Hollands scheme in 2013. Here, outer London Boroughs were invited to bid for funding to build Dutch-style cycling infrastructure.²⁵ Waltham Forest constructed 14 miles of segregated cycling paths and introduced extensive traffic calming and mixed mode crossing. The Borough's bid to the Greater London Assembly makes no mention of monetised benefits, instead outlining the likely qualitative benefits of the scheme and committing to monitoring trip and accident data.²⁶ The other successful bids did include monetised assessments, however, here again, community impacts / improved quality of life benefits were considered prominently in both cases.²⁷

8.3 Anticipated scheme benefits

The table shows the anticipated benefits of the scheme how these will progress its design objectives.

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Slower, quieter, and calmer street where traffic access is retained by people feel safer, and traffic is less of a barrier to community activity.	<ul style="list-style-type: none"> • Vehicle movements by street and vehicle class • Vehicle speeds • Rate of traffic collisions and casualties • Parking demand, duration, and occupancy, by vehicle class, by road and type of parking facility 	<ul style="list-style-type: none"> • Stage 3-4 engagement feedback • Post-construction online/household surveys. • Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> • Stage 1-2 TSV surveys • Road collision statistics to-date • Stage 1-2 engagement feedback • Baseline walking audits • Scottish Transport Statistics • DFT Traffic Counts • Cycling Scotland Data 	<ul style="list-style-type: none"> • Community impacts • Health impacts 	At least six months after scheme completion	Annually
People of all ages and abilities will more easily walk to access facilities	<ul style="list-style-type: none"> • % of Walking/wheeling travel mode share • % of Walking/wheeling travel for recreation / leisure trips 	<ul style="list-style-type: none"> • Stage 3-4 engagement feedback • Engagement and findings of Behavioural Change Plan 	<ul style="list-style-type: none"> • Stage 1-2 active travel surveys • Road collision statistics to-date 	<ul style="list-style-type: none"> • Community impacts • Health impacts 	At least six months after scheme completion	Annually

²³ Oslo kommune (2015). *Oslos sykkelstrategi 2015-2025*

²⁴ Oslo kommune (2021). *Holdningsundersøkelse om å sykle Oslo 2020*

²⁵ Mayor of London (2016). *Transforming cycling in outer boroughs: Mini-Hollands programme*

²⁶ Waltham Forest Council (2013). *Mini-Holland bid*.

²⁷ Enfield Council (2013). *Mini-Holland bid report*; Royal Borough of Kingston upon Thames (2014). *Kingston mini-Holland Programme outline business case*

safely, comfortably, and independently	<ul style="list-style-type: none"> Walking/wheeling journey times to local facilities % of short journeys made by walking/active travel modes Distance of walking trips Public awareness of active travel modes Perceived barriers to active modes Perceived journey quality for active modes 	<ul style="list-style-type: none"> Post-construction online/household surveys. Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> Stage 1-2 engagement feedback Baseline walking audits Scottish Transport Statistics DFT Traffic Counts Cycling Scotland Data 	<ul style="list-style-type: none"> Journey quality benefits Modal shift benefits 		
People of all ages and abilities will be able to move around by bicycle safely, comfortably, and independently.	<ul style="list-style-type: none"> % of Cycle travel mode share % of Cycling travel for recreation / leisure trips Cycle journey times to local facilities % of short journeys made by cycling/active travel modes Distance of cycling trips Public awareness of active travel modes Perceived barriers to active modes Perceived journey quality for active modes 	<ul style="list-style-type: none"> Stage 1-2 active travel surveys Road collision statistics to-date Stage 1-2 engagement feedback Baseline walking audits Scottish Transport Statistics DFT Traffic Counts Cycling Scotland Data Hands up Scotland Survey 	<ul style="list-style-type: none"> Stage 3-4 engagement feedback Engagement and findings of Behavioural Change Plan Post-construction online/household surveys. Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> Community impacts Health impacts Journey quality benefits Modal shift benefits 	At least six months after scheme completion	Annually
Using junctions and crossings will be an easier	<ul style="list-style-type: none"> % active travel mode share 	<ul style="list-style-type: none"> Stage 1-2 active travel surveys 	<ul style="list-style-type: none"> Stage 3-4 engagement feedback 	<ul style="list-style-type: none"> Community impacts 	At least six months after	Annually

and more comfortable experience	<ul style="list-style-type: none"> • Walking/wheeling journey times to local facilities • % of short journeys made by walking/active travel modes • Perceived barriers to active modes • Perceived journey quality for active modes • Queueing and delays at junctions. • Vehicle journey time reliability 	<ul style="list-style-type: none"> • Road collision statistics to-date • Stage 1-2 engagement feedback • Baseline walking audits • Scottish Transport Statistics • DFT Traffic Counts • Cycling Scotland Data 	<ul style="list-style-type: none"> • Post-construction online/household surveys. • Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> • Health impacts • Journey quality benefits • Modal shift benefits 	scheme completion	
The street will feel more attractive and safer for people to spend time in, with improved access to and through local green spaces, the distinctive feel of local spaces is enhanced and an overall net gain of 'green'.	<ul style="list-style-type: none"> • Vehicle movements by street and vehicle class • Vehicle speeds • Rate of traffic collisions and casualties • Transport emissions / Air quality • Parking demand & vehicle types • Community health and wellbeing • Perception of safety travelling by public transport and active modes • Attitudes towards/propensity to walking, cycling and other active modes 	<ul style="list-style-type: none"> • Stage 1-2 active travel surveys • Road collision statistics to-date • Stage 1-2 engagement feedback • Baseline walking audits • Scottish Transport Statistics • DFT Traffic Counts • Cycling Scotland Data 	<ul style="list-style-type: none"> • Stage 3-4 engagement feedback • Post-construction online/household surveys. • Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> • Community impacts • Health impacts • Amenity and public realm impacts 	At least six months after scheme completion	Annually

	<ul style="list-style-type: none"> Quality of walking and cycling infrastructure Public awareness of active travel 					
<p>Essential access for bus travel will be retained while improving its comfort, reliability, and safety.</p>	<ul style="list-style-type: none"> Public transport mode share Bus journey times to local facilities Satisfaction with public transport Perceived barriers to public transport use and access Local bus services and their frequency Bus journey time reliability Public transport patronage 	<ul style="list-style-type: none"> Stage 1-2 active travel surveys Road collision statistics to-date Stage 1-2 engagement feedback Baseline walking audits Scottish Transport Statistics DFT Traffic Counts Cycling Scotland Data 	<ul style="list-style-type: none"> Stage 3-4 engagement feedback Post-construction online/household surveys. Post-construction TSV surveys and walking audits 	<ul style="list-style-type: none"> Community impacts Health impacts Modal shift impacts Amenity and public realm impacts 	At least six months after scheme completion	Annually

9. Costs

At this stage of project development, an initial capital cost estimate has been prepared. Quantity surveyors have prepared the estimate for the scheme. The tables below show the anticipated profile of capital and revenue expenditure over time. As discussed in section 12, no dates beyond stage 2 have been committed and it is anticipated the project will take between two-to-five years to deliver. Accordingly, the profiles presented below are indicative and are subject to change as the project progresses.

All costs in the profile are indicative and subject to change. As appropriate in this early phase of project development, optimism bias of 44% has been included in the project cost estimates. This represents the 90th percentile value for road projects in the Department for Transport optimism bias guidance. The upper percentile figure has been used for the following reasons:

- Early-stage design:** the capital cost estimate has been prepared from existing plans for the improvements. These are at an early stage and are subject to change as the design progresses through future project stages. Further work is needed to fully identify technical standards, project interfaces, and geo-technical conditions.

- **Desired degree of cost certainty:** it is important to ensure that cost-overruns do not occur given the external funding available. The project will likely be working to a fixed budget with limited access to additional funds beyond the approved budget. The Council has a low willingness to accept risk with regards to cost overruns in this situation.

External and Internal fees are inclusive of ACC staff costs.

Maintenance costs have been assumed at a percentage of the total construction costs. Detailed maintenance costs will be developed as the project progresses. These figures are included on a worst-case basis – it is likely that reduced vehicular use will lead to slower deterioration of road surfaces and potentially to cash saving. Literature reviewed during the business case development process supports this assumption.²⁸

9.1 Project Capital Expenditure

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
External & Internal fees / commissions	330	805	560	490	200						2,385
Land Acquisitions		250									250
Construction Costs		1,850	2,500	6,350	2,350						13,050
Sub-Total	330	2,905	3,060	6,840	2,550	-	-	-	-	-	15,685

9.2 Post- Project Capital Expenditure

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Staffing Resources											
Monitoring and evaluation					15	15	15	15			60
Sub-Total					15	15	15	15			60

9.3 Post- Project Revenue Expenditure

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total

²⁸ Todd Litman (2016), *Transportation Cost and Benefit Analysis Guidebook*, Section 5.6.

Non-Staffing Resources											
Maintenance						75	75	75	75	75	375
Sub-Total						75	75	75	75	75	375

10. Key Risks	
Description	Mitigation
Funding: Places for Everyone funding is not guaranteed this year. Future funding is subject to a competitive process and may not be available.	Project development process following Sustrans suggested methodology. Expert consultants engaged throughout design and engagement process.
Link and junction capacity issues: significant traffic impacts arising from reduced lane capacity.	Agreed design to be tested using industry-standard modelling software / techniques and any identified traffic impacts to be accepted by ACC prior to commencement of works.
Traffic diversions: increase to costs, negative effect on public perception of the project.	Analysis of the impact of the works on nearby traffic with aim to minimise requirement for diversions.
Finances cannot be carried into the next financial year: project halted.	Confirm availability of finances for further work.
Land outwith ACC ownership: land will need to be purchased to allow the project to continue. Possibility of non-cooperation of landowner leading to lengthy legal processes.	Check ownership of any required land out with highway boundary.
Environmental risks: identification of protected species, nesting birds, or similar may result in delay/additional cost incurred by relocation and/or protection measures.	Requirement for ecological surveys to be undertaken during planning process.
Accommodation works required: increase in costs.	Early contractor involvement to be considered.
Utilities companies unable to provide diversions to services in acceptable timescale: delay to project construction in waiting for utilities companies.	Early consultation with utility companies.
Utilities companies not able to provide diversions to services within acceptable budget: delay to project construction in negotiating with utilities companies, increased project cost.	Early consultation with utility companies.
Accidental Damage to Services: cost of repairs, health and safety risk.	Request C3 information to confirm service diversions required.
Owner of drainage infrastructure does not permit new apparatus to be joined to existing networks: increase in cost as new facilities need to be provided.	Consultation to be undertaken as soon as route drainage design confirmed.
Transport model availability: future appraisal of the scheme may depend on the Aberdeen Sub Area Model (ASAM) which is managed and maintained by Nestrans.	Early engagement with Nestrans to ensure access.
Objections to scheme received: delay to project whilst issues are resolved.	Ongoing consultation with affected parties recommended.

11. Procurement Approach

Service contracts to support in house resources will predominantly be procured via existing framework arrangements. Works procurement will be undertaken on a construction only basis and in line with current Scottish Government procurement regulations.

12. Time

Ashgrove Connects is being developed in a phased approach consistent with the Places for Everyone funding programme. Under this programme, funding is awarded in groups of project stages for Concept (Stages 0-2), Design (Stages 3-4), and Construction (Stages 5-7).

- Concept (Stages 0-2) is about broadly defining the scope of a project and its desired outcomes. Partners are expected to carry out initial engagement with stakeholders and to outline the total expected costs.
- Design (Stages 3-4) involves carrying out developed and technical tasks in order to make a project workable. Partners use funding at these stages to clearly define their interventions, test implementations and undertake significant community engagement.
- Construction (Stages 5-7) is when a project is built. At this point, the project can be closed out and formalised into use in the community.

This business case represents the cumulation of the second stage. No dates beyond this stage have been committed but it is anticipated the project will take between two-to-five years to deliver. It is recommended that ACC will apply for funding for Stages 3-4 in October 2022 (for 2023-24) for the full scheme and that further consideration is given to the proposed phasing:

- 2023-24 Continuation of design and commencement of interventions set out in the Behaviour Change Activation Plan
- 2024-26 Construction period and full implementation of the Project

13. Governance

Monitoring of progress and delivery will be undertaken by the Transportation Programme Board reporting to the Capital Programme Board.

Role	Name	Service
Project Sponsor	David Dunne	Strategic Place Planning
Project Manager	Katherine Duncan	Capital
Senior User	Doug Ritchie	Operations and Protective Services
Senior Supplier	Alan McKay	Capital

14. Resources

Task	Responsible Service/Team	Start Date	End Date
Project Management	Roads Projects	Ongoing	August 2026
Design	Roads Projects	Ongoing	August 2024

Land Negotiation	Corporate Landlord	Ongoing	August 2024
Land Purchase	Legal Services	Ongoing	August 2024
Communications	Corporate Comms	Ongoing	August 2026
Procurement	Roads Projects	Winter 2024	Spring 2025
Works Supervision	Roads Projects	August 2025	August 2026
Traffic Orders	Operations	Spring 2025	Summer 2025
Commissioning Handover	Operations	Spring 2025	August 2026

15. Environmental Management

A Preliminary Ecological Assessment has been undertaken to identify key ecological constraints, whether additional ecological surveys are required, and any necessary avoidance, mitigation, compensation, and enhancement measures.

No statutory designated sites for nature conservation were recorded within 2km of the project area. Two non-statutory designated sites for nature conservation were recorded within 1km of the site:

- Inverness – Aberdeen Railway Line Local Nature Conservation Site
- Hilton Wood Local Nature Conservation Site

The project area mostly comprises hardstanding (roads and pavements) and houses with associated gardens. Areas of species-poor grassland, ornamental scrub planting, and broadleaved woodland were scattered throughout, typically located around community amenity areas and commercial businesses.

Habitats within the project area have suitability to support bats, badger, nesting birds, common species of reptile, red squirrel, hedgehog, and priority invertebrates. Possible veteran trees were also recorded.

Avoidance and mitigation measures include the following:

- Retention of habitat within the survey area as far as possible, including trees
- Avoidance of night-time working (defined as 30-minutes prior to sunset and 30-minutes after sunrise)
- Implementation of pollution prevention measures
- Methods to prevent accidental harm to wildlife during the works

Opportunities for biodiversity enhancement include the following:

- The installation of woodcrete bat and bird boxes within woodland areas
- The creation of habitats through habitat piles in grassland areas
- An increase in the floristic diversity through local-sourced green hay and woodland floristic communities

A preliminary bat roost assessment (PBRA) of structures and ground level tree assessment (GLTA) may be required, depending on the nature of the proposed works associated with the Scheme.

If works are likely to impact suitable habitat for red squirrel a survey for the presence or likely absence of squirrel dreys.

	Yes	No
Is a Buildings Checklist being completed for this project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, what is the reason for this?		
This is a road construction project.		

16. Preserving Our Heritage

The only recorded heritage interest within the project area is the Rosemount and Westburn Conservation Area, which borders on a small stretch of Ashgrove Road on the south side, east of Westburn Drive.

The buildings with notable historic significance within this conservation area are situated in Rosemount to the south. Westburn has been included within the conservation area to retain the parklands of Westburn and Victoria Parks.

17. Stakeholders

The stakeholder management plan will be updated. The key interested individuals, teams, groups, or parties identified at this stage are:

- Aberdeen Civic Society
- ACC Roads Teams
- Community Councils
- Cycling Groups - Aberdeen Cycle Forum, Grampian Cycle Partnership
- Disability Equity Partnership
- Divisional Road Policing Unit
- First Aberdeen
- Freight Transport Association
- General Public
- Local businesses
- Local Schools
- Network Rail
- Road Haulage Association
- Police Scotland
- Scottish Ambulance Service
- Scottish Fire and Rescue Service
- Stagecoach Bluebird
- Nestrans
- NHS Grampian
- University of Aberdeen

18. Assumptions

Current high level project development assumptions:

- No significant utility apparatus diversion works will be required
- Contingencies assumed at 5% with additional design development risk allowance at 4%.
- Scottish Government procurement requirements will remain in force for the duration of the project.
- BCI programme ambitions remain as stated in the current public programme

19. Dependencies

Dependencies are external factors such as infrastructure which the project is reliant upon to be successful, but which are beyond its direct control. The successful delivery of the objectives depends on these factors. Key dependencies include:

- The Berryden Corridor Improvement Project
- Planning consents
- Changes to financial markets
- Costs increasing as a result of unforeseen circumstances
- Behavioural change
- Land ownership and land take
- Availability of internal resources
- Workable diversions and operational arrangements during construction
- Construction market activity
- Traffic regulation and redetermination orders
- COVID-19 pandemic impacts

20. Constraints

Constraints are external considerations that set limits within which the proposals must work. Current high-level project development constraints include:

- Maintaining access to local residences and businesses (including emergency access);
- Maintaining utility supplies;
- Minimising delays to business traffic and travelling public; and
- Roads, Legal and Estates teams resourcing.

21. ICT Hardware, Software or Network infrastructure

Description of change to Hardware, Software or Network Infrastructure	Approval Required?	Date Approval Received
None	-	-

22. Change Controls Issued by the Project

Date	Change Ref ID	Approval Route	Change Description
N/A	N/A	N/A	N/A

23. Support Services Consulted

The minimum **consultation period for Outline Business Cases is 10 working days** unless the Programme Board Chair agrees there are exceptional circumstances that require a shorter turnaround time.

Note:

It is mandatory for Capital projects to consult with the full list below.

If any services are not consulted, this should be indicated in the Comments section, along with the reason why. All comments received should also be noted, or reasons given for discounting them.

It is a legal requirement for the Council to carry out an [Equality and Human Rights Impact Assessment \(EHRIA\)](#) to evaluate the impact our decisions have on our customers.

Note: There is a copy and paste version of the consultation list below which you can use for circulating your Business Case – [Support Services Consulted Circulation List](#)

Service	Consultee	Comments	Date
Resources	Chief Officer, Finance jbelford@aberdeencity.gov.uk		
Resources	Chief Officer, Corporate Landlord stbooth@aberdeencity.gov.uk		
Governance	Chief Officer, Governance frbell@aberdeencity.gov.uk		
Place	Chief Officer, Strategic Place Planning DDunne@aberdeencity.gov.uk		
Place	Chief Officer, City Growth rsweetnam@aberdeencity.gov.uk		
Operations	Chief Officer, Operations and Protective Services mareilly@aberdeencity.gov.uk		
Operations (Facilities)			
PMO			
Finance			
Asset Management			
Legal (Property/ Planning & Environment)			
Legal (Commercial & Procurement)			
Procurement			

Service	Consultee	Comments	Date
ICT – Digital & Technology			
Design – Public Buildings			
Grounds Maintenance			
Communications			
HR			
Transportation Strategy and Programmes			
Place – TSAP			
Roads Management			
Roads Projects			
Emergency Planning Officer			

You can attach a link to your document to the list above but will need to attach **a copy of your document** to the consultees below as the link function doesn't work for generic addresses:

Service	Consultee	Comments	Date
Estates			
Environmental Policy			
Equalities			
Planning			

24. Decision by Capital Board	Date
* Approved/Not Approved to:	

* Insert approval decision from Capital Board.

25. Document Revision History			
Version	Reason	By	Date
2			
3			
4			

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Appendix D

Constituent Reports and Drawings

Constituent Report CR-A

Behaviour Change Activation Plan

Ashgrove Connects

Behaviour Change Activation Plan

Aberdeen City Council

19 August 2022

Notice

This document and its contents have been prepared and are intended solely as information and use for Aberdeen City Council and Nestrans in relation to the Ashgrove Connects Project.

Atkins Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 17 pages including the cover.

Document history

Document title: Behaviour Change Activation Plan

Document reference: 002

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	BC Activation Plan	CC	RH	ED		10/08/2022
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Client signoff

Client	Aberdeen City Council
Project	Ashgrove Connects
Job number	5212138
Client signature/date	

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1. Introduction

1.1. Scope

This outline Behaviour Change Activation Plan has been developed in support of the Ashgrove Connects Project, providing recommendations that will help maximise the benefits of the scheme and contribute to the short and long-term aspirations for cycling and walking in Aberdeen.

The process followed by Atkins for developing this outline Activation Plan is highlighted in Table 1.1. Stage 1 is reported on in this document.

Table 1.1

Stage	Task	Content
Stage 1 (RIBA 0-2)	Outline Behaviour Change Activation Plan	<ul style="list-style-type: none"> Commence stakeholder & community engagement to better understand the community needs and attitudes. Identify potential suppliers Prepare cost estimates Identify behaviour change interventions suitable for Ashgrove Connects and those people serviced by the new infrastructure scheme Prepare outline Activation Plan for RIBA 0-2
Stage 2 (RIBA 3-4)	Finalised Behaviour Change Activation Plan	<ul style="list-style-type: none"> Undertake Stakeholder & community engagement to raise awareness and gain community buy in for the finalised Activation Plan Establish the Activation network / steering group. Allocating tasks to its members and agreeing on the programme KPI's & milestones, delivery processes and M&E Develop finalised Activation Plan consisting of the chosen interventions, delivery timeline, budget request and chosen suppliers with agreements established.

A campaign of community and stakeholder engagement has supported the Activations Plan with the feedback helping to identify behaviour change interventions that feature throughout. These interventions should be seen as recommendations, with further work needed at RIBA Stages 3 and 4 (Stage 2 in Table 1.1) to identify the preferred interventions with potential delivery partners. A desktop mapping exercise was also undertaken to identify potential suppliers and programme partners, outlined in Appendix A, who will help shape, coordinate and deliver this Activation Plan.

1.2. Background

To support Aberdeen City Council's (ACC) investment in the Local Outcome Improvement Plan (LOIP), there is a need for targeted "activation" to ensure local communities, businesses and other street users are aware of the opportunities offered by the new infrastructure proposed through the Ashgrove Connects Project.

Activation refers to the package of interventions that will encourage people to travel more sustainably by providing them with the opportunity, knowledge and skills to do so. Activation Plans are therefore a supporting measure that enable usage of new infrastructure to be maximised.

Implementing an Activation Plan for the Ashgrove Connects Project, will create a clear pathway for cycling and walking, enabling a wider range of people to access opportunities to travel actively for leisure, studying and work purposes. It will target and motivate key audiences to use the new cycling and walking infrastructure by developing a comprehensive set of activities. By adopting a place-based approach, the plan will also acknowledge how people recognise and utilise and the new infrastructure This may be, a place to study, live and exercise, a place to visit and shop.

The project focuses on Ashgrove Road and Ashgrove Road West, between Powis Terrace and Laurelwood Avenue in the east to North Anderson Drive in the west.

The geographic location of the project is illustrated in Figure 1.1.

Figure 1-1 - Project Location



2. Activation Development

This Activation Plan has been prepared in support of the Ashgrove Connects Project. The type of intervention and the key target audiences to benefit have been identified through early engagement and the following factors:

- Project location.
- [Local stakeholder engagement](#) (online surveys, webinars, walking audits, drop in events and community workshops with seldom heard groups).
- Area demographics.
- [Health and deprivation statistics](#) – Joint Strategic Needs Assessment (JSNA).
- Strengths and opportunities within the project location (personal, social, physical and neighbourhood assets).
- [Aberdeen City Centre Locality Plan](#).

The plan sets out the supporting measures that are essential if the project is to maximise usage of the proposed infrastructure. The plan will be a live document thus allowing for refinement should there be a need or demand for alternative activity.

It has been agreed with ACC that a bespoke activation plan should be produced for this project. However, if similar projects are to be developed and/or delivered within Aberdeen City, such as the Berryden Corridor Improvement Project and the A92 Multi-Model Transport Study, consideration should be given to preparing a combined area-wide Activation Plan.

2.1. Covid-19 Statement

The measures included in the Activation Plan should be continually reviewed and amended as necessary to reflect the latest Government guidance. The safety of the public will remain paramount, and any engagement will be approached and delivered within these parameters.

2.2. Activation Task Group

It is a recommendation that the Ashgrove Connect Project is supported by an “Activation Task Group”. A combination of representatives such as residents, ACC Officers, local employees and other public facing stakeholders could form the task group and work collectively in achieving the proposed outcomes of this Activation Plan. Evaluation shows that those infrastructure schemes that develop an Activation Task Group benefit from strategic direction, co-ordinated support, scheme promotion, generating ideas and approval in decision-making processes.

The Activation Task Group may develop from the Stakeholder Working Group that has already been established for the project (see figure 2.1). The working group includes representatives from different street users including ACC Officers, institutions, residents, community organisations, cycling groups and wider stakeholders.

There is an opportunity to engage with [Aberdeen Cycling & Walking Forum](#). Activation would be a key agenda item for the forum as its members recognise the opportunities of delivering behaviour change activities and how they link into the City’s overall vision for increasing the number of journeys made by sustainable modes.



Figure 2-1 - Stakeholder Working Group

3. Activation Engagement

Community engagement has taken place throughout, helping to bring local people together and provide a platform for them to share ideas, and in doing so identify active travel and placemaking opportunities. Engagement within educational settings, community resident groups and public facing organisations has ensured that this Activation Plan is co-designed, has key stakeholder buy-in and incorporates inclusive initiatives that meet the needs of the local communities.

ACC will continue to engage and consult the local communities served by the Ashgrove Connects Project as the project develops and this should continue throughout the Activation delivery period. Forming an alliance with Aberdeen’s third sector interface organisation, [Aberdeen Council of Voluntary Organisations \(ACVO\)](#), should be a priority for the Activation programme, both for this project and future infrastructure schemes.

Project Activation should take an asset-based approach to ensure a resident-led environment is created throughout the delivery stage. This approach aligns with the wider cycling and walking objective of ACC which is to identify and/or upskill residents to become key community builders (Active Travel Activators).

3.1. Key Audiences

Activation delivery is planned across the project location highlighted in Figure 1.1. The target audiences will therefore be dependent on the type of activity and the chosen location.

Factors influencing the key target audiences include area demographics, local community assets, current attitudes towards cycling and walking and the health needs of those residents.

Table 3-1 provides an insight into some of the key target audiences and the supporting stakeholders within Aberdeen.

Table 3-1 - Key Target Audiences and Supporting Stakeholders

Education	Communities	Businesses/Institutions	Stakeholders
Cornhill Primary School	Rosehill & Mile End Community Council	NHS Grampian	ACVO
Aberdeen University	Cornhill Community Association	Royal Mail	Nestrans
Kittybrewster Primary	Cairncry Community Association	SPAR	Sport Aberdeen
St Machar Academy	Crosby House Care Home	Beautan 2020	Aberdeen Multicultural Centre
Holy Family RC Primary		SSE Enterprise	Aberdeen Civic Society
St Peters RC Primary		Optima Health	Aberdeen Inspired
St Josephs RC Primary		Aberdeenshire Council	Grampian Cyclist Touring Club
Skene Square Primary			NHS Grampian Bicycle Users Groups
Mile End Primary			Aberdeen Cycle Forum
			Grampian Cycle Partnership
			GetAbout

Table 3-1 is not an exhaustive list and additional work will take place to identify further audiences that may benefit from activation support.

3.2. Key Opportunities

A detailed review of the stakeholder engagement feedback has identified the following opportunities:

- An increase in secure cycle parking facilities would improve confidence in people to own / purchase a bike, particularly those living in flats.

- Cycling and walking can be promoted as an initiative to help tackle social isolation amongst pensioners living alone.
- A popular request during project engagement is to make the streets greener and pleasant places to socialise and play. A key opportunity is to work with the community and partners to green up the streets, adding artwork, seating and spaces to socialise.
- There is an opportunity to deliver a campaign with local businesses to promote the off-street parking that is available but often unused.
- There is an opportunity to collaborate with public facing organisations and target those neighbourhoods which are less likely to walk or cycle due to income deprivation.
- Litter was highlighted as being an issue within the project area. There is an opportunity to upskill community champions to lead health / litter pick walks. Young people could help design signage to encourage people to put litter in bins.
- The project benefits from personal, community and neighbourhood assets (NHS Grampian, University of Aberdeen, Westburn Park, Aberdeen VCO, community champions).
- Opportunity to improve road safety and awareness for young people visiting schools and other educational settings.
- Opportunity to improve physical activity rates for those residents not achieving the recommended amount as per national guidance.
- Opportunity to support Royal Mail's 'Net Zero Deliveries' initiative within the Kittybrewster Depot delivery area.
- Engaging with ethnically diverse communities to introduce cycling and walking opportunities through an accessible and inclusive programme of initiatives.

3.3. Neighbourhood Asset – Westburn Park

Westburn Park is a public park located close to the Ashgrove Connects project area and a great neighbourhood asset.

The Park is owned by Aberdeen City Council and is one of the largest in the city. The Park caters for a range of recreation opportunities including an indoor and outdoor bowling pavilion, a tennis centre with indoor and outdoor courts, a basketball court, a skate park and a children's cycle track. Aberdeen Tennis Centre, run by Sport Aberdeen, is located within the park.

There is an opportunity, as part of this Activation Plan, to facilitate delivery of activities, as outlined in Chapter 4, within the Park.

Examples of the types of activity that could be planned within the Park include:

- Accredited cycling and walking training.
- Public cycle training.
- Children's cycle clubs.
- Guided walks.



Figure 3-1 – Westburn Park Cycle Track

Appendix A provides examples of the types of support available to deliver these activities.

4. Activation Activity Plan

ACC's motivation for increasing sustainable travel is embedded in a range of national, regional and local strategy documents such as the [Aberdeen Active Travel Action Plan](#). To compliment the city's investment in new transport infrastructure, there is a need for targeted activation initiatives to enable behaviour change that will ensure local communities and potential users are aware of the opportunities offered by the schemes. It is therefore a priority of this Activation Plan to engage with local communities, schools, businesses, and a wide range of voluntary/third sector organisations within the Ashgrove Connects Project area and wider city. This approach will enable a wide reach for the activation programme and ensure interaction with residents from different backgrounds including those from disadvantaged areas.

The overall aim of this Activation Plan is to create a complete pathway for both cycling and walking. To achieve this, a comprehensive package of interventions that will appeal to the complete beginner, casual cyclist and the active travel enthusiast have been included in the activities listed in section 4.1. Appendix A provides examples of the types of support available to deliver these activities.

This plan will ensure everyone in the scheme location can participate, from learning to ride a bike to becoming an accredited cycling instructor. Ultimately, the desire is to increase the number of people choosing cycling and walking as their default mode of transport for short commuter trips. This supports the city's active travel objectives whilst also supporting Scotland's commitment to climate change and decarbonisation.

4.1. School Activation

Targeted activity for schools and further education centres served by the Ashgrove Connects Project is set out in Table 4-1, along with the budget request for undertaking these activities.

Table 4-1 - School Activation Activities

Note: Potential suppliers of the below activities are listed in Appendix A.

Activity	Description	Audience
Cycling Skills Programme	This would look to increase and enhance current cycling skills by bringing Adventure Aberdeen's Learn to Bike sessions to schools within the project area. Activity will include: <ul style="list-style-type: none"> • Early skills lessons to ensure children are at Bikeability standard. • Engagement with those schools who do not access the Bikeability offer. • Booster sessions for those schools that miss out on Bikeability funding. • Increase access to bikes enabling young people to participate, including maintenance of existing bikes to make them safe. 	Ages 3 – 8
Key stage 3 cycle training	<ul style="list-style-type: none"> • A modern training campaign for those that may have missed Learn to Bike / Bikeability due to Covid 19. • On the bike training complemented by journey planning and advanced safety sessions. 	Secondary school (Senior 1 & 2)
Signage / Mapping	<ul style="list-style-type: none"> • Arts related programme with young people - designing active travel signing / promoting active travel and the new infrastructure. • Participation in the Arts Award programme. 	Primary & secondary schools
Accredited Training	<ul style="list-style-type: none"> • A programme of accredited cycling and walking training, covering cycle skills, maintenance and walk leader training. This could be delivered as extra curriculum learning. 	Secondary schools & further education settings

Active Travel Support	<ul style="list-style-type: none"> • Provide bespoke support to schools within the scheme buffer zone, ensuring the school is encouraging active travel and offering facilities to national standard. • Supporting schools to apply for external funding for sustainable grants relating to facility improvements, cycle parking etc. • Supporting school to promote national events such as Walk to School Day, Clean Air Day and the Daily Mile. • Supporting schools to create and update school travel plans with templates 	All education settings (depending on interest / uptake)
Modeshift Stars for Schools	<ul style="list-style-type: none"> • Promote the platform across the city schools. 	All schools
School Ambassador Project	<ul style="list-style-type: none"> • Creating a network of junior ambassadors, helping to promote active travel and clean air programmes within the school setting. 	Primary and secondary schools
Travel Training	<ul style="list-style-type: none"> • Bespoke and interactive training delivered to young people that will increase awareness of active travel whilst educating them on safety measures – increasing confidence to travel by active travel modes. 	Primary and secondary schools
Bike donation Stations	<ul style="list-style-type: none"> • Recycle / bike donation project aiming to increase bike access for young people. 	All education settings

Budget Estimate: £30,000 per annum (12 month delivery)

4.2 Community Activation

Targeted activity for residents and identified communities served by the Ashgrove Connects Project is set out in Table 4-2, along with the budget request for undertaking these activities.

Table 4-2 - Community Activation Activities

Note: Potential suppliers of the below activities are listed in Appendix A

Activity	Description	Audience
Community Cycle Training Programme (Delivered and assisted by multiple agencies and suppliers)	<ul style="list-style-type: none"> • Delivery of comprehensive and accessible training sessions, held at community venues and tailored for the complete beginner to the experienced cyclist. • Train the trainer programme to upskill community residents – increasing local trainers and employment opportunities. • Inclusive sessions, linking in with disability groups to deliver fun and interactive cycling sessions. • 1:1 buddy schemes for inclusive cycling. A programme that looks to help individuals with a disability make that step to road, or commuter cycling. 	Community residents
Bike Maintenance sessions	<ul style="list-style-type: none"> • Drop-in maintenance sessions, held at community venues to help increase the number of road safety bikes. • Free bike maintenance for those disadvantaged residents. 	Community residents
Community awareness events	<ul style="list-style-type: none"> • Pop up and celebration events - fun and interactive to help promote and raise awareness of active travel locally and across Aberdeen. 	Community residents
Family Learning	<ul style="list-style-type: none"> • Family cycle sessions held at green space locations - learning and leisure sessions. 	Families, young carers
Scheme Ownership Programme	<ul style="list-style-type: none"> • A programme of resident-led initiatives that add value to the project. 	All sections of the community

Activity	Description	Audience
	<ul style="list-style-type: none"> Projects not directly linked to cycling and walking such as litter busters, graffiti artwork, construction sign design. 	
Walking programme	<ul style="list-style-type: none"> A bespoke programme consisting of guided walks, health specific walks and the creation of self-led walking maps. 	Targeted work on the ageing well population and young residents
Community Group Support	<ul style="list-style-type: none"> A targeted programme that supports a selected number of community groups delivering active travel activities. Support to include small grant funding, staff training such as social media and safeguarding. 	Targeted groups operating across the third sector
Increased cycle parking	<ul style="list-style-type: none"> Increase secure cycle parking facilities across the project location, identifying key locations within the buffer zone. 	Key locations within scheme buffer zone

Budget Estimate: £40,000 per annum (12 month delivery)

4.2. Business/Institution Activation

Targeted business/institution support for organisations served by the Ashgrove Connects Project is set out in Table 4-3, along with the budget request for undertaking these activities.

Table 4-3 – Business/Institution Activation Activities

Note: Potential suppliers of the below activities are listed in Appendix A

Activity	Description	Audience
Staff engagement events	<ul style="list-style-type: none"> Interactive events offering information and free incentives to encourage active travel. 	Workplaces within scheme location
Active Travel support	<ul style="list-style-type: none"> Tailored support to organisations on active travel topics such as travel planning, corporate travel discounts, cycle facility standards, cycle schemes and wider accessibility options. Grant support from local and national government linked to sustainability. 	Workplaces within scheme location, focus on those large employee organisations
Onsite employee training	<ul style="list-style-type: none"> Training onsite to include cycle skills. 	Workplaces within scheme location
Business Active Travel Network	<ul style="list-style-type: none"> Create a corridor network of key stakeholders to bring together Active Travel officers, resources and skill sets. Opportunity to expand Active Travel opportunities outside of the workplace and into the surrounding communities. 	University of Aberdeen, NHS, City Council

Budget Estimate: £10,000 per annum (12 month delivery)

It is advised that the above listed initiatives are to be delivered by a range of suppliers currently operating within the project area and across the wider city. Early identification of potential suppliers are listed in Appendix A however further engagement and outreach will be required to identify additional suppliers and commence with service / delivery agreements.

This outline Activation Plan has positively identified a number of behaviour change interventions that are / have been successfully delivered within close proximity to the scheme location. Atkins proposes that these initiatives are seen as a priority and are considered for inclusion within the finalised Behaviour Change Activation Plan. There is an opportunity to deliver proven behaviour change initiatives and in doing so, expand the reach and opportunities to those individuals serviced by the Ashgrove Connects Project.

4.3. Monitoring and Evaluation

The Activation Plan is a live document and as such will be reviewed and refined on a regular basis. A formal review of the Activation Plan should take place annually and the outcome to be shared amongst partners to help determine if priorities are being met and / or whether these need to be reset.

Table 4-4 provides an overview of how the school, community and business activation activities can be measured, as part of the formal annual review.

Table 4-4 - Monitoring and Evaluation

Activation Activity	Measure
Cycle Training, Health Walks and Access to Bikes	Number of people in attendance at sessions. Survey pre- and post-engagement. Case studies.
Schools/Colleges	Case studies. Lesson plans. Travel maps. Number of people in attendance at sessions. Survey pre- and post-engagement.
Communications	Social media clicks, shares and commentaries.
Staff Resource	Lessons learnt report at the end of the project.

4.4. Budget

The budget estimate prepared for the outline Activation Plan is set out in Table 4-5. A minimum price has been included to reflect the variation in activities and the cost of procuring external suppliers. The total of £175,000 is recommended to be viewed as the minimum required to deliver a three year programme of behaviour change activity in support of the Ashgrove Connects Project. The estimated budget is for a three year delivery period and it encompasses the activity and supplier costs, additional staffing and coordination fees, equipment and the facility and venue hire required to deliver the proposed behaviour change interventions.

Table 4-5 - Activation Budget Request

Year	Activity	Consultant / Third party supplier cost (£)	Assumptions	Total
Year 1	Development and approval of the Ashgrove Connects Behaviour Change Activation Plan	£20,000	The work to develop the finalised Activation Plan will be carried out by a chosen consultant via the approved commissioning process	£20,000
	Delivery of School Activation	£10,000	Third party suppliers to delivery chosen interventions	£10,000
	Overall coordination of the Activation Programme (including M&E)	£5,000	ACC to appoint a qualified programme coordinator to oversee the Activation Programme	£5,000
Total Year 1				£35,000
Year 2	Delivery of School Activation	£30,000	As above	£30,000
	Delivery of Community Activation	£30,000		£30,000
	Delivery of Business Activation	£5,000		£5,000
	Overall coordination of the Activation Programme (including M&E)	£15,000		£15,000
Total Year 2				£80,000
Year 3	Delivery of School Activation	£20,000	There is an assumption that year three costings will reduce as activities become self-sustained after the year 2 delivery period.	£20,000
	Delivery of Community Activation	£20,000		£20,000
	Delivery of Business Activation	£5,000		£5,000
	Overall coordination of the Activation Programme (including M&E)	£15,000		£15,000
Total Year 3				£60,000
Combined Activation Total				£175,000

Please Note:

- ACC have the option to deliver aspects of the activation plan via their respected departments (Parks & Green Spaces, Health Teams etc)
- It is assumed that ACC will appoint an Activation Coordinator to oversee the delivery and coordination of the programme. This can be managed within the City Council or by an external consultant / third party supplier
- Where possible, interventions will be sustained beyond the duration of this programme. This will enable behaviour change activity to remain within the scheme location long after scheme completion

4.5 Objectives

The outline Activation Plan considers both the engagement feedback and the wider city ambitions for active travel.

Table 4.6 lists the ACC transport objectives that this Activation Plan aligns with.

Table 4-6 - ACC Transport Objectives

THEME	OBJECTIVE
Walking	To increase the number of people walking, both as a means of travel and for recreation, in recognition of the significant health and environmental benefits it can bring to our citizens
Cycling	To foster a cycling culture in Aberdeen by improving conditions for cycling in Aberdeen so that cycling becomes an everyday, safe mode of transport for all.
Road carriageway and footway maintenance	To improve the condition of the road, footway and cycle networks.
Travel Information and Awareness	To engage with members of the public, employers and schools on travel behaviour-change campaigns, events and promotions and to provide the information that citizens and visitors need to let them undertake 'smarter' journeys in the City
School Travel and Young People	To ensure that all young people have the opportunity to travel to school by active and/or sustainable modes of transport and are equipped with the necessary knowledge, skills and infrastructure to allow them to undertake local journeys safely and independently
Climate Change Mitigation and Adaptation	To contribute to Aberdeen's carbon emissions targets and develop climate resilient infrastructure

4.6 Activation Next Steps

The Activation Plan will only be successful and sustainable if ownership of interventions is delegated and shared between local stakeholders.

The next stage of the Activation Plan (Stage 2, RIBA 3-4) is to formalise an agreed delivery plan with the Activation Task Group (or Stakeholder Working Group), consisting of the behaviour change interventions, identification of the preferred suppliers, final programme budget and the agreed delivery timeframe. Specific activities included in the finalised Activation Plan will be best delivered by those local organisations already operating within the scheme location therefore a further mapping and engagement exercise should be undertaken to identify those suitable suppliers. The finalised Activation Plan should remain flexible throughout, allowing interventions to be added if beneficial to those individuals who may use the Ashgrove Connects Project.

Community engagement should continue throughout with a recommendation that workshops and community meetings are held with residents and local stakeholders to discuss the proposed interventions and the benefits to the area. Keeping engagement opportunities open will provide a platform for this Activation Plan to reach those grassroot communities, interact with young people and connect with those disadvantaged communities.

Aberdeen City Council officers intend to seek Committee approval to apply for RIBA Stages 3-4 funding from Sustrans Places for Everyone. It is recommended that this application includes the budget detailed in Table 4-5

to both develop the detailed plan and start delivering on it during the design phase alongside future engagement.

Appendices



Appendix A. Delivery Support

Local and National Organisations

This includes examples of local and nation organisations which run projects/programmes related to walking, cycling and health that could support the delivery of the Activation Plan.

- [Aberdeen Health and Social Care Partnership](#) work with communities to enable people to achieve fulfilling, healthier lives and wellbeing. The Partnership has a focus on diet and physical activity, including a remit for Active Travel, and can support with projects that link with the Local Outcome Improvement Plan.
- [Aberdeen Multicultural Centre](#) receive funding to promote active travel campaigns among diverse, ethnic minority communities through their Travelling Workshops, Bike Hire, Travel Diary and the Annual Multicultural Bike Rally event.
- [beCyCle](#) is a community project which is run solely by volunteers. One of their initiations include lending bikes. The Student Association of Aberdeen University sponsors a certified training for interested volunteers each year.
- [Cycling UK](#) run the Big Bike Revival which is a campaign to inspire and enable people to get on their bike. The programme offers funding and support through a regional Development Officer to put on Free Big Bike Revival Events across the country, including led rides, maintenance classes, bike check-ups and social events. The programme also works with local community groups to develop Community Cycle Clubs and provide them with access to free training, tailored support and free insurance. The programme support groups to start up cycling activities to meet their local needs and interests such as led rides or bike maintenance & repair classes.
- [Cycling Scotland](#) deliver a range of programmes to support anyone to enjoy cycling and the benefits this has to offer, including a full range of practical based cycle training and instructor training courses for all ages and abilities, a suite of Cycle Friendly programmes to make workplaces, schools, campuses and communities more cycle friendly.
- [GetAbout](#) own a fleet of bicycles which consists of bikes of various types, sizes and uses. As well as conventional bikes, the fleet includes folding bikes, an electric bike, a tandem, tricycles, recumbent bikes, bicycles adapted for disabled users, balance bikes for toddlers and novelty bikes such as penny farthings, unicycles and a clown bike. Their Getabout bicycle roadshow is used for events throughout the year in schools, universities, parks, galas and open days and is a fun attraction that gets people enthused about cycling, while also imparting the message that there is a bike available for all individuals, no matter what their capabilities, and that cycling is an activity that can be enjoyed by all.
- [NHS Grampian Bicycle Users Groups](#) help support NHS Grampian staff who cycle to work or for leisure.
- [Sustrans Scotland's I Bike Programme](#) provides support to promote walking, cycling and scooting by working closely with schools to deliver classroom activities.
- [Sport Aberdeen](#) deliver two relevant programmes:
 - [Walk Aberdeen](#) is designed to assist people to become more active through walking, this included weekly Health Walks.
 - [Adventure Aberdeen](#) deliver Learn to Bike sessions (similar to Cycling Scotland's Bikeability Programme) in schools in Aberdeen and offer a large range of outdoor adventure activities including cycling courses and Dr Bike sessions.

Funding Programmes

This includes examples funding programmes related to walking, cycling and health that could support the delivery of the Activation Plan.

- [ASDA Foundation – Empowering Local Communities Grant](#) provides grants for local groups aimed at supporting a broad range of activities which contribute towards transforming communities and improving lives.

- [Cycling Scotland - Community Development Fund](#) supports projects which improve cycling facilities including procurement of bicycles, installation or enhancement of cycle parking, creation of maintenance hubs and promote cycling for a community, increasing access to bikes and opportunities to cycle.
- [Cycling Scotland – Social Housing Partnership Fund](#) works with social housing providers to encourage and support active travel within areas of deprivations, helping to overcome issues around access, transport isolation and health inequalities. Social housing providers can apply for grants of up to £25,000 for a range of infrastructure proposals including cycle parking shelters, street furniture such as seating, litter bins, bollards and planters as well as improvements to access points and lighting.
- [Energy Saving Trust – eBike Grant Fund](#) supports projects that provide opportunities to trial e-bikes in communities and large-scale fleets of pool bikes or public bikeshare/hire schemes.
- [Nestrans](#) provide two grant funds to support organisations and groups across the North East to implement sustainable travel initiatives:
 - [Sustainable Travel Grant Scheme](#) supports the development of Travel Plans and travel awareness. Organisations can apply for up to £10,000 in matched funding to support sustainable transport initiatives.
 - [Community Sustainable Travel Grant](#) supports any constituted Community Group, registered charity or social enterprise based in Aberdeen or Aberdeenshire. Funding of up to £10,000 is available and groups are expected to demonstrate commitment by a contribution (or contribution in kind such as volunteer hours or resources) to the project.
- [Scottish Government - Climate Challenge Fund \(CCF\)](#) provides grants and support for community-led organisations to tackle climate change by running projects that reduce local carbon emissions. The CCF supports projects involving energy efficiency improvements to community-owned buildings, home energy efficiency advice, lower carbon travel options, community growing initiatives and schemes to tackle waste.
- [Sustrans - Places for Everyone](#) will fund relevant activities, as part of infrastructure delivery, that will support and encourage people to use the infrastructure and therefore create a bigger impact (referred to as behaviour change). Places for Everyone provides 100% funding for concept and design work.
- [Paths for All - Smarter Places Open Fund](#) aims to encourage people to change their behaviours to walk or cycle as part of their everyday short journeys. The Fund also encourages people to use other sustainable travel choices for longer journeys. It is available to support public, third and community sector organisations that want to change people’s everyday travel behaviour and help create a happier, healthier Scotland. Bids from £5k to £50k.

These examples are not exhaustive and should be developed further with the Activation Task Group.

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Constituent Report CR-B

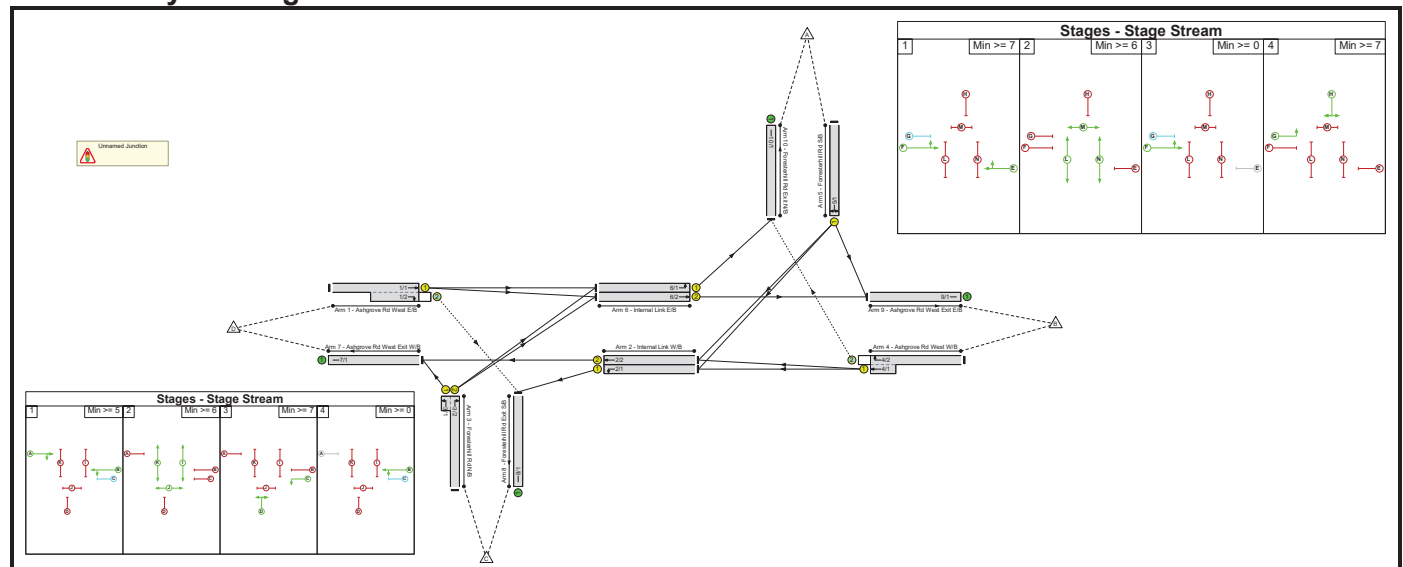
Traffic Data & Models

Full Input Data And Results
Full Input Data And Results

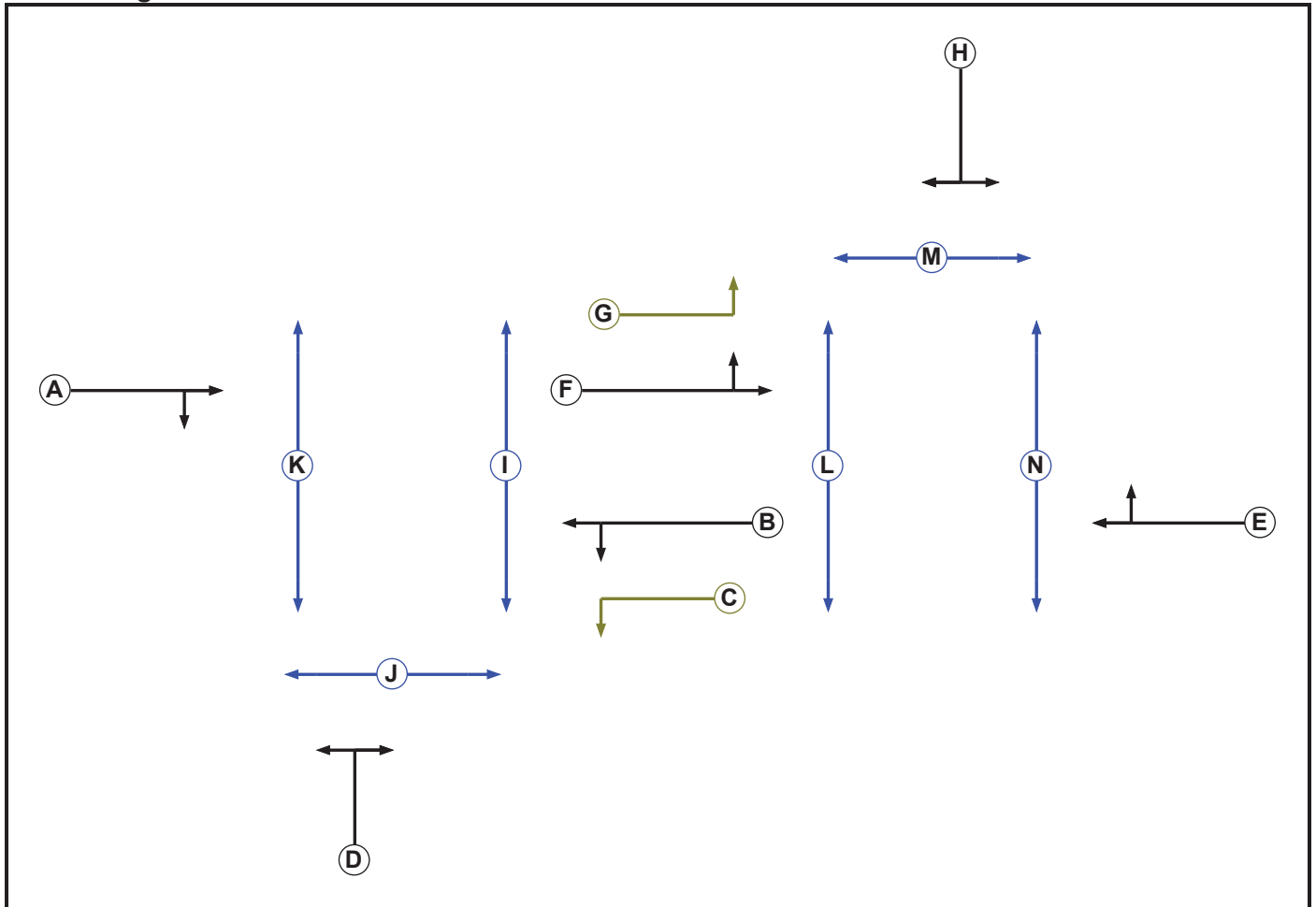
User and Project Details

Project:	Ashgrove Connects
Title:	Foresterhill Road - Existing Layout
Location:	
Client:	Aberdeen City Council
Site Ref(s):	2
Design Layout Ref:	Existing
Date Completed:	12/08/2022
Checked By:	KF
Checked By Date:	16/08/2022
Additional detail:	
File name:	2022-05-27 Foresterhill Rd Existing.lsg3x
Author:	C Jolly
Company:	Atkins
Address:	10 Canning Street, Edinburgh, EH3 8EG

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Filter	1	B	4	0
D	Traffic	1		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Filter	2	F	4	0
H	Traffic	2		7	7
I	Pedestrian	1		6	6
J	Pedestrian	1		6	6
K	Pedestrian	1		6	6
L	Pedestrian	2		6	6
M	Pedestrian	2		6	6
N	Pedestrian	2		6	6

Phase Intergrens Matrix

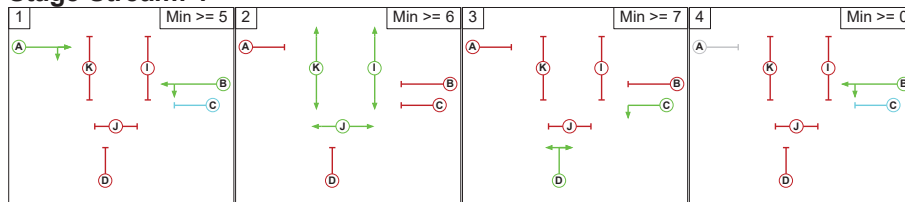
		Starting Phase													
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
Terminating Phase	A	-	-	5	-	-	-	-	8	8	8	-	-	-	
	B	-	-	6	-	-	-	-	8	8	8	-	-	-	
	C	-	-	-	-	-	-	-	8	8	8	-	-	-	
	D	5	7	-	-	-	-	-	8	8	8	-	-	-	
	E	-	-	-	-	-	-	7	-	-	-	8	8	8	
	F	-	-	-	-	-	-	5	-	-	-	8	8	8	
	G	-	-	-	-	-	-	-	-	-	-	8	8	8	
	H	-	-	-	-	5	5	-	-	-	-	8	8	8	
	I	0	0	0	0	-	-	-	-	-	-	-	-	-	
	J	0	0	0	0	-	-	-	-	-	-	-	-	-	
	K	0	0	0	0	-	-	-	-	-	-	-	-	-	
	L	-	-	-	-	0	0	0	0	-	-	-	-	-	
	M	-	-	-	-	0	0	0	0	-	-	-	-	-	
	N	-	-	-	-	0	0	0	0	-	-	-	-	-	

Phases in Stage

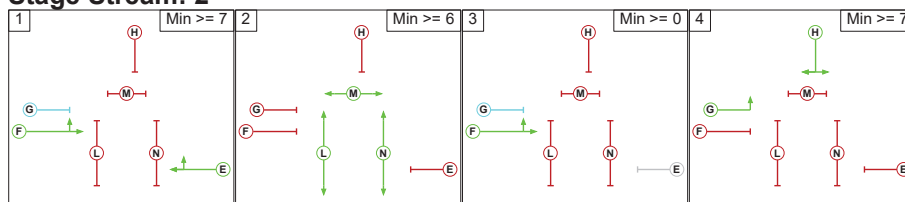
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	I J K
1	3	C D
1	4	B
2	1	E F
2	2	L M N
2	3	F
2	4	G H

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage			
		1	2	3	4
From Stage	1		8	6	0
	2	2		2	2
	3	7	X		7
	4	2	8	6	

Stage Stream: 2

		To Stage			
		1	2	3	4
From Stage	1		8	0	7
	2	2		2	2
	3	2	8		5
	4	5	X	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Ashgrove Rd West E/B)	8/1 (Right)	1439	0	2/1	1.09	All	2.00	-	0.50	2	2.00
				2/2	1.09	All					
4/2 (Ashgrove Rd West W/B)	10/1 (Right)	1439	0	6/1	1.09	All	2.00	-	0.50	2	2.00
				6/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Ashgrove Rd West E/B)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
1/2 (Ashgrove Rd West E/B)	O	A	2	3	8.0	Geom	-	3.00	0.00	N	Arm 8 Right	9.00
2/1 (Internal Link W/B)	U	B C	2	3	3.0	Geom	-	3.00	0.00	Y	Arm 8 Left	12.00
2/2 (Internal Link W/B)	U	B	2	3	3.5	Geom	-	3.00	0.00	N	Arm 7 Ahead	Inf
3/1 (Foresterhill Rd N/B)	U	D	2	3	2.4	Geom	-	3.75	0.00	Y	Arm 7 Left	7.00
3/2 (Foresterhill Rd N/B)	U	D	2	3	60.0	Geom	-	3.75	0.00	N	Arm 6 Right	12.00
4/1 (Ashgrove Rd West W/B)	U	E	2	3	4.2	Geom	-	3.15	0.00	Y	Arm 2 Ahead	Inf
4/2 (Ashgrove Rd West W/B)	O	E	2	3	60.0	Geom	-	3.15	0.00	N	Arm 10 Right	8.00
5/1 (Forresterhill Rd S/B)	U	H	2	3	60.0	Geom	-	3.75	0.00	Y	Arm 2 Right	10.00
6/1 (Internal Link E/B)	U	F G	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 9 Left	11.00
6/2 (Internal Link E/B)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 10 Left	6.00
6/2 (Internal Link E/B)	U	F	2	3	60.0	Geom	-	3.00	0.00	N	Arm 9 Ahead	Inf
7/1 (Ashgrove Rd West Exit W/B)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Foresterhill Rd Exit S/B)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Ashgrove Rd West Exit E/B)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Foresterhill Rd Exit N/B)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM'	08:00	09:00	01:00	
2: 'PM'	17:00	18:00	01:00	

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'AM')

Traffic Flows, Desired

Desired Flow :

		Destination					Tot.
		A	B	C	D		
Origin	A	0	86	103	26	215	
	B	78	0	149	43	270	
	C	20	49	0	25	94	
	D	59	123	13	0	195	
	Tot.	157	258	265	94	774	

Traffic Lane Flows

Lane	Scenario 1: AM
Junction: Unnamed Junction	
1/1 (with short)	195(In) 182(Out)
1/2 (short)	13
2/1	252
2/2	69
3/1 (short)	25
3/2 (with short)	94(In) 69(Out)
4/1 (short)	192
4/2 (with short)	270(In) 78(Out)
5/1	215
6/1	79
6/2	172
7/1	94
8/1	265
9/1	258
10/1	157

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Ashgrove Rd West E/B)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashgrove Rd West E/B)	3.00	0.00	N	Arm 8 Right	9.00	100.0 %	1761	1761
2/1 (Internal Link W/B)	3.00	0.00	Y	Arm 8 Left	12.00	100.0 %	1702	1702
2/2 (Internal Link W/B)	3.00	0.00	N	Arm 7 Ahead	Inf	100.0 %	2055	2055
3/1 (Foresterhill Rd N/B)	3.75	0.00	Y	Arm 7 Left	7.00	100.0 %	1639	1639
3/2 (Foresterhill Rd N/B)	3.75	0.00	N	Arm 6 Right	12.00	100.0 %	1893	1893
4/1 (Ashgrove Rd West W/B)	3.15	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1930	1930
4/2 (Ashgrove Rd West W/B)	3.15	0.00	N	Arm 10 Right	8.00	100.0 %	1743	1743
5/1 (Forresterhill Rd S/B)	3.75	0.00	Y	Arm 2 Right	10.00	60.0 %	1739	1739
				Arm 9 Left	11.00	40.0 %		
6/1 (Internal Link E/B)	3.00	0.00	Y	Arm 10 Left	6.00	100.0 %	1532	1532
6/2 (Internal Link E/B)	3.00	0.00	N	Arm 9 Ahead	Inf	100.0 %	2055	2055
7/1 (Ashgrove Rd West Exit W/B Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Foresterhill Rd Exit S/B Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Ashgrove Rd West Exit E/B Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Foresterhill Rd Exit N/B Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM' (FG2: 'PM', Plan 2: 'PM')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	122	35	62	219
	B	145	0	46	78	269
	C	28	90	0	112	230
	D	47	137	9	0	193
	Tot.	220	349	90	252	911

Traffic Lane Flows

Lane	Scenario 2: PM
Junction: Unnamed Junction	
1/1 (with short)	193(In) 184(Out)
1/2 (short)	9
2/1	81
2/2	140
3/1 (short)	112
3/2 (with short)	230(In) 118(Out)
4/1 (short)	124
4/2 (with short)	269(In) 145(Out)
5/1	219
6/1	75
6/2	227
7/1	252
8/1	90
9/1	349
10/1	220

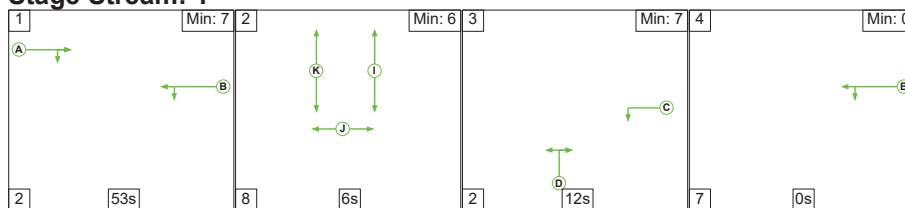
Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Ashgrove Rd West E/B)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashgrove Rd West E/B)	3.00	0.00	N	Arm 8 Right	9.00	100.0 %	1761	1761
2/1 (Internal Link W/B)	3.00	0.00	Y	Arm 8 Left	12.00	100.0 %	1702	1702
2/2 (Internal Link W/B)	3.00	0.00	N	Arm 7 Ahead	Inf	100.0 %	2055	2055
3/1 (Foresterhill Rd N/B)	3.75	0.00	Y	Arm 7 Left	7.00	100.0 %	1639	1639
3/2 (Foresterhill Rd N/B)	3.75	0.00	N	Arm 6 Right	12.00	100.0 %	1893	1893
4/1 (Ashgrove Rd West W/B)	3.15	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1930	1930
4/2 (Ashgrove Rd West W/B)	3.15	0.00	N	Arm 10 Right	8.00	100.0 %	1743	1743
5/1 (Forresterhill Rd S/B)	3.75	0.00	Y	Arm 2 Right	10.00	44.3 %	1742	1742
				Arm 9 Left	11.00	55.7 %		
6/1 (Internal Link E/B)	3.00	0.00	Y	Arm 10 Left	6.00	100.0 %	1532	1532
6/2 (Internal Link E/B)	3.00	0.00	N	Arm 9 Ahead	Inf	100.0 %	2055	2055
7/1 (Ashgrove Rd West Exit W/B Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Foresterhill Rd Exit S/B Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Ashgrove Rd West Exit E/B Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Foresterhill Rd Exit N/B Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'AM')

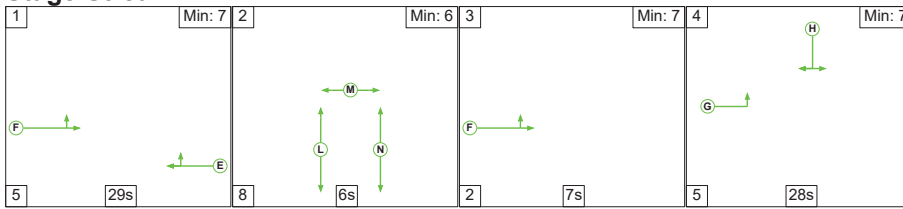
Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results

Stage Stream: 2



Stage Timings

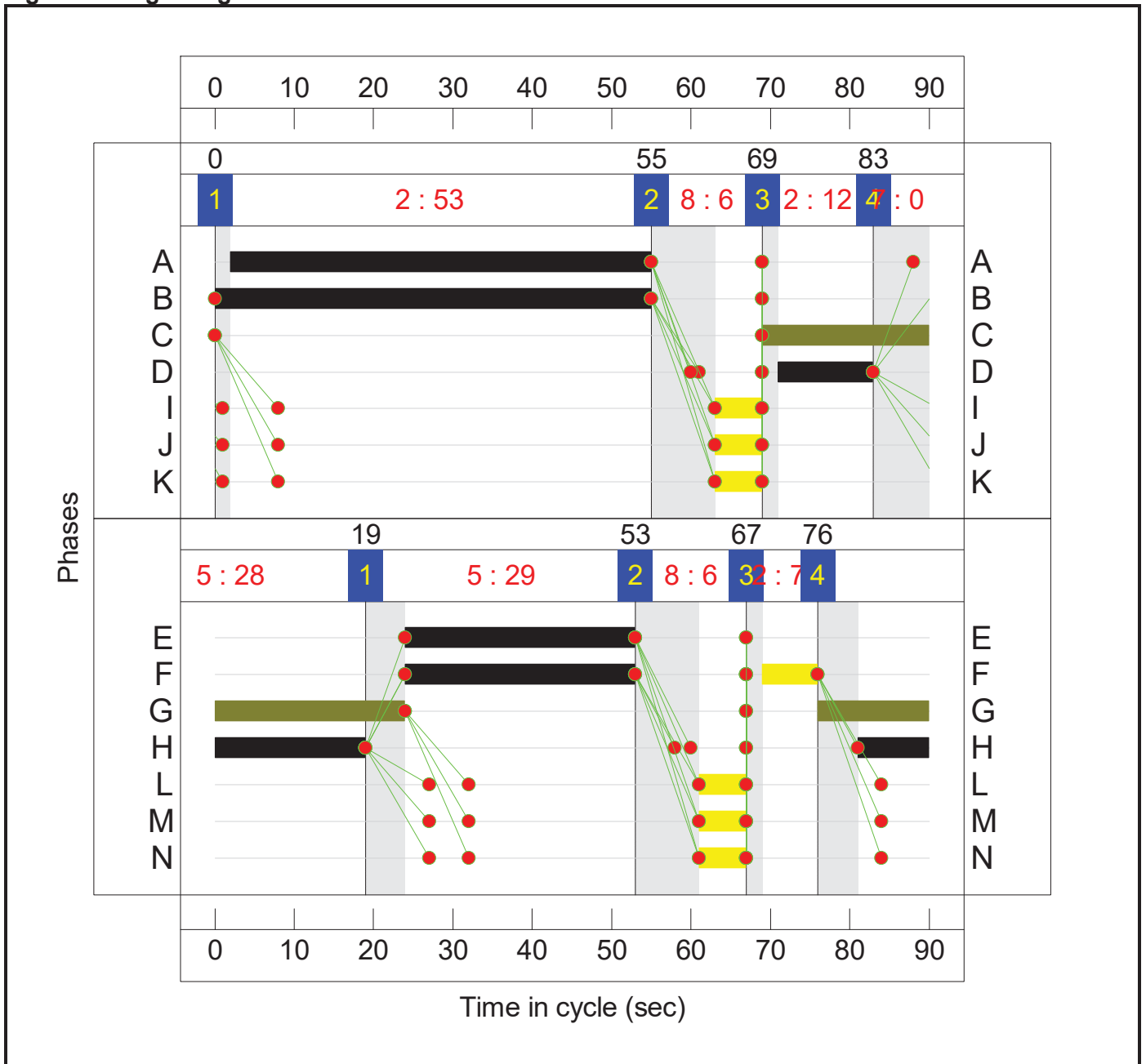
Stage Stream: 1

Stage	1	2	3	4
Duration	53	6	12	0
Change Point	0	55	69	83

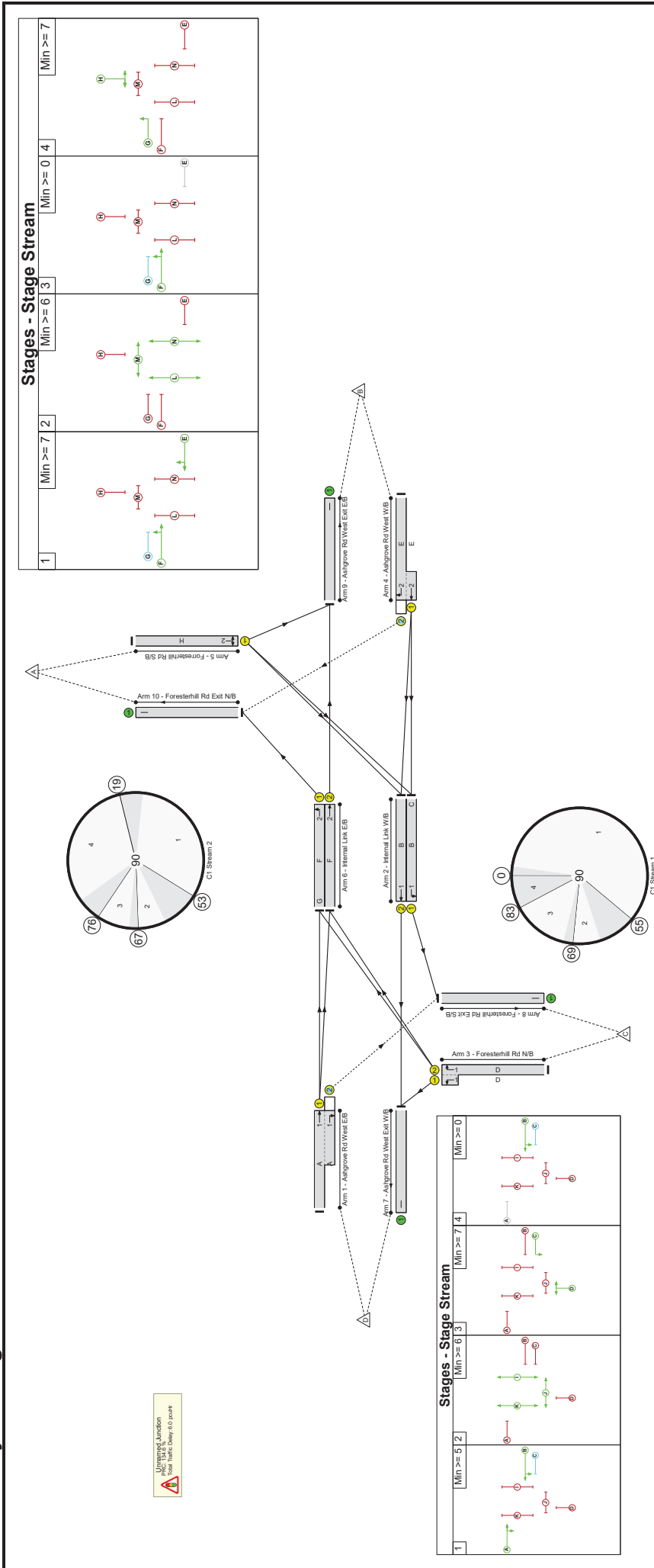
Stage Stream: 2

Stage	1	2	3	4
Duration	29	6	7	28
Change Point	19	53	67	76

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Foresterhill Road - Existing Layout	-	-	N/A	-	-	-	-	-	-	-	-	-	38.4%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	38.4%
1/1+1/2	Ashgrove Rd West E/B Ahead Right	U+O	1	N/A	A		1	53	-	195	1915:1761	1090+78	16.7 : 16.7%
2/1	Internal Link W/B Left	U	1	N/A	B	C	1	76	21	252	1702	1456	17.3%
2/2	Internal Link W/B Ahead	U	1	N/A	B		1	55	-	69	2055	1279	5.4%
3/2+3/1	Foresterhill Rd N/B Right Left	U	1	N/A	D		1	12	-	94	1893:1639	225+81	30.7 : 30.7%
4/2+4/1	Ashgrove Rd West W/B Ahead Right	O+U	2	N/A	E		1	29	-	270	1743:1930	206+506	37.9 : 37.9%
5/1	Foresterhill Rd S/B Right Left	U	2	N/A	H		1	28	-	215	1739	560	38.4%
6/1	Internal Link E/B Left	U	2	N/A	F	G	2	74	38	79	1532	1277	6.2%
6/2	Internal Link E/B Ahead	U	2	N/A	F		2	36	-	172	2055	868	19.8%
7/1	Ashgrove Rd West Exit W/B	U	N/A	N/A	-		-	-	-	94	Inf	Inf	0.0%
8/1	Foresterhill Rd Exit S/B	U	N/A	N/A	-		-	-	-	265	Inf	Inf	0.0%
9/1	Ashgrove Rd West Exit E/B	U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%
10/1	Foresterhill Rd Exit N/B	U	N/A	N/A	-		-	-	-	157	Inf	Inf	0.0%

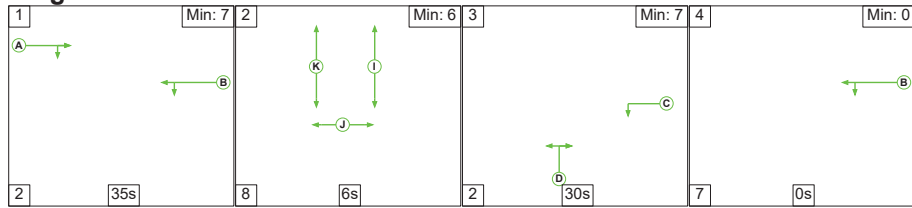
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Foresterhill Road - Existing Layout	-	-	91	0	0	4.7	1.2	0.1	6.0	-	-	-	-
Unnamed Junction	-	-	91	0	0	4.7	1.2	0.1	6.0	-	-	-	-
1/1+1/2	195	195	13	0	0	0.4	0.1	0.0	0.5	9.8	2.0	0.1	2.1
2/1	252	252	-	-	-	0.0	0.1	-	0.1	1.6	0.0	0.1	0.1
2/2	69	69	-	-	-	0.0	0.0	-	0.0	2.4	0.4	0.0	0.4
3/2+3/1	94	94	-	-	-	0.9	0.2	-	1.1	42.5	1.5	0.2	1.7
4/2+4/1	270	270	78	0	0	1.6	0.3	0.1	2.0	26.7	3.6	0.3	3.9
5/1	215	215	-	-	-	1.4	0.3	-	1.7	28.8	4.1	0.3	4.4
6/1	79	79	-	-	-	0.0	0.0	-	0.1	2.7	0.3	0.0	0.3
6/2	172	172	-	-	-	0.3	0.1	-	0.5	9.5	1.5	0.1	1.6
7/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	157	157	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1	Stream: 1	PRC for Signalled Lanes (%)	193.1	Total Delay for Signalled Lanes (pcuHr):	1.79	Cycle Time (s):	90						
C1	Stream: 2	PRC for Signalled Lanes (%)	134.6	Total Delay for Signalled Lanes (pcuHr):	4.23	Cycle Time (s):	90						
		PRC Over All Lanes (%)	134.6	Total Delay Over All Lanes (pcuHr):	6.03								

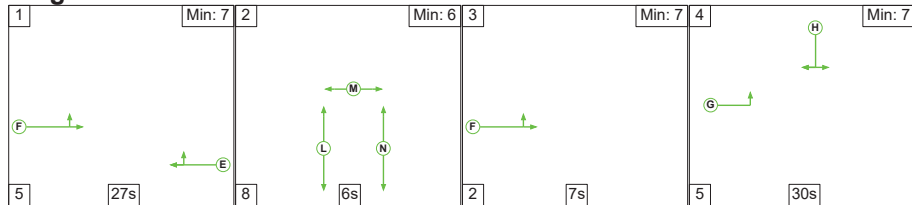
Full Input Data And Results
Scenario 2: 'PM' (FG2: 'PM', Plan 2: 'PM')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

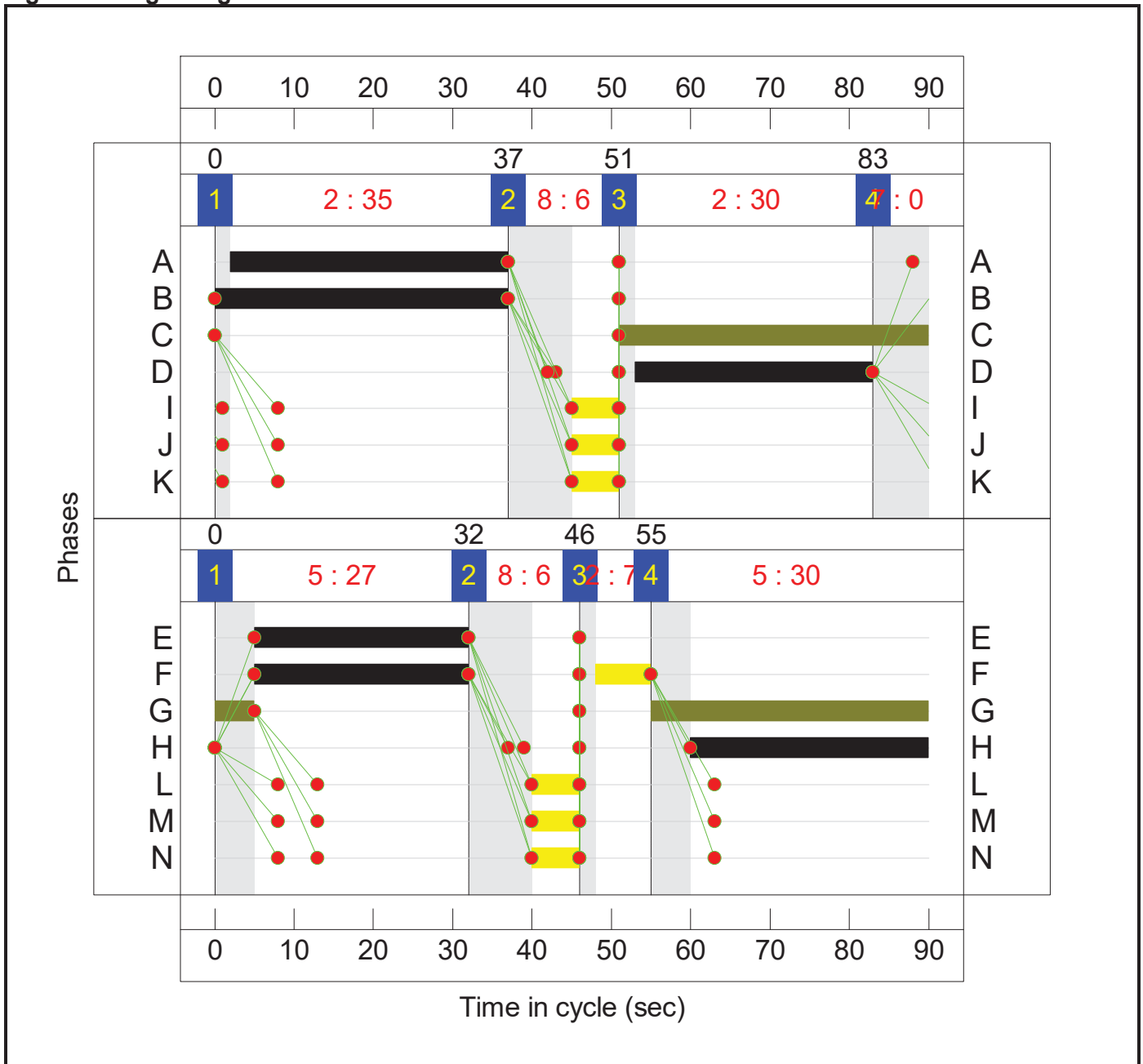
Stage Stream: 1

Stage	1	2	3	4
Duration	35	6	30	0
Change Point	0	37	51	83

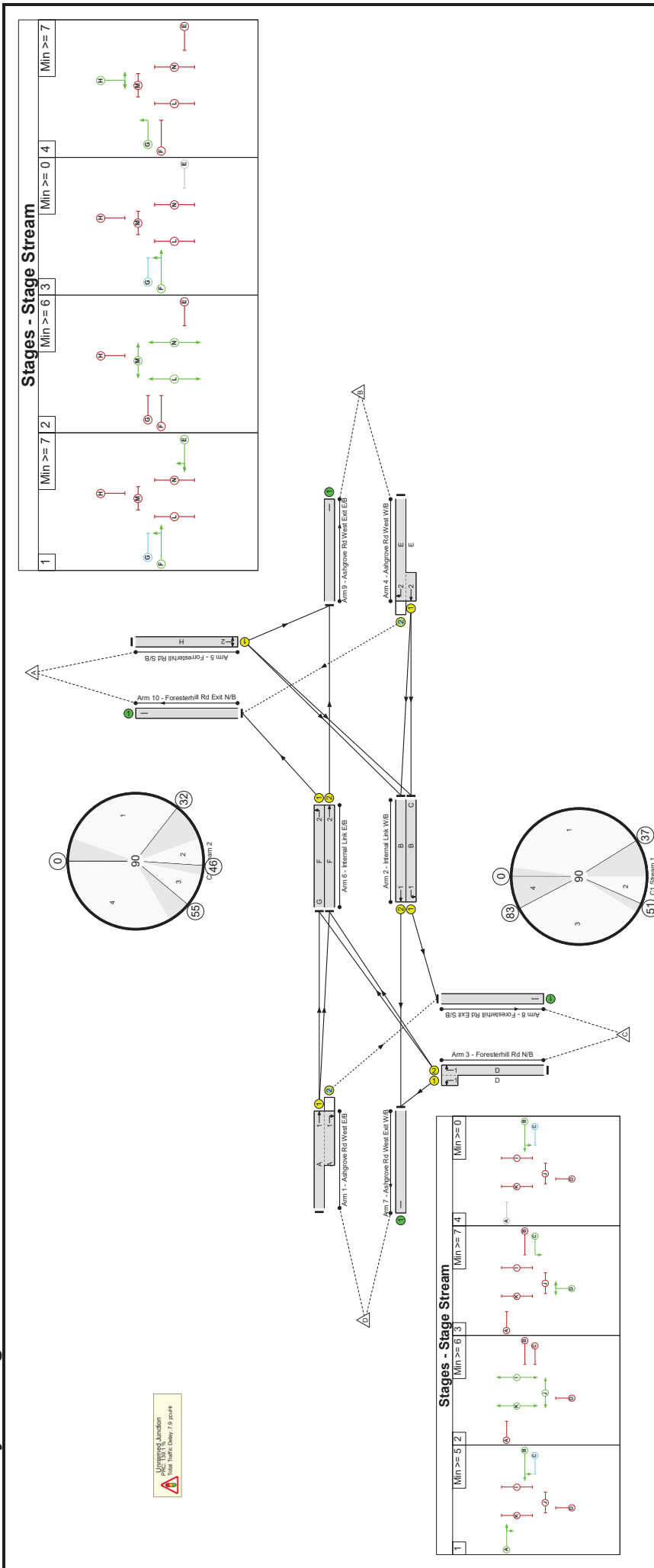
Stage Stream: 2

Stage	1	2	3	4
Duration	27	6	7	30
Change Point	0	32	46	55

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Foresterhill Road - Existing Layout	-	-	N/A	-	-	-	-	-	-	-	-	-	37.6%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	37.6%
1/1+1/2	Ashgrove Rd West E/B Ahead Right	U+O	1	N/A	A		1	35	-	193	1915:1761	744+36	24.7 : 24.7%
2/1	Internal Link W/B Left	U	1	N/A	B	C	1	76	39	81	1702	1456	5.6%
2/2	Internal Link W/B Ahead	U	1	N/A	B		1	37	-	140	2055	868	16.1%
3/2+3/1	Foresterhill Rd N/B Right Left	U	1	N/A	D		1	30	-	230	1893:1639	364+346	32.4 : 32.4%
4/2+4/1	Ashgrove Rd West W/B Ahead Right	O+U	2	N/A	E		1	27	-	269	1743:1930	385+329	37.6 : 37.6%
5/1	Foresterhill Rd S/B Right Left	U	2	N/A	H		1	30	-	219	1742	600	36.5%
6/1	Internal Link E/B Left	U	2	N/A	F	G	2	74	40	75	1532	1277	5.9%
6/2	Internal Link E/B Ahead	U	2	N/A	F		2	34	-	227	2055	822	27.6%
7/1	Ashgrove Rd West Exit W/B	U	N/A	N/A	-		-	-	-	252	Inf	Inf	0.0%
8/1	Foresterhill Rd Exit S/B	U	N/A	N/A	-		-	-	-	90	Inf	Inf	0.0%
9/1	Ashgrove Rd West Exit E/B	U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%
10/1	Foresterhill Rd Exit N/B	U	N/A	N/A	-		-	-	-	220	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Foresterhill Road - Existing Layout	-	-	154	0	0	6.4	1.3	0.2	7.9	-	-	-	-
Unnamed Junction	-	-	154	0	0	6.4	1.3	0.2	7.9	-	-	-	-
1/1+1/2	193	193	9	0	0	1.0	0.2	0.0	1.1	21.0	3.0	0.2	3.2
2/1	81	81	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0
2/2	140	140	-	-	-	0.4	0.1	-	0.5	11.6	1.5	0.1	1.6
3/2+3/1	230	230	-	-	-	1.3	0.2	-	1.6	24.4	2.0	0.2	2.3
4/2+4/1	269	269	145	0	0	1.7	0.3	0.2	2.2	29.5	2.8	0.3	3.1
5/1	219	219	-	-	-	1.3	0.3	-	1.6	26.8	4.1	0.3	4.4
6/1	75	75	-	-	-	0.1	0.0	-	0.1	4.6	0.7	0.0	0.7
6/2	227	227	-	-	-	0.6	0.2	-	0.8	13.2	2.4	0.2	2.5
7/1	252	252	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	90	90	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	220	220	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1 Stream: 1 PRC for Signalled Lanes (%): 178.0 Total Delay for Signalled Lanes (pcuHr): 3.17 Cycle Time (s): 90</p> <p>C1 Stream: 2 PRC for Signalled Lanes (%): 139.1 Total Delay for Signalled Lanes (pcuHr): 4.77 Cycle Time (s): 90</p> <p>PRC Over All Lanes (%): 139.1 Total Delay Over All Lanes (pcuHr): 7.94</p>													

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.1.1519 © Copyright TRL Software Limited, 2021
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Filename: Linked Compact.j10

Path: C:\Users\JOLL2764\OneDrive Corp\OneDrive - SNC Lavalin Group\Ashgrove\Feasibility\Work\Traffic Models\Option Testing\Foresterhill Rd\2022-08-03 Arcady Compacts

Report generation date: 06/09/2022 12:15:04

»Supplied Flows - 2022, AM

»Supplied Flows - 2022, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
Supplied Flows - 2022								
1 - West Roundabout - 1 - ARW Internal (east)	0.9	8.96	0.47	34 % [1 - West Roundabout - 1 - ARW Internal (east)]	0.5	6.88	0.32	32 % [2 - East Roundabout - 1 - ARW Internal (west)]
1 - West Roundabout - 2 - Foresterhill (south)	0.2	6.07	0.15		0.6	8.81	0.38	
1 - West Roundabout - 3 - ARW (west)	0.4	6.98	0.29		0.4	7.31	0.30	
2 - East Roundabout - 1 - ARW Internal (west)	0.6	7.87	0.38		0.9	9.77	0.47	
2 - East Roundabout - 2 - Foresterhill (north)	0.5	8.03	0.35		0.6	8.71	0.37	
2 - East Roundabout - 3 - ARW (east)	0.7	9.00	0.43		0.7	8.48	0.41	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Foresterhill Road - Compact Roundabout
Location	Ashgrove Road, Aberdeen
Site number	
Date	03/08/2022
Version	
Status	(new file)
Identifier	
Client	Aberdeen City Council
Jobnumber	
Enumerator	WSATKINSJOLL2764
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	00:00	01:30	15	✓
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Supplied Flows	✓	100.000	100.000

Supplied Flows - 2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	1 - West Roundabout - 1 - ARW Internal (east)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	2 - East Roundabout - 1 - ARW Internal (west)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	1 - West Roundabout	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Vehicle Mix	2 - East Roundabout	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	West Roundabout	Standard Roundabout		1, 2, 3	7.88	A
2	East Roundabout	Standard Roundabout		1, 2, 3	8.33	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	34	1 - West Roundabout - 1 - ARW Internal (east)	8.13	A

Arms

Arms

Junction	Arm	Name	Description	No give-way line
1 - West Roundabout	1	ARW Internal (east)		
	2	Foresterhill (south)		
	3	ARW (west)		
2 - East Roundabout	1	ARW Internal (west)		
	2	Foresterhill (north)		
	3	ARW (east)		

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - West Roundabout	1 - ARW Internal (east)	3.00	3.00	0.0	5.0	20.0	32.0		
	2 - Foresterhill (south)	3.00	3.00	0.0	4.0	20.0	31.0		
	3 - ARW (west)	3.00	3.00	0.0	5.0	20.0	32.0		
2 - East Roundabout	1 - ARW Internal (west)	3.00	3.00	0.0	5.0	20.0	31.0		
	2 - Foresterhill (north)	3.00	3.00	0.0	5.0	20.0	31.0		
	3 - ARW (east)	3.00	3.00	0.0	5.0	20.0	32.0		

Zebra Crossings

Junction	Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)
1 - West Roundabout	1 - ARW Internal (east)	1.00	1.00		Distance	6.00	4.29
	2 - Foresterhill (south)	1.00	1.00		Distance	6.00	4.29
	3 - ARW (west)	1.00	1.00		Distance	6.00	4.29
2 - East Roundabout	1 - ARW Internal (west)	1.00	1.00		Distance	6.00	4.29
	2 - Foresterhill (north)	1.00	1.00		Distance	6.00	4.29
	3 - ARW (east)	1.00	1.00		Distance	6.00	4.29

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - West Roundabout	1 - ARW Internal (east)	0.424	769
	2 - Foresterhill (south)	0.401	728
	3 - ARW (west)	0.424	769
2 - East Roundabout	1 - ARW Internal (west)	0.426	772
	2 - Foresterhill (north)	0.426	772
	3 - ARW (east)	0.424	769

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - West Roundabout	1 - ARW Internal (east)	2	1	Simple (vertical queueing)	Normal	0	100.00	
2 - East Roundabout	1 - ARW Internal (west)	1	1	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - West Roundabout	1 - ARW Internal (east)	✓				
	2 - Foresterhill (south)		ONE HOUR	✓	94	100.000
	3 - ARW (west)		ONE HOUR	✓	195	100.000
2 - East Roundabout	1 - ARW Internal (west)	✓				
	2 - Foresterhill (north)		ONE HOUR	✓	215	100.000
	3 - ARW (east)		ONE HOUR	✓	270	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - West Roundabout	1 - ARW Internal (east)	[ONEHOUR]	29.00
	2 - Foresterhill (south)	[ONEHOUR]	15.00
	3 - ARW (west)	[ONEHOUR]	7.00
2 - East Roundabout	1 - ARW Internal (west)	[ONEHOUR]	29.00
	2 - Foresterhill (north)	[ONEHOUR]	7.00
	3 - ARW (east)	[ONEHOUR]	15.00

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - ARW Internal (east)	2 - Foresterhill (south)	3 - ARW (west)
1 - West Roundabout	From	1 - ARW Internal (east)	0	252
		2 - Foresterhill (south)	69	0
		3 - ARW (west)	182	13
				0

Demand (PCU/hr)

		To		
		1 - ARW Internal (west)	2 - Foresterhill (north)	3 - ARW (east)
2 - East Roundabout	From	1 - ARW Internal (west)	0	79
		2 - Foresterhill (north)	129	0
		3 - ARW (east)	192	78
				0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - ARW Internal (east)	2 - Foresterhill (south)	3 - ARW (west)
1 - West Roundabout	From	1 - ARW Internal (east)	0	0
		2 - Foresterhill (south)	0	0
		3 - ARW (west)	0	0
				0

Heavy Vehicle Percentages

		To		
		1 - ARW Internal (west)	2 - Foresterhill (north)	3 - ARW (east)
2 - East Roundabout	From	1 - ARW Internal (west)	0	0
		2 - Foresterhill (north)	0	0
		3 - ARW (east)	0	0
				0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - West Roundabout	1 - ARW Internal (east)	0.47	8.96	0.9	A	294	441
	2 - Foresterhill (south)	0.15	6.07	0.2	A	86	129
	3 - ARW (west)	0.29	6.98	0.4	A	179	268
2 - East Roundabout	1 - ARW Internal (west)	0.38	7.87	0.6	A	230	345
	2 - Foresterhill (north)	0.35	8.03	0.5	A	197	296
	3 - ARW (east)	0.43	9.00	0.7	A	248	372

Main Results for each time segment

00:00 - 00:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	240	60	10	21.83	762	0.315	238	188	0.0	0.5	6.847	A
	2 - Foresterhill (south)	71	18	51	11.29	707	0.100	70	197	0.0	0.1	5.648	A
	3 - ARW (west)	147	37	52	5.27	745	0.197	146	70	0.0	0.2	6.000	A
2 - East Roundabout	1 - ARW Internal (west)	188	47	58	21.83	747	0.251	186	240	0.0	0.3	6.405	A
	2 - Foresterhill (north)	162	40	128	5.27	715	0.226	161	117	0.0	0.3	6.476	A
	3 - ARW (east)	203	51	96	11.29	724	0.281	202	192	0.0	0.4	6.878	A

00:15 - 00:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	288	72	12	26.07	759	0.379	287	225	0.5	0.6	7.618	A
	2 - Foresterhill (south)	85	21	62	13.48	703	0.120	84	237	0.1	0.1	5.821	A
	3 - ARW (west)	175	44	62	6.29	739	0.237	175	84	0.2	0.3	6.381	A
2 - East Roundabout	1 - ARW Internal (west)	225	56	70	26.07	741	0.304	225	288	0.3	0.4	6.962	A
	2 - Foresterhill (north)	193	48	154	6.29	703	0.275	193	141	0.3	0.4	7.057	A
	3 - ARW (east)	243	61	116	13.48	713	0.340	242	231	0.4	0.5	7.640	A

00:30 - 00:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	352	88	14	31.93	755	0.467	351	276	0.6	0.9	8.893	A
	2 - Foresterhill (south)	103	26	76	16.52	697	0.148	103	290	0.1	0.2	6.061	A
	3 - ARW (west)	215	54	76	7.71	730	0.294	214	103	0.3	0.4	6.969	A
2 - East Roundabout	1 - ARW Internal (west)	276	69	86	31.93	734	0.376	275	352	0.4	0.6	7.842	A
	2 - Foresterhill (north)	237	59	189	7.71	686	0.345	236	172	0.4	0.5	7.999	A
	3 - ARW (east)	297	74	142	16.52	697	0.426	296	283	0.5	0.7	8.960	A

00:45 - 01:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	353	88	14	31.93	755	0.468	353	276	0.9	0.9	8.961	A
	2 - Foresterhill (south)	103	26	76	16.52	697	0.149	103	292	0.2	0.2	6.065	A
	3 - ARW (west)	215	54	76	7.71	730	0.294	215	103	0.4	0.4	6.981	A
2 - East Roundabout	1 - ARW Internal (west)	276	69	86	31.93	733	0.377	276	353	0.6	0.6	7.874	A
	2 - Foresterhill (north)	237	59	189	7.71	685	0.345	237	173	0.5	0.5	8.027	A
	3 - ARW (east)	297	74	142	16.52	697	0.426	297	284	0.7	0.7	9.002	A

01:00 - 01:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	290	72	12	26.07	759	0.381	291	226	0.9	0.6	7.695	A
	2 - Foresterhill (south)	85	21	62	13.48	703	0.120	85	240	0.2	0.1	5.829	A
	3 - ARW (west)	175	44	62	6.29	739	0.237	176	85	0.4	0.3	6.396	A
2 - East Roundabout	1 - ARW Internal (west)	226	57	70	26.07	741	0.305	227	290	0.6	0.4	7.008	A
	2 - Foresterhill (north)	193	48	155	6.29	702	0.275	194	142	0.5	0.4	7.092	A
	3 - ARW (east)	243	61	116	13.48	713	0.341	244	233	0.7	0.5	7.691	A

01:15 - 01:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	242	61	10	21.83	762	0.318	243	189	0.6	0.5	6.946	A
	2 - Foresterhill (south)	71	18	52	11.29	707	0.100	71	200	0.1	0.1	5.663	A
	3 - ARW (west)	147	37	52	5.27	745	0.197	147	71	0.3	0.2	6.029	A
2 - East Roundabout	1 - ARW Internal (west)	189	47	59	21.83	746	0.254	190	242	0.4	0.3	6.470	A
	2 - Foresterhill (north)	162	40	130	5.27	714	0.227	162	119	0.4	0.3	6.523	A
	3 - ARW (east)	203	51	97	11.29	723	0.281	204	195	0.5	0.4	6.936	A

Supplied Flows - 2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	1 - West Roundabout - 1 - ARW Internal (east)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	2 - East Roundabout - 1 - ARW Internal (west)	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	1 - West Roundabout	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Vehicle Mix	2 - East Roundabout	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	West Roundabout	Standard Roundabout		1, 2, 3	7.70	A
2	East Roundabout	Standard Roundabout		1, 2, 3	9.04	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	32	2 - East Roundabout - 1 - ARW Internal (west)	8.44	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - West Roundabout	1 - ARW Internal (east)	2	1	Simple (vertical queueing)	Normal	0	100.00	
2 - East Roundabout	1 - ARW Internal (west)	1	1	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - West Roundabout	1 - ARW Internal (east)	✓				
	2 - Foresterhill (south)		ONE HOUR	✓	229	100.000
	3 - ARW (west)		ONE HOUR	✓	193	100.000
2 - East Roundabout	1 - ARW Internal (west)	✓				
	2 - Foresterhill (north)		ONE HOUR	✓	218	100.000
	3 - ARW (east)		ONE HOUR	✓	268	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - West Roundabout	1 - ARW Internal (east)	[ONEHOUR]	16.00
	2 - Foresterhill (south)	[ONEHOUR]	7.00
	3 - ARW (west)	[ONEHOUR]	11.00
2 - East Roundabout	1 - ARW Internal (west)	[ONEHOUR]	24.00
	2 - Foresterhill (north)	[ONEHOUR]	7.00
	3 - ARW (east)	[ONEHOUR]	11.00

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - ARW Internal (east)	2 - Foresterhill (south)	3 - ARW (west)
1 - West Roundabout	From			
		1 - ARW Internal (east)	0	81
		2 - Foresterhill (south)	117	0
		3 - ARW (west)	184	9

Demand (PCU/hr)

		To		

2 - East Roundabout	From		1 - ARW Internal (west)	2 - Foresterhill (north)	3 - ARW (east)
		1 - ARW Internal (west)	0	75	227
		2 - Foresterhill (north)	96	0	122
		3 - ARW (east)	123	145	0

Vehicle Mix

Heavy Vehicle Percentages

1 - West Roundabout	From	To			
			1 - ARW Internal (east)	2 - Foresterhill (south)	3 - ARW (west)
		1 - ARW Internal (east)	0	0	0
		2 - Foresterhill (south)	0	0	0
	3 - ARW (west)	0	0	0	

Heavy Vehicle Percentages

2 - East Roundabout	From	To			
			1 - ARW Internal (west)	2 - Foresterhill (north)	3 - ARW (east)
		1 - ARW Internal (west)	0	0	0
		2 - Foresterhill (north)	0	0	0
	3 - ARW (east)	0	0	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - West Roundabout	1 - ARW Internal (east)	0.32	6.88	0.5	A	201	301
	2 - Foresterhill (south)	0.38	8.81	0.6	A	210	315
	3 - ARW (west)	0.30	7.31	0.4	A	177	266
2 - East Roundabout	1 - ARW Internal (west)	0.47	9.77	0.9	A	276	414
	2 - Foresterhill (north)	0.37	8.71	0.6	A	200	300
	3 - ARW (east)	0.41	8.48	0.7	A	246	369

Main Results for each time segment

00:00 - 00:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	164	41	7	12.05	766	0.214	163	225	0.0	0.3	5.952	A
	2 - Foresterhill (south)	172	43	103	5.27	684	0.252	171	66	0.0	0.3	6.995	A
	3 - ARW (west)	145	36	87	8.28	728	0.200	144	187	0.0	0.2	6.155	A
2 - East Roundabout	1 - ARW Internal (west)	225	56	108	18.07	724	0.311	223	164	0.0	0.4	7.159	A
	2 - Foresterhill (north)	164	41	168	5.27	696	0.236	163	164	0.0	0.3	6.742	A
	3 - ARW (east)	202	50	72	8.28	737	0.274	200	259	0.0	0.4	6.688	A

00:15 - 00:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	196	49	8	14.38	765	0.257	196	270	0.3	0.3	6.321	A
	2 - Foresterhill (south)	206	51	124	6.29	674	0.305	205	80	0.3	0.4	7.668	A
	3 - ARW (west)	174	43	105	9.89	719	0.241	173	225	0.2	0.3	6.597	A
2 - East Roundabout	1 - ARW Internal (west)	270	68	130	21.58	714	0.378	270	196	0.4	0.6	8.085	A
	2 - Foresterhill (north)	196	49	203	6.29	678	0.289	196	197	0.3	0.4	7.456	A
	3 - ARW (east)	241	60	86	9.89	730	0.330	240	312	0.4	0.5	7.350	A

00:30 - 00:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	240	60	10	17.62	764	0.315	240	331	0.3	0.5	6.858	A
	2 - Foresterhill (south)	252	63	152	7.71	661	0.381	251	98	0.4	0.6	8.772	A
	3 - ARW (west)	212	53	128	12.11	705	0.302	212	275	0.3	0.4	7.300	A
2 - East Roundabout	1 - ARW Internal (west)	331	83	159	26.42	700	0.472	330	240	0.6	0.9	9.686	A
	2 - Foresterhill (north)	240	60	248	7.71	654	0.367	239	241	0.4	0.6	8.670	A
	3 - ARW (east)	295	74	105	12.11	720	0.410	294	382	0.5	0.7	8.442	A

00:45 - 01:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	241	60	10	17.62	764	0.315	241	331	0.5	0.5	6.877	A
	2 - Foresterhill (south)	252	63	153	7.71	661	0.382	252	98	0.6	0.6	8.809	A

	3 - ARW (west)	212	53	129	12.11	705	0.302	212	276	0.4	0.4	7.314	A
2 - East Roundabout	1 - ARW Internal (west)	331	83	160	26.42	700	0.474	331	241	0.9	0.9	9.767	A
	2 - Foresterhill (north)	240	60	249	7.71	653	0.368	240	242	0.6	0.6	8.714	A
	3 - ARW (east)	295	74	106	12.11	720	0.410	295	383	0.7	0.7	8.475	A

01:00 - 01:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	198	49	8	14.38	765	0.258	198	271	0.5	0.4	6.349	A
	2 - Foresterhill (south)	206	51	125	6.29	674	0.305	207	81	0.6	0.4	7.713	A
	3 - ARW (west)	174	43	106	9.89	718	0.242	174	226	0.4	0.3	6.619	A
2 - East Roundabout	1 - ARW Internal (west)	271	68	131	21.58	714	0.380	272	198	0.9	0.6	8.176	A
	2 - Foresterhill (north)	196	49	205	6.29	677	0.290	197	198	0.6	0.4	7.508	A
	3 - ARW (east)	241	60	87	9.89	730	0.330	242	315	0.7	0.5	7.388	A

01:15 - 01:30

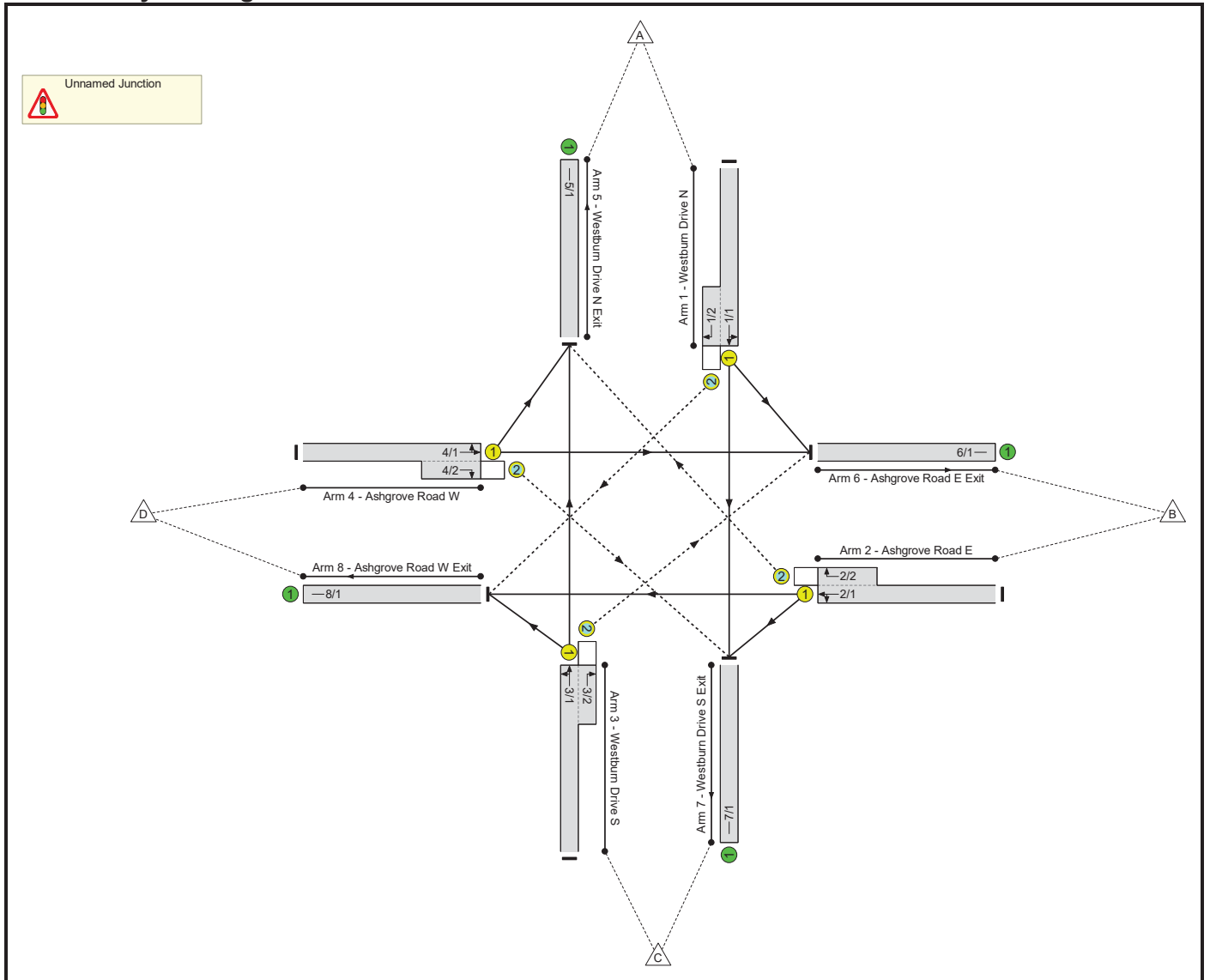
Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - West Roundabout	1 - ARW Internal (east)	165	41	7	12.05	766	0.216	166	227	0.4	0.3	5.998	A
	2 - Foresterhill (south)	172	43	105	5.27	684	0.252	173	67	0.4	0.3	7.057	A
	3 - ARW (west)	145	36	88	8.28	728	0.200	146	189	0.3	0.3	6.185	A
2 - East Roundabout	1 - ARW Internal (west)	227	57	109	18.07	724	0.314	228	165	0.6	0.5	7.263	A
	2 - Foresterhill (north)	164	41	171	5.27	694	0.236	165	166	0.4	0.3	6.805	A
	3 - ARW (east)	202	50	72	8.28	737	0.274	202	263	0.5	0.4	6.743	A

Full Input Data And Results
Full Input Data And Results

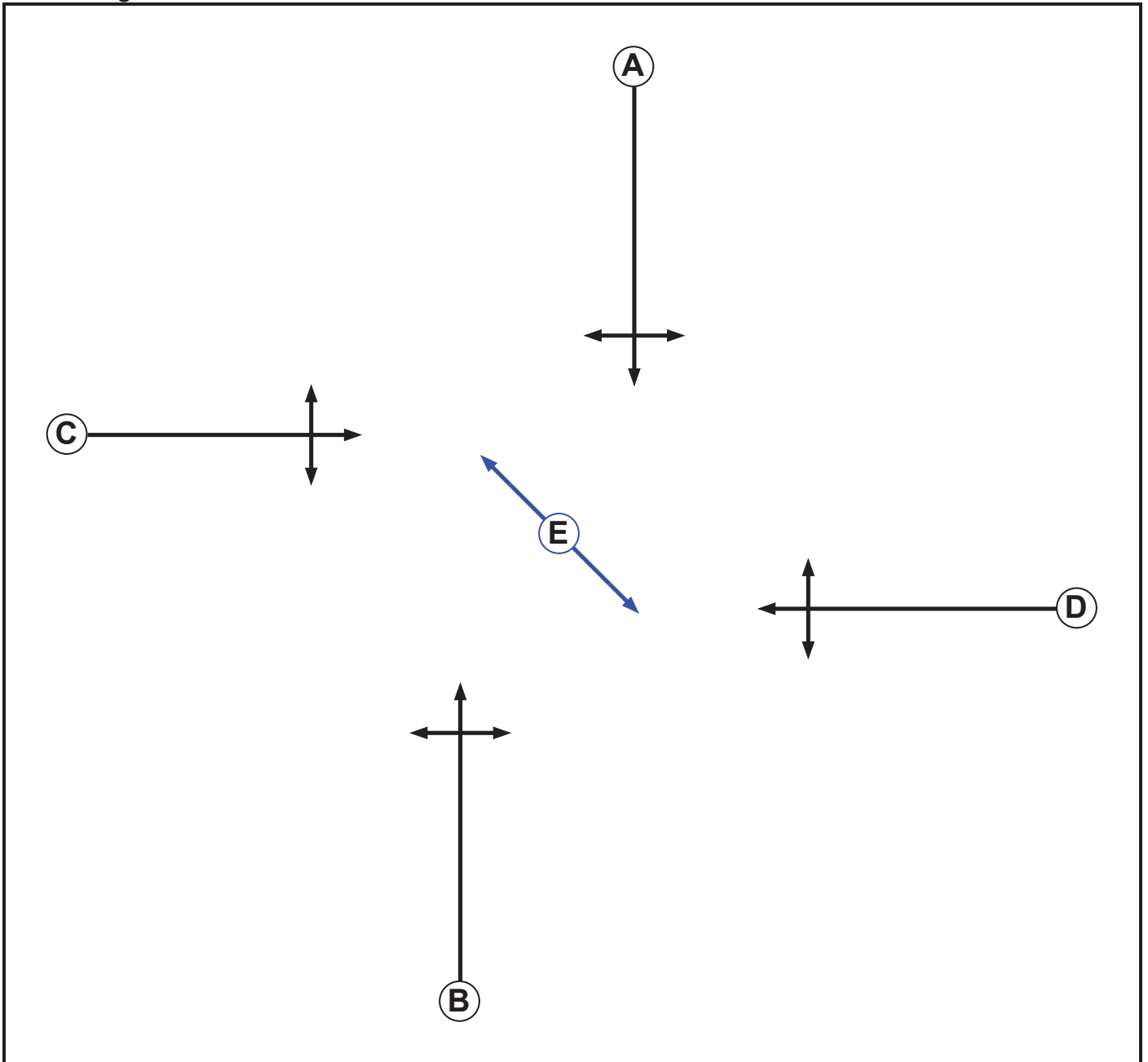
User and Project Details

Project:	Ashgrove Connects
Title:	Westburn Drive - Existing Layout
Location:	
Client:	Aberdeen City Council
Site Ref(s):	3
Date Completed:	12/08/2022
Checked By:	KF
Checked By Date:	16/08/2022
Additional detail:	
File name:	2022-02-21 Westburn Dr Existing.lsg3x
Author:	C Jolly
Company:	Atkins
Address:	10 Canning Street, Edinburgh, EH3 8EG

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		10	10

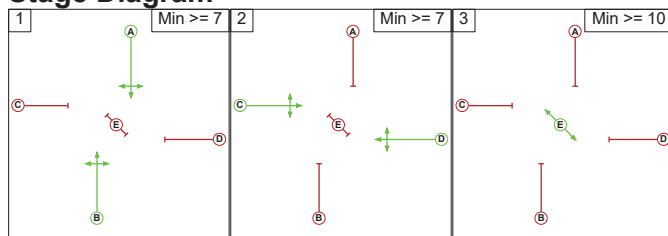
Phase Intergreens Matrix

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A	-	-	5	5	8
	B	-	-	5	5	8
	C	5	5	-	-	8
	D	5	5	-	-	8
	E	10	10	10	10	-

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C D
3	E

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1	-	5	8
	2	5	-	8
	3	10	10	-

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Westburn Drive N)	8/1 (Right)	1439	0	3/1	1.09	All	2.00	-	0.50	2	2.00
				3/2	1.09	All					
2/2 (Ashgrove Road E)	5/1 (Right)	1439	0	4/1	1.09	All	2.00	-	0.50	2	2.00
3/2 (Westburn Drive S)	6/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					
4/2 (Ashgrove Road W)	7/1 (Right)	1439	0	2/1	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Westburn Drive N)	U	A	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 6 Left	Inf
											Arm 7 Ahead	Inf
1/2 (Westburn Drive N)	O	A	2	3	5.0	Geom	-	2.50	0.00	N	Arm 8 Right	Inf
2/1 (Ashgrove Road E)	U	D	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 7 Left	Inf
											Arm 8 Ahead	Inf
2/2 (Ashgrove Road E)	O	D	2	3	5.0	Geom	-	2.50	0.00	N	Arm 5 Right	Inf
3/1 (Westburn Drive S)	U	B	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	Inf
3/2 (Westburn Drive S)	O	B	2	3	5.0	Geom	-	2.75	0.00	N	Arm 6 Right	Inf
4/1 (Ashgrove Road W)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	Inf
											Arm 6 Ahead	Inf
4/2 (Ashgrove Road W)	O	C	2	3	5.0	Geom	-	3.00	0.00	N	Arm 7 Right	Inf
5/1 (Westburn Drive N Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Ashgrove Road E Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Westburn Drive S Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Ashgrove Road W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM'	08:00	09:00	01:00	
2: 'PM'	17:00	18:00	01:00	

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'Supplied / Existing')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	112	395	155	662
	B	93	0	26	53	172
	C	371	37	0	63	471
	D	57	99	78	0	234
	Tot.	521	248	499	271	1539

Traffic Lane Flows

Lane	Scenario 1: AM
Junction: Unnamed Junction	
1/1 (with short)	662(In) 507(Out)
1/2 (short)	155
2/1 (with short)	172(In) 79(Out)
2/2 (short)	93
3/1 (with short)	471(In) 434(Out)
3/2 (short)	37
4/1 (with short)	234(In) 156(Out)
4/2 (short)	78
5/1	521
6/1	248
7/1	499
8/1	271

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Westburn Drive N)	2.50	0.00	Y	Arm 6 Left	Inf	22.1 %	1865	1865
				Arm 7 Ahead	Inf	77.9 %		
1/2 (Westburn Drive N)	2.50	0.00	N	Arm 8 Right	Inf	100.0 %	2005	2005
2/1 (Ashgrove Road E)	2.50	0.00	Y	Arm 7 Left	Inf	32.9 %	1865	1865
				Arm 8 Ahead	Inf	67.1 %		
2/2 (Ashgrove Road E)	2.50	0.00	N	Arm 5 Right	Inf	100.0 %	2005	2005
3/1 (Westburn Drive S)	2.75	0.00	Y	Arm 5 Ahead	Inf	85.5 %	1890	1890
				Arm 8 Left	Inf	14.5 %		
3/2 (Westburn Drive S)	2.75	0.00	N	Arm 6 Right	Inf	100.0 %	2030	2030
4/1 (Ashgrove Road W)	3.00	0.00	Y	Arm 5 Left	Inf	36.5 %	1915	1915
				Arm 6 Ahead	Inf	63.5 %		
4/2 (Ashgrove Road W)	3.00	0.00	N	Arm 7 Right	Inf	100.0 %	2055	2055
5/1 (Westburn Drive N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ashgrove Road E Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Westburn Drive S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Ashgrove Road W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM' (FG2: 'PM', Plan 1: 'Supplied / Existing')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	81	478	84	643
	B	70	0	38	71	179
	C	443	110	0	103	656
	D	105	160	92	0	357
	Tot.	618	351	608	258	1835

Traffic Lane Flows

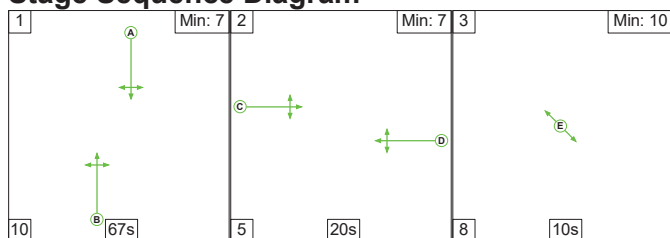
Lane	Scenario 2: PM
Junction: Unnamed Junction	
1/1 (with short)	643(In) 559(Out)
1/2 (short)	84
2/1 (with short)	179(In) 109(Out)
2/2 (short)	70
3/1 (with short)	656(In) 546(Out)
3/2 (short)	110
4/1 (with short)	357(In) 265(Out)
4/2 (short)	92
5/1	618
6/1	351
7/1	608
8/1	258

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Westburn Drive N)	2.50	0.00	Y	Arm 6 Left	Inf	14.5 %	1865	1865
				Arm 7 Ahead	Inf	85.5 %		
1/2 (Westburn Drive N)	2.50	0.00	N	Arm 8 Right	Inf	100.0 %	2005	2005
2/1 (Ashgrove Road E)	2.50	0.00	Y	Arm 7 Left	Inf	34.9 %	1865	1865
				Arm 8 Ahead	Inf	65.1 %		
2/2 (Ashgrove Road E)	2.50	0.00	N	Arm 5 Right	Inf	100.0 %	2005	2005
3/1 (Westburn Drive S)	2.75	0.00	Y	Arm 5 Ahead	Inf	81.1 %	1890	1890
				Arm 8 Left	Inf	18.9 %		
3/2 (Westburn Drive S)	2.75	0.00	N	Arm 6 Right	Inf	100.0 %	2030	2030
4/1 (Ashgrove Road W)	3.00	0.00	Y	Arm 5 Left	Inf	39.6 %	1915	1915
				Arm 6 Ahead	Inf	60.4 %		
4/2 (Ashgrove Road W)	3.00	0.00	N	Arm 7 Right	Inf	100.0 %	2055	2055
5/1 (Westburn Drive N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ashgrove Road E Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Westburn Drive S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Ashgrove Road W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'Supplied / Existing')

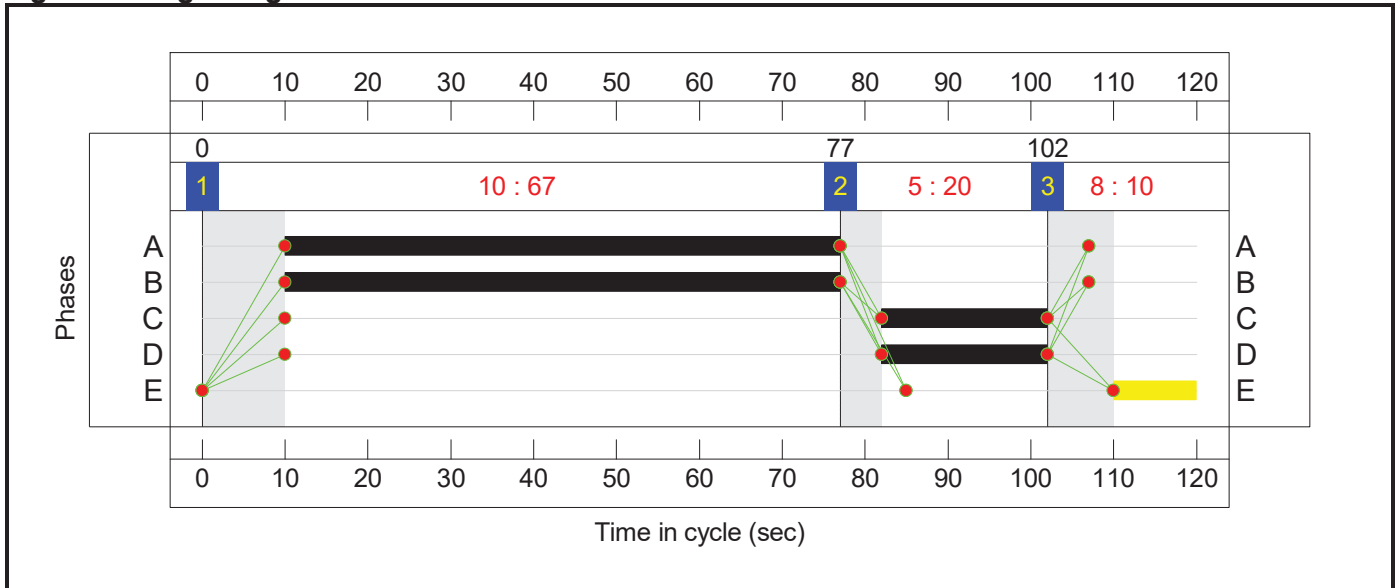
Stage Sequence Diagram



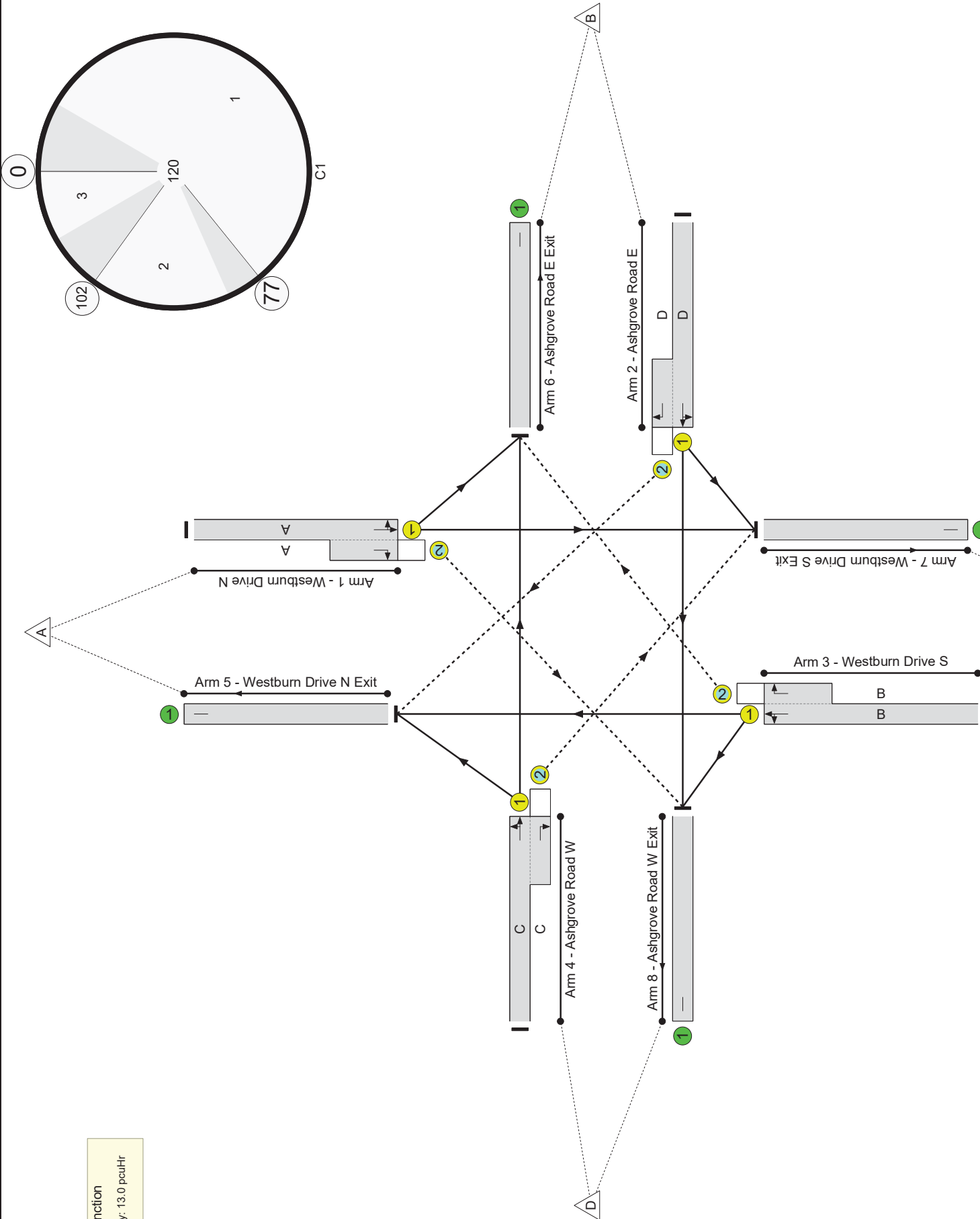
Stage Timings

Stage	1	2	3
Duration	67	20	10
Change Point	0	77	102

Signal Timings Diagram




 Unnamed Junction
 PRC: 51.2 %
 Total Traffic Delay: 13.0 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Westburn Drive - Existing Layout	-	-	N/A	-	-	-	-	-	-	-	-	-	59.5%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	59.5%
1/1+1/2	Westburn Drive N Left Ahead Right	U+O	N/A	N/A	A	-	1	67	-	662	1865:2005	852+260	59.5 : 59.5%
2/1+2/2	Ashgrove Road E Right Left Ahead	U+O	N/A	N/A	D	-	1	20	-	172	1865:2005	141+166	56.1 : 56.1%
3/1+3/2	Westburn Drive S Ahead Right Left	U+O	N/A	N/A	B	-	1	67	-	471	1890:2030	996+85	43.6 : 43.6%
4/1+4/2	Ashgrove Road W Left Ahead Right	U+O	N/A	N/A	C	-	1	20	-	234	1915:2055	281+140	55.6 : 55.6%
5/1	Westburn Drive N Exit	U	N/A	N/A	-	-	-	-	-	521	Inf	Inf	0.0%
6/1	Ashgrove Road E Exit	U	N/A	N/A	-	-	-	-	-	248	Inf	Inf	0.0%
7/1	Westburn Drive S Exit	U	N/A	N/A	-	-	-	-	-	499	Inf	Inf	0.0%
8/1	Ashgrove Road W Exit	U	N/A	N/A	-	-	-	-	-	271	Inf	Inf	0.0%

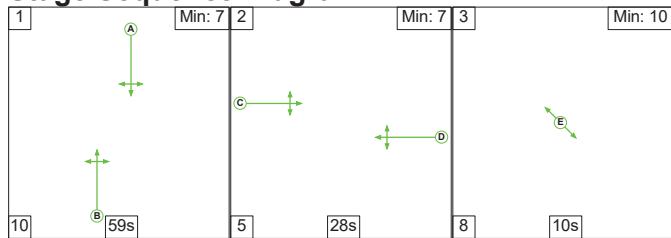
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Westburn Drive - Existing Layout	-	-	363	0	0	9.8	2.4	0.8	13.0	-	-	-	-
Unnamed Junction	-	-	363	0	0	9.8	2.4	0.8	13.0	-	-	-	-
1/1+1/2	662	662	155	0	0	2.9	0.7	0.3	4.0	21.8	12.4	0.7	13.2
2/1+2/2	172	172	93	0	0	2.1	0.6	0.2	2.9	61.2	2.9	0.6	3.6
3/1+3/2	471	471	37	0	0	1.9	0.4	0.2	2.5	18.8	8.5	0.4	8.9
4/1+4/2	234	234	78	0	0	2.9	0.6	0.1	3.6	55.0	4.6	0.6	5.3
5/1	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	499	499	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	271	271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1													
PRC for Signalled Lanes (%): 51.2 Total Delay for Signalled Lanes (pcuHr): 12.98 Cycle Time (s): 120 PRC Over All Lanes (%): 51.2 Total Delay Over All Lanes (pcuHr): 12.98													

Full Input Data And Results

Scenario 2: 'PM' (FG2: 'PM', Plan 1: 'Supplied / Existing')

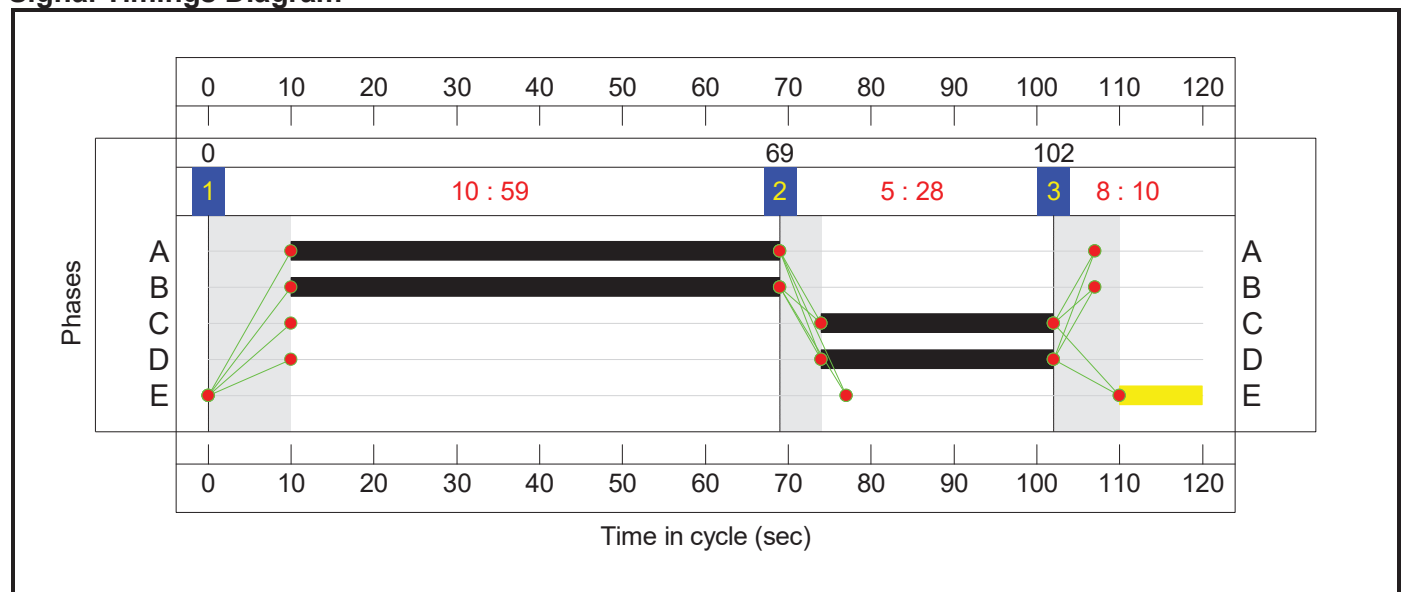
Stage Sequence Diagram



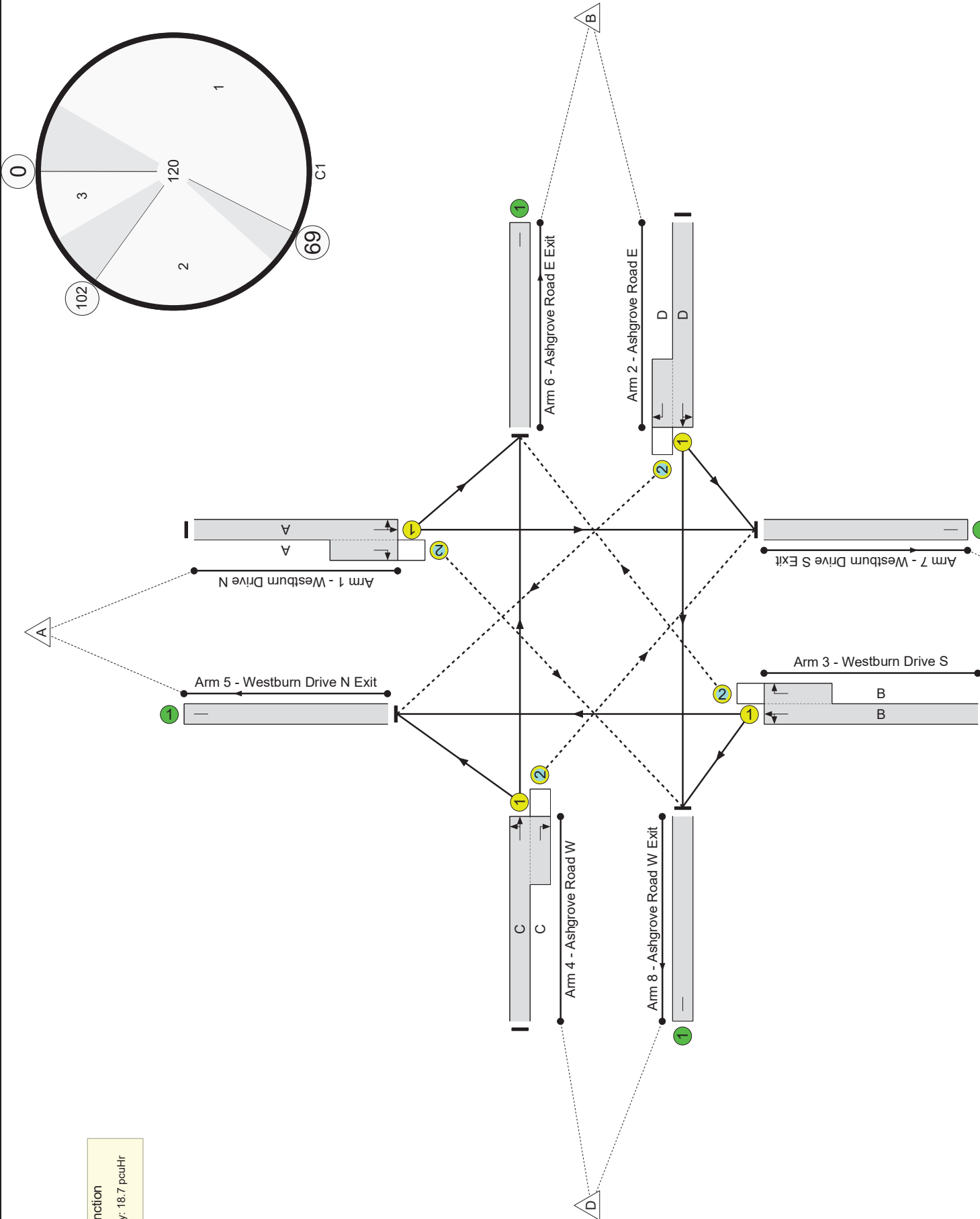
Stage Timings

Stage	1	2	3
Duration	59	28	10
Change Point	0	69	102

Signal Timings Diagram




Unnamed Junction
 PRC: 32.8 %
 Total Traffic Delay: 18.7 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Westburn Drive - Existing Layout	-	-	N/A	-	-	-	-	-	-	-	-	-	67.7%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	67.7%
1/1+1/2	Westburn Drive N Left Ahead Right	U+O	N/A	N/A	A	-	1	59	-	643	1865:2005	832+125	67.2 : 67.2%
2/1+2/2	Ashgrove Road E Right Left Ahead	U+O	N/A	N/A	D	-	1	28	-	179	1865:2005	254+163	42.8 : 42.8%
3/1+3/2	Westburn Drive S Ahead Right Left	U+O	N/A	N/A	B	-	1	59	-	656	1890:2030	813+164	67.1 : 67.1%
4/1+4/2	Ashgrove Road W Left Ahead Right	U+O	N/A	N/A	C	-	1	28	-	357	1915:2055	391+136	67.7 : 67.7%
5/1	Westburn Drive N Exit	U	N/A	N/A	-	-	-	-	-	618	Inf	Inf	0.0%
6/1	Ashgrove Road E Exit	U	N/A	N/A	-	-	-	-	-	351	Inf	Inf	0.0%
7/1	Westburn Drive S Exit	U	N/A	N/A	-	-	-	-	-	608	Inf	Inf	0.0%
8/1	Ashgrove Road W Exit	U	N/A	N/A	-	-	-	-	-	258	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Westburn Drive - Existing Layout	-	-	356	0	0	13.7	3.4	1.5	18.7	-	-	-	-
Unnamed Junction	-	-	356	0	0	13.7	3.4	1.5	18.7	-	-	-	-
1/1+1/2	643	643	84	0	0	3.9	1.0	0.6	5.5	30.9	15.1	1.0	16.2
2/1+2/2	179	179	70	0	0	1.8	0.4	0.3	2.5	49.8	2.9	0.4	3.3
3/1+3/2	656	656	110	0	0	4.0	1.0	0.5	5.6	30.8	15.2	1.0	16.2
4/1+4/2	357	357	92	0	0	3.9	1.0	0.1	5.1	51.2	8.9	1.0	9.9
5/1	618	618	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	351	351	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1													
			PRC for Signalled Lanes (%):	32.8	Total Delay for Signalled Lanes (pcuHr):	18.67			Cycle Time (s):	120			
			PRC Over All Lanes (%):	32.8	Total Delay Over All Lanes (pcuHr):	18.67							

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.1.1519 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Westburn Junction (compact roundabout) 110822.j10

Path: C:\Users\JOLL2764\OneDrive Corp\OneDrive - SNC Lavalin Group\Ashgrove\Feasibility\Work\Traffic Models\STAGE 2 MODELS\3 Westburn\Option 1 - Compact Roundabout

Report generation date: 12/08/2022 16:14:56

»Westburn Junction (compact roundabout) - 2022 Proposed, AM

»Westburn Junction (compact roundabout) - 2022 Proposed, PM

Summary of junction performance

	AM								PM							
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
Westburn Junction (compact roundabout) - 2022 Proposed																
1 - Westburn Drive (N)	D1	2.3	11.59	0.68	B	11.46	B	24 %	D2	2.8	14.58	0.72	B	25.85	D	-10 %
2 - Ashgrove Road (E)		0.7	13.31	0.39	B			[4 - Ashgrove Road (W)]		0.8	15.13	0.43	C			
3 - Westburn Drive (S)		1.2	8.06	0.51	A			2.4		11.97	0.69	B				
4 - Ashgrove Road (W)		1.2	16.56	0.52	C			7.8		77.01	0.91	F				

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

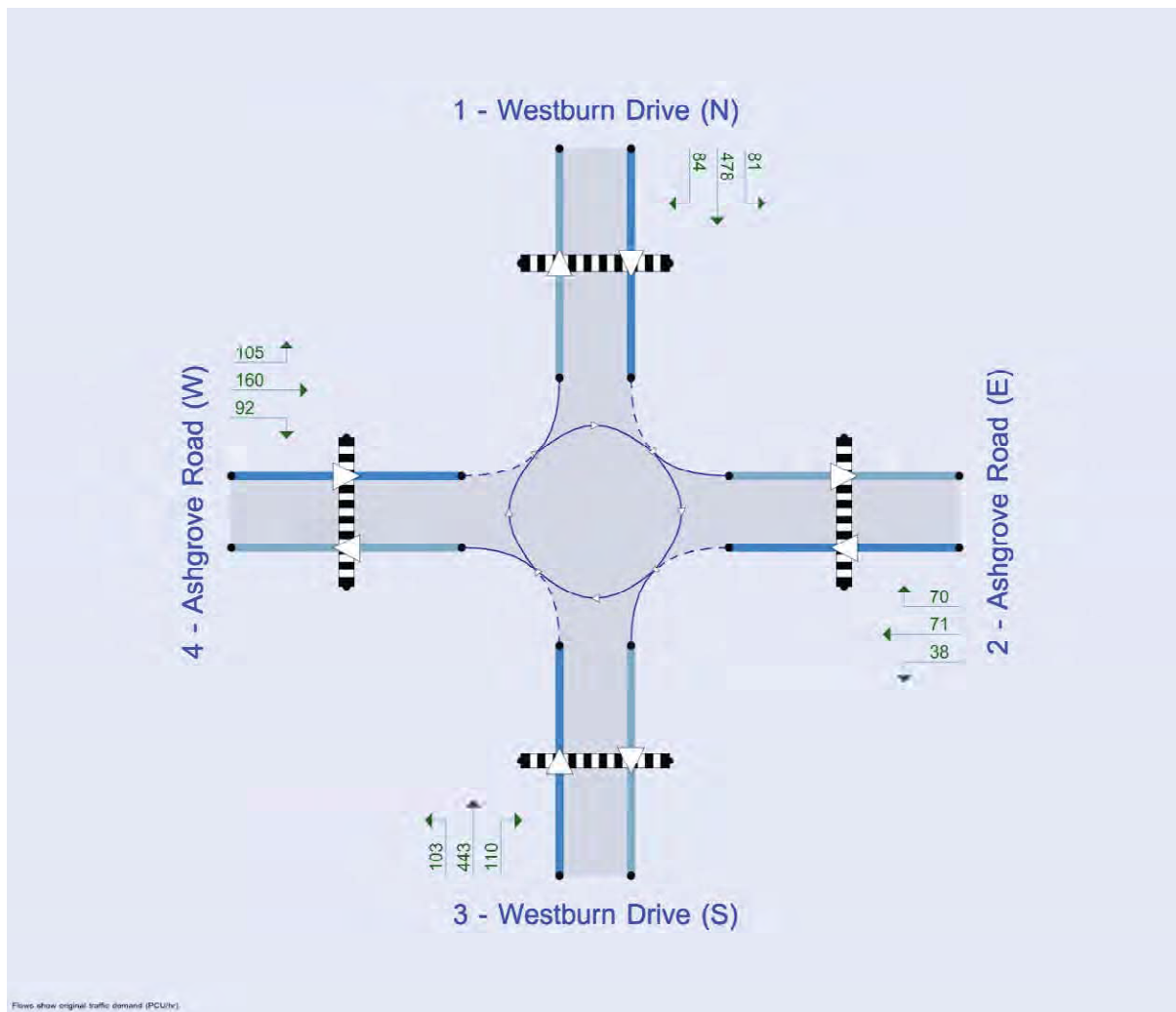
File summary

File Description

Title	
Location	
Site number	
Date	28/07/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\BEAG7302
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	mph	PCU	PCU	perHour	s	-Min	perMin



Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Proposed	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Proposed	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Westburn Junction (compact roundabout)	✓	100.000	100.000

Westburn Junction (compact roundabout) - 2022 Proposed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westburn Junction (compact roundabout)	Standard Roundabout		1, 2, 3, 4	11.46	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	4 - Ashgrove Road (W)	11.46	B

Arms

Arms

Arm	Name	Description	No give-way line
1	Westburn Drive (N)		
2	Ashgrove Road (E)		
3	Westburn Drive (S)		
4	Ashgrove Road (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Westburn Drive (N)	4.63	4.67	1.2	6.0	24.0	41.0		
2 - Ashgrove Road (E)	3.44	3.68	3.0	4.0	24.0	51.0		
3 - Westburn Drive (S)	4.60	4.80	2.2	10.0	24.0	67.0		
4 - Ashgrove Road (W)	3.25	3.27	1.9	5.0	24.0	53.0		

Zebra Crossings

Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)
1 - Westburn Drive (N)	1.00	1.00		Distance	9.20	6.57
2 - Ashgrove Road (E)	1.00	1.00		Distance	6.00	4.29
3 - Westburn Drive (S)	1.00	1.00		Distance	9.25	6.61
4 - Ashgrove Road (W)	1.00	1.00		Distance	6.00	4.29

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Westburn Drive (N)	0.512	1198
2 - Ashgrove Road (E)	0.394	805
3 - Westburn Drive (S)	0.501	1185
4 - Ashgrove Road (W)	0.399	766

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Proposed	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Westburn Drive (N)		ONE HOUR	✓	662	100.000
2 - Ashgrove Road (E)		ONE HOUR	✓	172	100.000
3 - Westburn Drive (S)		ONE HOUR	✓	471	100.000
4 - Ashgrove Road (W)		ONE HOUR	✓	234	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - Westburn Drive (N)	[ONEHOUR]	5.00
2 - Ashgrove Road (E)	[ONEHOUR]	17.00
3 - Westburn Drive (S)	[ONEHOUR]	10.00
4 - Ashgrove Road (W)	[ONEHOUR]	12.00

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Westburn Drive (N)	2 - Ashgrove Road (E)	3 - Westburn Drive (S)	4 - Ashgrove Road (W)
From	1 - Westburn Drive (N)	0	112	395	155
	2 - Ashgrove Road (E)	93	0	26	53
	3 - Westburn Drive (S)	371	37	0	63
	4 - Ashgrove Road (W)	57	99	78	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Westburn Drive (N)	2 - Ashgrove Road (E)	3 - Westburn Drive (S)	4 - Ashgrove Road (W)
From	1 - Westburn Drive (N)	0	10	10	10
	2 - Ashgrove Road (E)	10	0	10	10
	3 - Westburn Drive (S)	10	10	0	10
	4 - Ashgrove Road (W)	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Westburn Drive (N)	0.68	11.59	2.3	B	607	911
2 - Ashgrove Road (E)	0.39	13.31	0.7	B	158	237
3 - Westburn Drive (S)	0.51	8.06	1.2	A	432	648
4 - Ashgrove Road (W)	0.52	16.56	1.2	C	215	322

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	498	125	160	3.76	1114	0.448	495	389	0.0	0.9	6.364	A
2 - Ashgrove Road (E)	129	32	469	12.80	593	0.218	128	185	0.0	0.3	8.498	A
3 - Westburn Drive (S)	355	89	225	7.53	1069	0.332	352	373	0.0	0.5	5.509	A
4 - Ashgrove Road (W)	176	44	375	9.03	588	0.299	174	203	0.0	0.5	9.523	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	595	149	192	4.49	1096	0.543	594	467	0.9	1.3	7.862	A
2 - Ashgrove Road (E)	155	39	563	15.28	548	0.282	154	222	0.3	0.4	10.038	B
3 - Westburn Drive (S)	423	106	270	8.99	1044	0.405	423	447	0.5	0.7	6.361	A
4 - Ashgrove Road (W)	210	53	449	10.79	550	0.383	210	243	0.5	0.7	11.612	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	729	182	234	5.51	1071	0.681	725	571	1.3	2.3	11.322	B
2 - Ashgrove Road (E)	189	47	688	18.72	488	0.388	188	271	0.4	0.7	13.150	B
3 - Westburn Drive (S)	519	130	330	11.01	1011	0.513	517	546	0.7	1.1	7.993	A
4 - Ashgrove Road (W)	258	64	550	13.21	497	0.518	256	297	0.7	1.1	16.251	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	729	182	236	5.51	1070	0.681	729	574	2.3	2.3	11.589	B
2 - Ashgrove Road (E)	189	47	691	18.72	487	0.389	189	273	0.7	0.7	13.314	B
3 - Westburn Drive (S)	519	130	331	11.01	1010	0.514	519	549	1.1	1.2	8.059	A
4 - Ashgrove Road (W)	258	64	552	13.21	496	0.519	258	298	1.1	1.2	16.556	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	595	149	194	4.49	1094	0.544	599	471	2.3	1.3	8.058	A
2 - Ashgrove Road (E)	155	39	568	15.28	546	0.283	156	225	0.7	0.4	10.181	B
3 - Westburn Drive (S)	423	106	272	8.99	1043	0.406	425	452	1.2	0.8	6.425	A
4 - Ashgrove Road (W)	210	53	452	10.79	548	0.384	212	245	1.2	0.7	11.852	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	498	125	162	3.76	1112	0.448	500	393	1.3	0.9	6.487	A
2 - Ashgrove Road (E)	129	32	475	12.80	591	0.219	130	187	0.4	0.3	8.610	A
3 - Westburn Drive (S)	355	89	227	7.53	1068	0.332	355	377	0.8	0.6	5.568	A
4 - Ashgrove Road (W)	176	44	378	9.03	587	0.300	177	205	0.7	0.5	9.691	A

Westburn Junction (compact roundabout) - 2022 Proposed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Last Run	Last Run	2 - Ashgrove Road (E) - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 2 timesegment(s).
Last Run	Last Run	4 - Ashgrove Road (W) - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 2 timesegment(s).

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westburn Junction (compact roundabout)	Standard Roundabout		1, 2, 3, 4	25.85	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-10	4 - Ashgrove Road (W)	25.85	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Proposed	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Westburn Drive (N)		ONE HOUR	✓	643	100.000
2 - Ashgrove Road (E)		ONE HOUR	✓	179	100.000
3 - Westburn Drive (S)		ONE HOUR	✓	656	100.000
4 - Ashgrove Road (W)		ONE HOUR	✓	357	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - Westburn Drive (N)	[ONEHOUR]	23.00
2 - Ashgrove Road (E)	[ONEHOUR]	16.00
3 - Westburn Drive (S)	[ONEHOUR]	12.00
4 - Ashgrove Road (W)	[ONEHOUR]	10.00

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Westburn Drive (N)	2 - Ashgrove Road (E)	3 - Westburn Drive (S)	4 - Ashgrove Road (W)
From	1 - Westburn Drive (N)	0	81	478	84
	2 - Ashgrove Road (E)	70	0	38	71
	3 - Westburn Drive (S)	443	110	0	103
	4 - Ashgrove Road (W)	105	160	92	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Westburn Drive (N)	2 - Ashgrove Road (E)	3 - Westburn Drive (S)	4 - Ashgrove Road (W)
From	1 - Westburn Drive (N)	0	10	10	10
	2 - Ashgrove Road (E)	10	0	10	10

3 - Westburn Drive (S)	10	10	0	10
4 - Ashgrove Road (W)	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Westburn Drive (N)	0.72	14.58	2.8	B	590	885
2 - Ashgrove Road (E)	0.43	15.13	0.8	C	164	246
3 - Westburn Drive (S)	0.69	11.97	2.4	B	602	903
4 - Ashgrove Road (W)	0.91	77.01	7.8	F	328	491

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	484	121	269	17.32	1053	0.460	480	461	0.0	0.9	6.868	A
2 - Ashgrove Road (E)	135	34	488	12.05	575	0.234	133	261	0.0	0.3	8.941	A
3 - Westburn Drive (S)	494	123	168	9.03	1098	0.450	490	454	0.0	0.9	6.481	A
4 - Ashgrove Road (W)	269	67	466	7.53	544	0.494	265	193	0.0	1.0	13.986	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	578	145	323	20.68	1022	0.566	576	553	0.9	1.4	8.845	A
2 - Ashgrove Road (E)	161	40	585	14.38	526	0.306	160	313	0.3	0.5	10.822	B
3 - Westburn Drive (S)	590	147	202	10.79	1079	0.547	588	544	0.9	1.3	8.037	A
4 - Ashgrove Road (W)	321	80	558	8.99	496	0.647	318	231	1.0	1.9	21.780	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	708	177	385	25.32	984	0.720	703	672	1.4	2.7	13.854	B
2 - Ashgrove Road (E)	197	49	711	17.62	462	0.426	196	377	0.5	0.8	14.795	B
3 - Westburn Drive (S)	722	181	246	13.21	1053	0.686	718	661	1.3	2.3	11.674	B
4 - Ashgrove Road (W)	393	98	682	11.01	433	0.908	375	282	1.9	6.4	56.440	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	708	177	394	25.32	978	0.724	708	679	2.7	2.8	14.581	B
2 - Ashgrove Road (E)	197	49	718	17.62	459	0.430	197	384	0.8	0.8	15.135	C
3 - Westburn Drive (S)	722	181	248	13.21	1052	0.686	722	668	2.3	2.4	11.966	B
4 - Ashgrove Road (W)	393	98	686	11.01	431	0.913	387	284	6.4	7.8	77.010	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	578	145	342	20.68	1011	0.572	583	565	2.8	1.5	9.364	A
2 - Ashgrove Road (E)	161	40	598	14.38	519	0.310	162	327	0.8	0.5	11.133	B
3 - Westburn Drive (S)	590	147	204	10.79	1078	0.547	594	556	2.4	1.4	8.249	A
4 - Ashgrove Road (W)	321	80	564	8.99	492	0.652	343	234	7.8	2.2	29.866	D

18:00 - 18:15

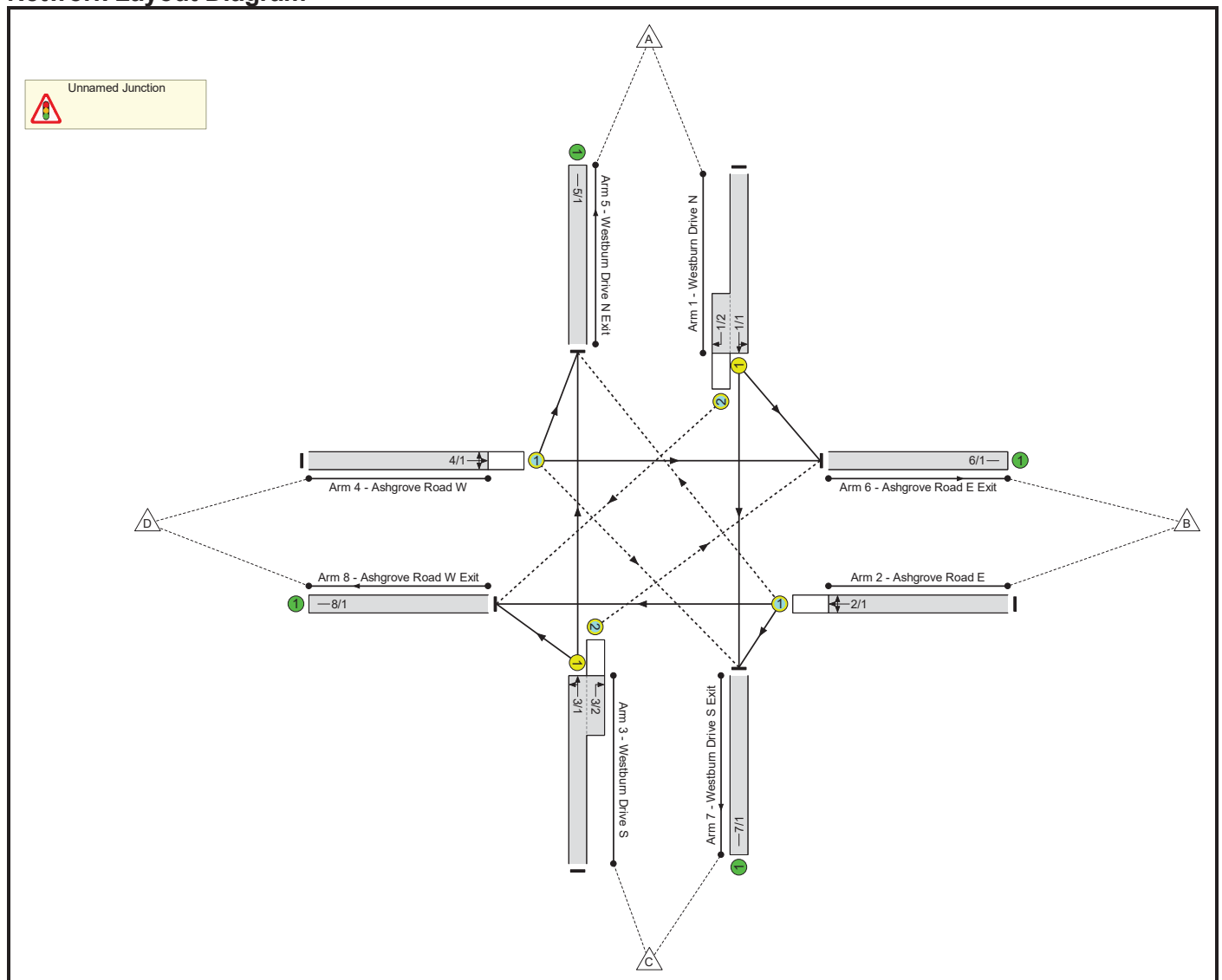
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Westburn Drive (N)	484	121	276	17.32	1049	0.461	486	468	1.5	1.0	7.057	A
2 - Ashgrove Road (E)	135	34	495	12.05	571	0.236	135	267	0.5	0.3	9.099	A
3 - Westburn Drive (S)	494	123	170	9.03	1097	0.450	496	461	1.4	0.9	6.610	A
4 - Ashgrove Road (W)	269	67	471	7.53	541	0.497	273	195	2.2	1.1	15.020	C

Full Input Data And Results
Full Input Data And Results

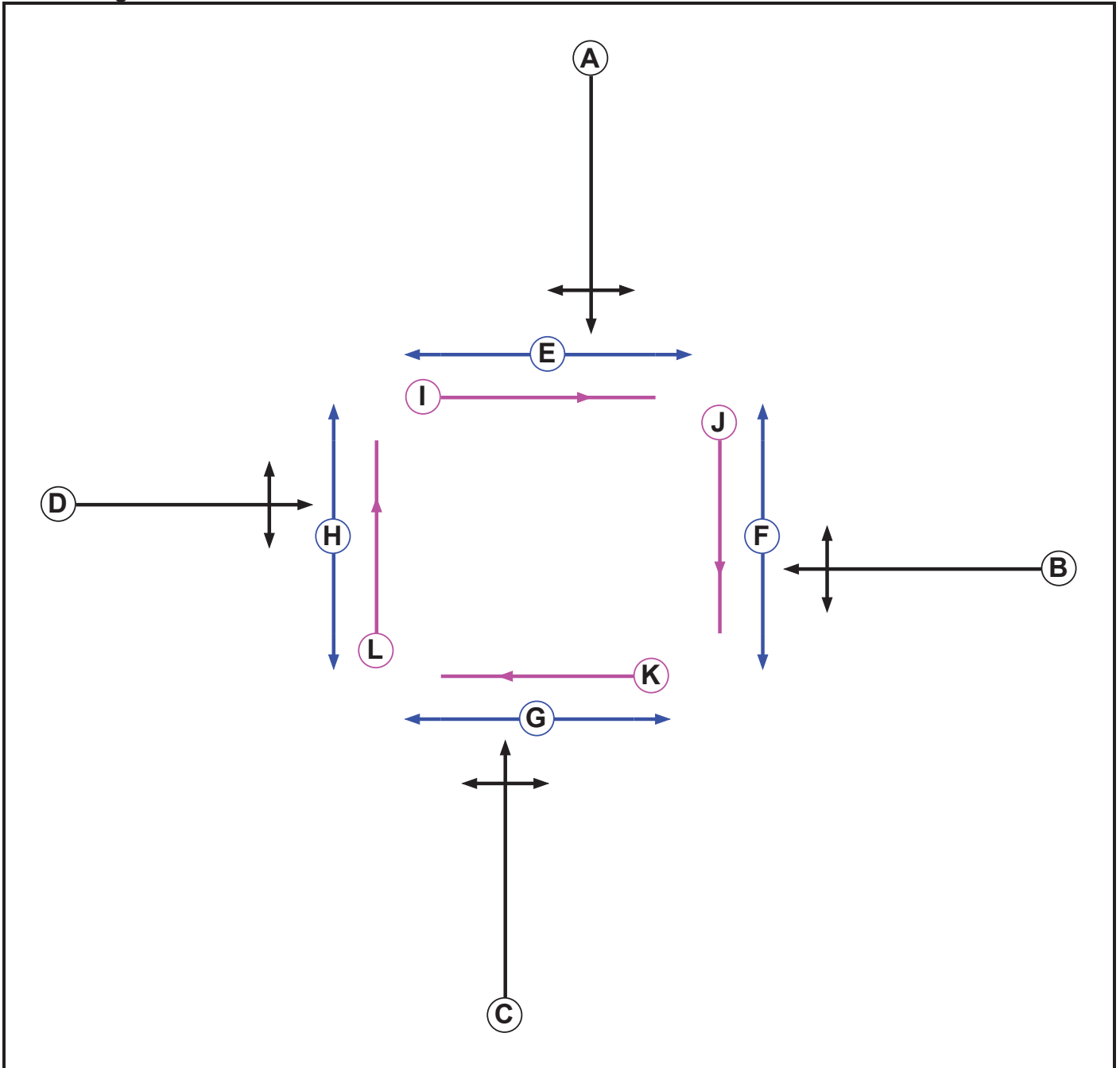
User and Project Details

Project:	Ashgrove Connects
Title:	Westburn Drive - Stage 2 Layout Option 2
Location:	
Client:	Aberdeen City Council
Site Ref(s):	3
Date Completed:	12/08/2022
Checked By:	KF
Checked By Date:	16/08/2022
Additional detail:	
File name:	2022-08-12 Westburn Dr Crossroads_Stage 2.lsg3x
Author:	C Jolly
Company:	Atkins
Address:	10 Canning Street, Edinburgh, EH3 8EG

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Cycle		7	7
J	Cycle		7	7
K	Cycle		7	7
L	Cycle		7	7

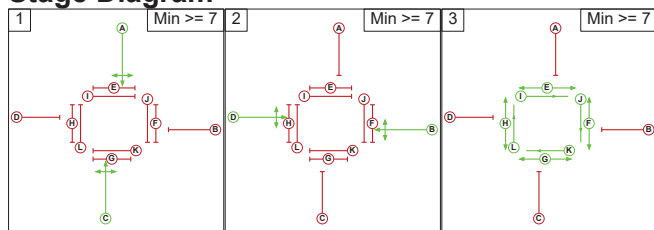
Phase Intergreens Matrix

		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A	-	6	-	6	5	7	8	8	5	7	7	8
	B	6	-	5	-	8	5	7	8	8	5	7	7
	C	-	5	-	5	8	8	5	7	7	7	5	7
	D	5	-	5	-	7	8	8	5	7	7	8	5
	E	14	14	14	14	-	-	-	-	-	-	-	-
	F	12	12	12	12	-	-	-	-	-	-	-	-
	G	13	13	13	13	-	-	-	-	-	-	-	-
	H	12	12	12	12	-	-	-	-	-	-	-	-
	I	7	7	7	7	-	-	-	-	-	-	-	-
	J	7	7	7	7	-	-	-	-	-	-	-	-
	K	7	7	7	7	-	-	-	-	-	-	-	-
	L	7	7	7	7	-	-	-	-	-	-	-	-

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B D
3	E F G H I J K L

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	I	Gaining absolute	8	8
1	3	J	Gaining absolute	8	8
1	3	K	Gaining absolute	8	8
2	3	J	Gaining absolute	8	8
2	3	L	Gaining absolute	8	8

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		6	8
	2	6		8
	3	14	14	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Westburn Drive N)	8/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	3.00
				3/2	1.09	All					
2/1 (Ashgrove Road E)	5/1 (Right)	1439	0	4/1	1.09	All	3.00	-	0.50	3	3.00
3/2 (Westburn Drive S)	6/1 (Right)	1439	0	1/1	1.09	All	3.00	-	0.50	3	3.00
				1/2	1.09	All					
4/1 (Ashgrove Road W)	7/1 (Right)	1439	0	2/1	1.09	All	3.00	-	0.50	3	3.00

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Westburn Drive N)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	11.00
											Arm 7 Ahead	Inf
1/2 (Westburn Drive N)	O	A	2	3	5.0	Geom	-	2.75	0.00	N	Arm 8 Right	15.00
2/1 (Ashgrove Road E)	O	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	17.00
											Arm 7 Left	10.00
											Arm 8 Ahead	Inf
3/1 (Westburn Drive S)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	10.00
3/2 (Westburn Drive S)	O	C	2	3	5.0	Geom	-	2.75	0.00	N	Arm 6 Right	13.00
4/1 (Ashgrove Road W)	O	D	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Left	10.00
											Arm 6 Ahead	Inf
											Arm 7 Right	17.00
5/1 (Westburn Drive N Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Ashgrove Road E Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Westburn Drive S Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Ashgrove Road W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM'	08:00	09:00	01:00	
2: 'PM'	17:00	18:00	01:00	

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'Supplied / Existing')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	112	395	155	662
	B	93	0	26	53	172
	C	371	37	0	63	471
	D	57	99	78	0	234
	Tot.	521	248	499	271	1539

Traffic Lane Flows

Lane	Scenario 1: AM
Junction: Unnamed Junction	
1/1 (with short)	662(In) 507(Out)
1/2 (short)	155
2/1	172
3/1 (with short)	471(In) 434(Out)
3/2 (short)	37
4/1	234
5/1	521
6/1	248
7/1	499
8/1	271

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Westburn Drive N)	3.25	0.00	Y	Arm 6 Left	11.00	22.1 %	1883	1883
				Arm 7 Ahead	Inf	77.9 %		
1/2 (Westburn Drive N)	2.75	0.00	N	Arm 8 Right	15.00	100.0 %	1845	1845
				Arm 5 Right	17.00	54.1 %		
2/1 (Ashgrove Road E)	3.25	0.00	Y	Arm 7 Left	10.00	15.1 %	1812	1812
				Arm 8 Ahead	Inf	30.8 %		
				Arm 5 Ahead	Inf	85.5 %		
3/1 (Westburn Drive S)	3.25	0.00	Y	Arm 8 Left	10.00	14.5 %	1899	1899
				Arm 6 Right	13.00	100.0 %		
3/2 (Westburn Drive S)	2.75	0.00	N	Arm 5 Left	10.00	24.4 %	1820	1820
				Arm 6 Ahead	Inf	42.3 %		
4/1 (Ashgrove Road W)	3.40	0.00	Y	Arm 7 Right	17.00	33.3 %	1834	1834
				Infinite Saturation Flow				
5/1 (Westburn Drive N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ashgrove Road E Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Westburn Drive S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Ashgrove Road W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM' (FG2: 'PM', Plan 1: 'Supplied / Existing')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	81	478	84	643	
B	70	0	38	71	179	
C	443	110	0	103	656	
D	105	160	92	0	357	
Tot.	618	351	608	258	1835	

Traffic Lane Flows

Lane	Scenario 2: PM
Junction: Unnamed Junction	
1/1 (with short)	643(In) 559(Out)
1/2 (short)	84
2/1	179
3/1 (with short)	656(In) 546(Out)
3/2 (short)	110
4/1	357
5/1	618
6/1	351
7/1	608
8/1	258

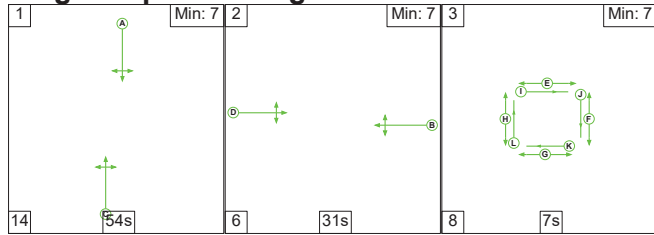
Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Westburn Drive N)	3.25	0.00	Y	Arm 6 Left	11.00	14.5 %	1902	1902
				Arm 7 Ahead	Inf	85.5 %		
1/2 (Westburn Drive N)	2.75	0.00	N	Arm 8 Right	15.00	100.0 %	1845	1845
2/1 (Ashgrove Road E)	3.25	0.00	Y	Arm 5 Right	17.00	39.1 %	1819	1819
				Arm 7 Left	10.00	21.2 %		
				Arm 8 Ahead	Inf	39.7 %		
3/1 (Westburn Drive S)	3.25	0.00	Y	Arm 5 Ahead	Inf	81.1 %	1887	1887
				Arm 8 Left	10.00	18.9 %		
3/2 (Westburn Drive S)	2.75	0.00	N	Arm 6 Right	13.00	100.0 %	1820	1820
4/1 (Ashgrove Road W)	3.40	0.00	Y	Arm 5 Left	10.00	29.4 %	1832	1832
				Arm 6 Ahead	Inf	44.8 %		
				Arm 7 Right	17.00	25.8 %		
5/1 (Westburn Drive N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ashgrove Road E Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Westburn Drive S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Ashgrove Road W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'AM' (FG1: 'AM', Plan 1: 'Supplied / Existing')

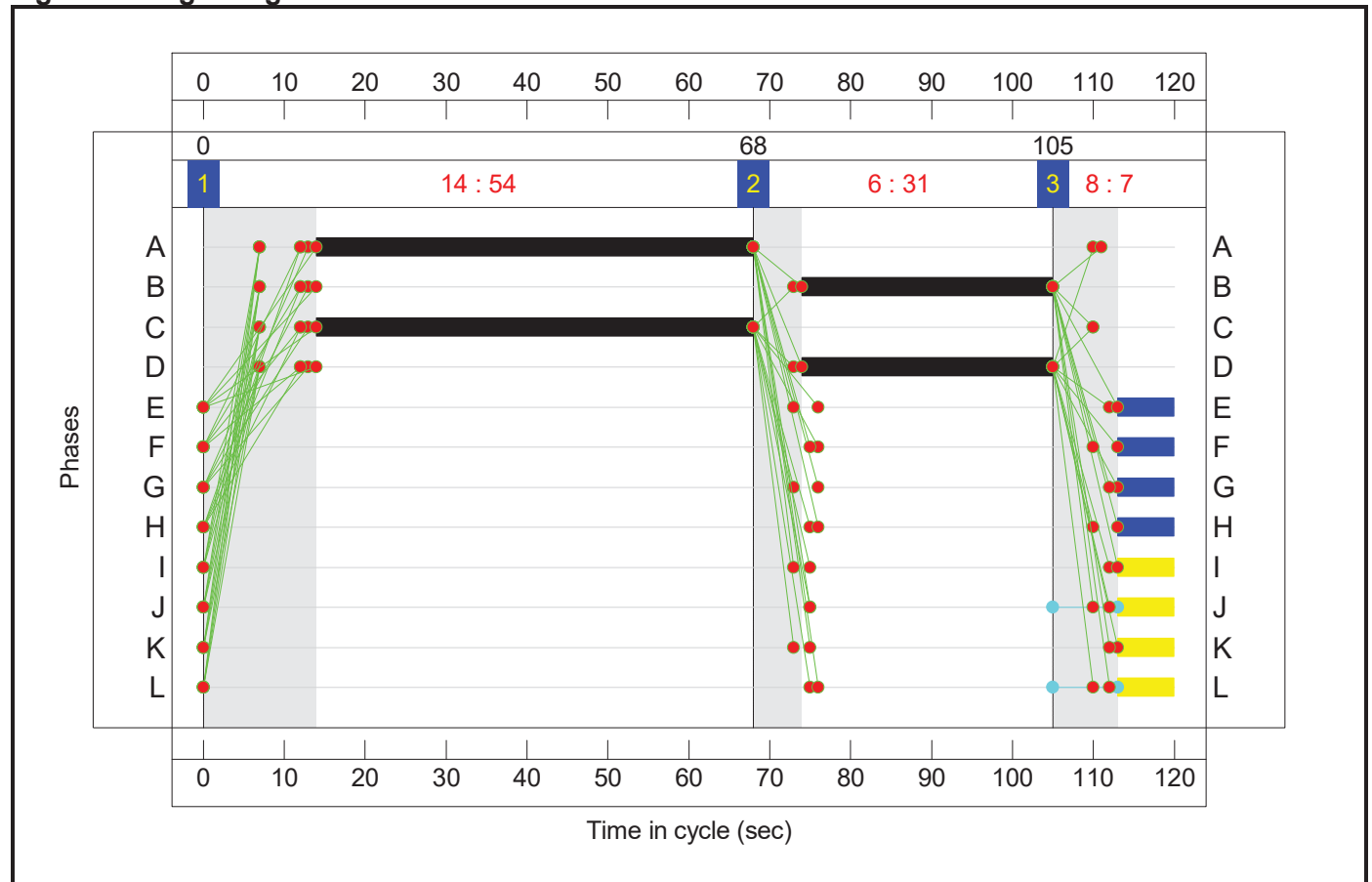
Stage Sequence Diagram



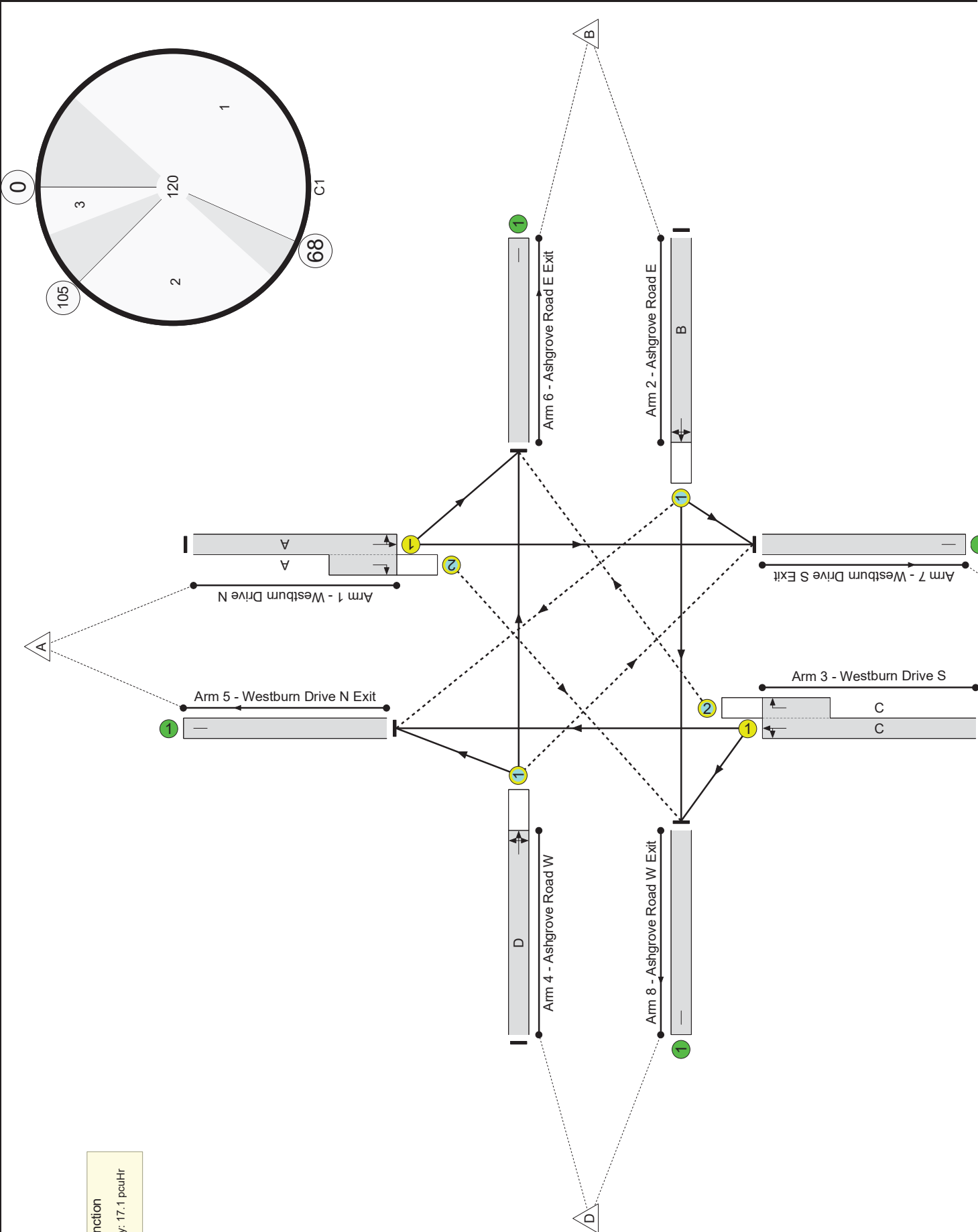
Stage Timings

Stage	1	2	3
Duration	54	31	7
Change Point	0	68	105

Signal Timings Diagram



Unnamed Junction
PRC: 20.8 %
Total Traffic Delay: 17.1 pcuHr



Network Results

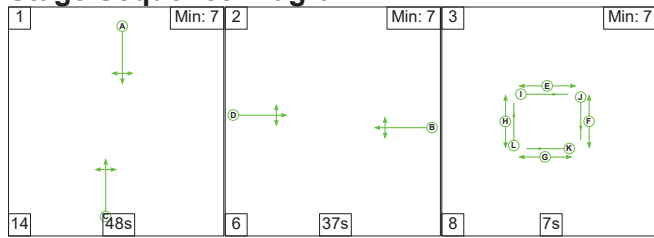
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Westburn Drive - Stage 2 Layout Option 2	-	-	N/A	-	-	-	-	-	-	-	-	-	74.5%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	74.5%
1/1+1/2	Westburn Drive N Left Ahead Right	U+O	N/A	N/A	A		1	54	-	662	1883:1845	688+210	73.7 : 73.7%
2/1	Ashgrove Road E Right Left Ahead	O	N/A	N/A	B		1	31	-	172	1812	259	66.5%
3/1+3/2	Westburn Drive S Ahead Right Left	U+O	N/A	N/A	C		1	54	-	471	1899:1820	818+70	53.0 : 53.0%
4/1	Ashgrove Road W Left Ahead Right	O	N/A	N/A	D		1	31	-	234	1834	314	74.5%
5/1	Westburn Drive N Exit	U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%
6/1	Ashgrove Road E Exit	U	N/A	N/A	-		-	-	-	248	Inf	Inf	0.0%
7/1	Westburn Drive S Exit	U	N/A	N/A	-		-	-	-	499	Inf	Inf	0.0%
8/1	Ashgrove Road W Exit	U	N/A	N/A	-		-	-	-	271	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Westburn Drive - Stage 2 Layout Option 2	-	-	346	0	17	12.0	4.3	0.9	17.1	-	-	-	-
Unnamed Junction	-	-	346	0	17	12.0	4.3	0.9	17.1	-	-	-	-
1/1+1/2	662	662	154	0	1	4.6	1.4	0.5	6.5	35.3	16.1	1.4	17.5
2/1	172	172	80	0	13	1.7	1.0	0.1	2.8	57.8	4.7	1.0	5.7
3/1+3/2	471	471	37	0	0	3.0	0.6	0.2	3.8	28.7	10.6	0.6	11.1
4/1	234	234	76	0	2	2.6	1.4	0.1	4.1	63.6	7.3	1.4	8.8
5/1	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	499	499	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	271	271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1													
PRC for Signalled Lanes (%):													20.8
PRC Over All Lanes (%):													20.8
Total Delay for Signalled Lanes (pcuHr):													17.14
Total Delay Over All Lanes (pcuHr):													17.14
Cycle Time (s):													120

Full Input Data And Results
Scenario 2: 'PM' (FG2: 'PM', Plan 1: 'Supplied / Existing')

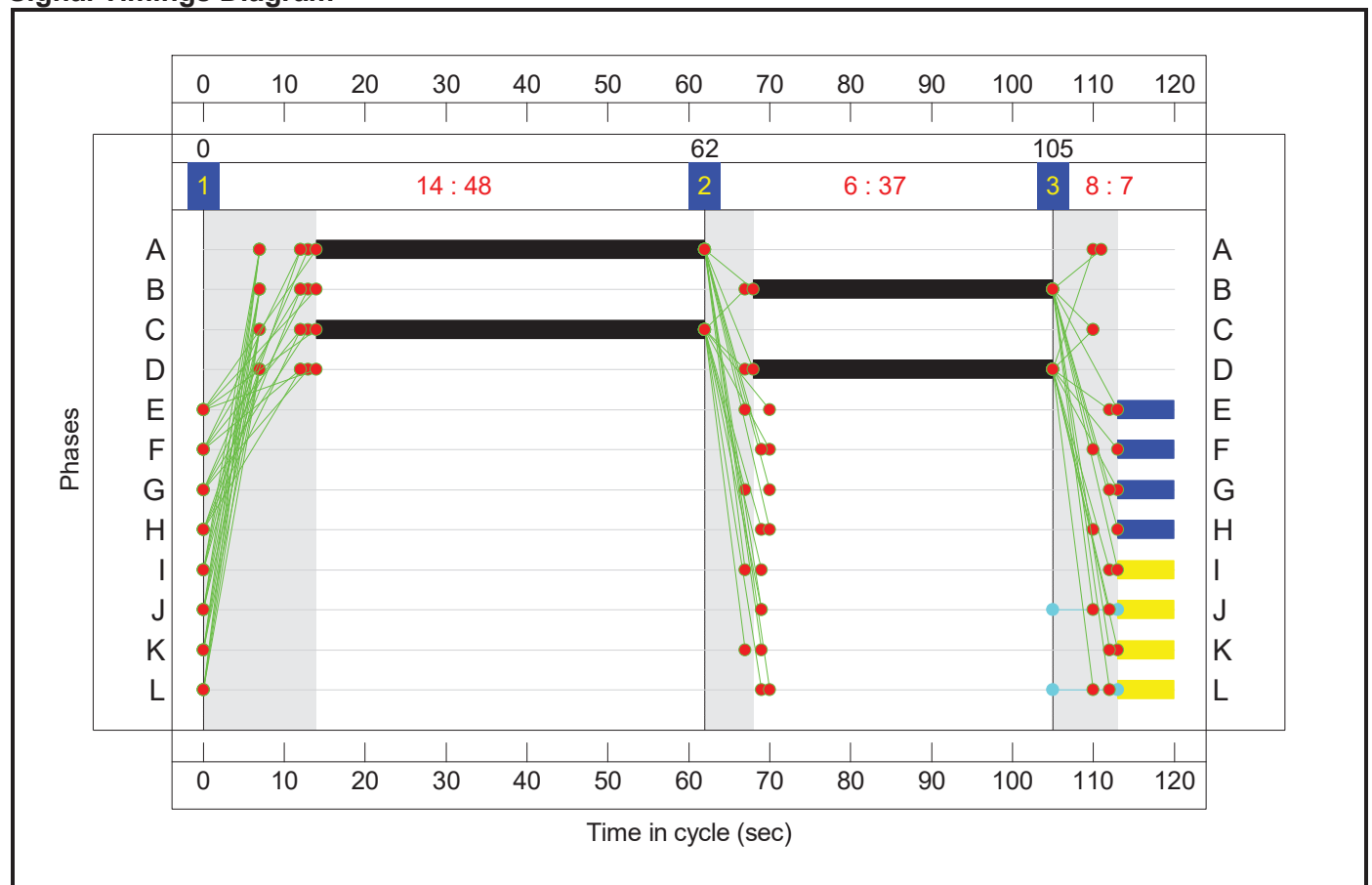
Stage Sequence Diagram




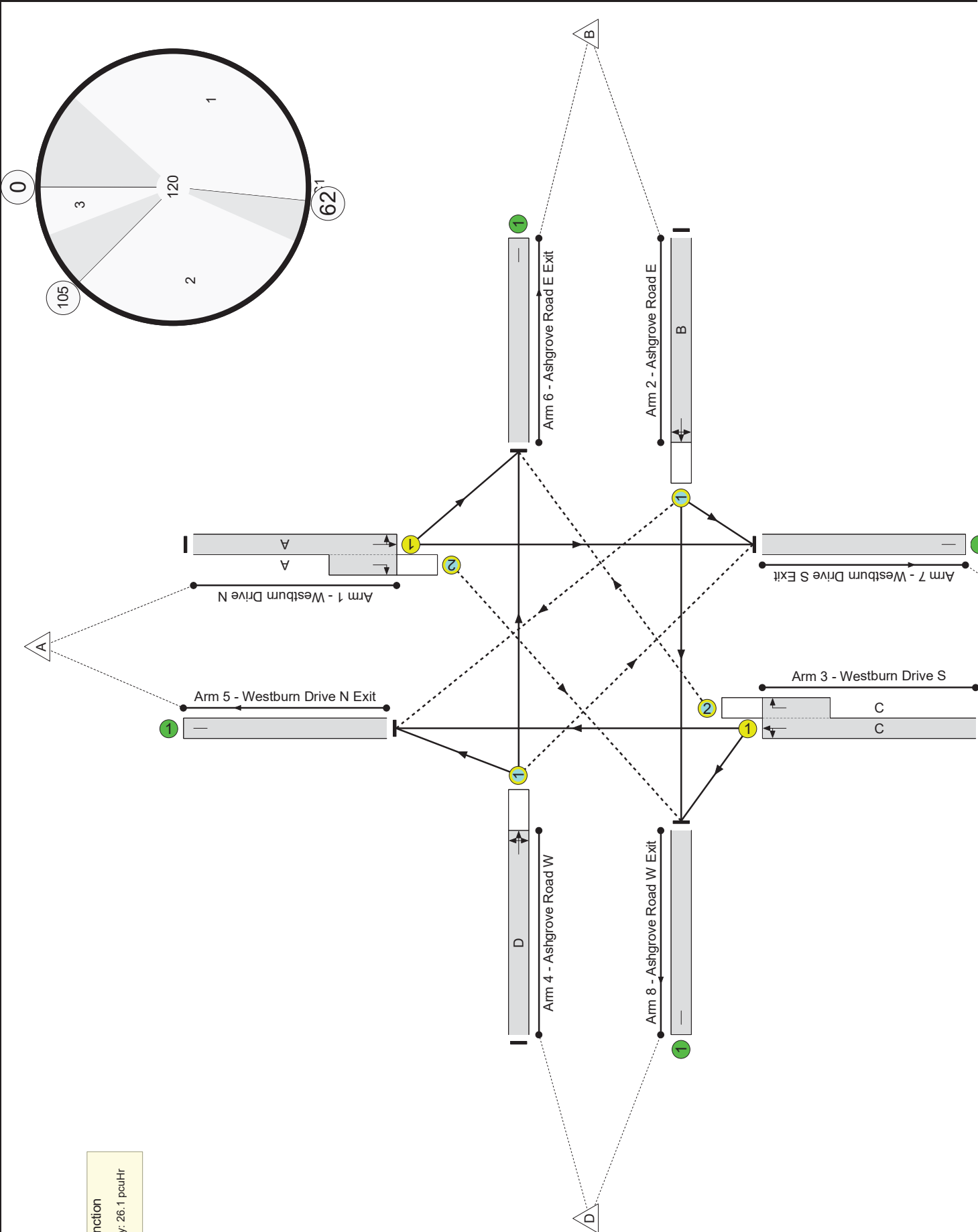
Stage Timings

Stage	1	2	3
Duration	48	37	7
Change Point	0	62	105

Signal Timings Diagram




Unnamed Junction
 PRC: 6.3 %
 Total Traffic Delay: 26.1 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Westburn Drive - Stage 2 Layout Option 2	-	-	N/A	-	-	-	-	-	-	-	-	-	84.6%
Unnamed Junction	-	-	N/A	-	-	-	-	-	-	-	-	-	84.6%
1/1+1/2	Westburn Drive N Left Ahead Right	U+O	N/A	N/A	A		1	48	-	643	1902:1845	699+102	80.0 : 82.3%
2/1	Ashgrove Road E Right Left Ahead	O	N/A	N/A	B		1	37	-	179	1819	255	70.2%
3/1+3/2	Westburn Drive S Ahead Right Left	U+O	N/A	N/A	C		1	48	-	656	1887:1820	657+132	83.1 : 83.1%
4/1	Ashgrove Road W Left Ahead Right	O	N/A	N/A	D		1	37	-	357	1832	422	84.6%
5/1	Westburn Drive N Exit	U	N/A	N/A	-		-	-	-	618	Inf	Inf	0.0%
6/1	Ashgrove Road E Exit	U	N/A	N/A	-		-	-	-	351	Inf	Inf	0.0%
7/1	Westburn Drive S Exit	U	N/A	N/A	-		-	-	-	608	Inf	Inf	0.0%
8/1	Ashgrove Road W Exit	U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Westburn Drive - Stage 2 Layout Option 2	-	-	253	0	103	16.6	8.0	1.5	26.1	-	-	-	-
Unnamed Junction	-	-	253	0	103	16.6	8.0	1.5	26.1	-	-	-	-
1/1+1/2	643	643	13	0	71	5.4	2.0	0.7	8.1	45.2	17.8	2.0	19.8
2/1	179	179	56	0	14	1.6	1.1	0.1	2.8	55.8	4.6	1.1	5.8
3/1+3/2	656	656	95	0	15	5.6	2.4	0.7	8.7	47.7	18.3	2.4	20.7
4/1	357	357	90	0	2	4.0	2.6	0.1	6.6	66.6	11.3	2.6	13.9
5/1	618	618	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	351	351	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1													
PRC for Signalled Lanes (%): 6.3 Total Delay for Signalled Lanes (pcuHr): 26.14 Cycle Time (s): 120 PRC Over All Lanes (%): 6.3 Total Delay Over All Lanes (pcuHr): 26.14													

<h1>Junctions 10</h1>
<h2>PICADY 10 - Priority Intersection Module</h2>
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Filename: Ashgrove-Laurelwood Priority EXISTING 180822.j10

Path: C:\Users\JOLL2764\OneDrive Corp\OneDrive - SNC Lavalin Group\Ashgrove\Phase 2 Report\Traffic Modelling\4 Laurelwood

Report generation date: 18/08/2022 18:22:24

»2022 Model - 2022, AM

»2022 Model - 2022, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2022 Model - 2022												
Stream B-AC	D1	0.2	6.61	0.18	A	214 %	D2	0.4	8.13	0.30	A	115 %
Stream C-AB		0.3	7.88	0.23	A	[Stream C-AB]		0.7	7.78	0.34	A	[Stream C-AB]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	18/08/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\COMB3402
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

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ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	08:00	09:30	15	✓
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	2022 Model	✓	100.000	100.000

2022 Model - 2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ashgrove Road - Laurelwood Avenue	T-Junction	Two-way	Two-way	Two-way		4.85	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	214	Stream C-AB	4.85	A

Arms

Arms

Arm	Name	Description	Arm type
A	Ashgrove Road (East)		Major
B	Laurelwood Avenue		Minor
C	Ashgrove Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Ashgrove Road (West)	6.43			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Laurelwood Avenue	One lane	4.08	0	0

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)
B - Laurelwood Avenue	1.00	1.00		Distance	5.80	4.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	530	0.095	0.239	0.151	0.342
B-C	691	0.104	0.263	-	-
C-B	574	0.218	0.218	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ashgrove Road (East)		ONE HOUR	✓	72	100.000
B - Laurelwood Avenue		ONE HOUR	✓	111	100.000
C - Ashgrove Road (West)		ONE HOUR	✓	171	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ashgrove Road (East)		
B - Laurelwood Avenue	[ONEHOUR]	68.00
C - Ashgrove Road (West)		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	14	58
	B - Laurelwood Avenue	2	0	109
	C - Ashgrove Road (West)	58	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	1	1
	B - Laurelwood Avenue	0	0	0
	C - Ashgrove Road (West)	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.18	6.61	0.2	A	102	153
C-AB	0.23	7.88	0.3	A	114	171
C-A					43	64
A-B					13	19
A-C					53	80

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	51.19	673	0.124	83	0.0	0.1	6.093	A

C-AB	92	23		592	0.155	91	0.0	0.2	7.246	A
C-A	37	9				37				
A-B	11	3				11				
A-C	44	11				44				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	61.13	670	0.149	100	0.1	0.2	6.304	A
C-AB	111	28		596	0.187	111	0.2	0.2	7.502	A
C-A	42	11				42				
A-B	13	3				13				
A-C	52	13				52				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	31	74.87	666	0.183	122	0.2	0.2	6.611	A
C-AB	139	35		601	0.232	139	0.2	0.3	7.872	A
C-A	49	12				49				
A-B	15	4				15				
A-C	64	16				64				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	31	74.87	666	0.183	122	0.2	0.2	6.614	A
C-AB	139	35		601	0.232	139	0.3	0.3	7.882	A
C-A	49	12				49				
A-B	15	4				15				
A-C	64	16				64				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	61.13	670	0.149	100	0.2	0.2	6.314	A
C-AB	111	28		596	0.187	112	0.3	0.3	7.520	A
C-A	42	11				42				
A-B	13	3				13				
A-C	52	13				52				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	51.19	673	0.124	84	0.2	0.1	6.108	A
C-AB	92	23		592	0.155	92	0.3	0.2	7.277	A
C-A	37	9				37				
A-B	11	3				11				
A-C	44	11				44				

2022 Model - 2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	B - Laurelwood Avenue - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ashgrove Road - Laurelwood Avenue	T-Junction	Two-way	Two-way	Two-way		5.73	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	115	Stream C-AB	5.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ashgrove Road (East)		ONE HOUR	✓	13	100.000
B - Laurelwood Avenue		ONE HOUR	✓	170	100.000
C - Ashgrove Road (West)		ONE HOUR	✓	345	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ashgrove Road (East)		
B - Laurelwood Avenue	[ONEHOUR]	0.00
C - Ashgrove Road (West)		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	2	11
	B - Laurelwood Avenue	27	0	143
	C - Ashgrove Road (West)	188	157	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
A - Ashgrove Road (East)	0	1	1
B - Laurelwood Avenue	0	0	0
C - Ashgrove Road (West)	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.30	8.13	0.4	A	156	234
C-AB	0.34	7.78	0.7	A	194	291
C-A					122	184
A-B					2	3
A-C					10	15

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	128	32	0.00	640	0.200	127	0.0	0.2	7.001	A
C-AB	150	37		668	0.224	149	0.0	0.4	6.982	A
C-A	110	27				110				
A-B	2	0.38				2				
A-C	8	2				8				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	38	0.00	636	0.240	153	0.2	0.3	7.443	A
C-AB	188	47		687	0.273	187	0.4	0.5	7.277	A
C-A	123	31				123				
A-B	2	0.45				2				
A-C	10	2				10				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	47	0.00	630	0.297	187	0.3	0.4	8.114	A
C-AB	244	61		713	0.343	243	0.5	0.7	7.757	A
C-A	136	34				136				
A-B	2	0.55				2				
A-C	12	3				12				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	47	0.00	630	0.297	187	0.4	0.4	8.130	A
C-AB	244	61		713	0.343	244	0.7	0.7	7.782	A
C-A	135	34				135				
A-B	2	0.55				2				
A-C	12	3				12				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	38	0.00	636	0.240	153	0.4	0.3	7.463	A
C-AB	188	47		687	0.273	189	0.7	0.5	7.314	A
C-A	122	31				122				
A-B	2	0.45				2				
A-C	10	2				10				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	128	32	0.00	640	0.200	128	0.3	0.3	7.038	A
C-AB	150	38		669	0.225	151	0.5	0.4	7.033	A
C-A	109	27				109				
A-B	2	0.38				2				
A-C	8	2				8				

<h1>Junctions 10</h1>
<h2>PICADY 10 - Priority Intersection Module</h2>
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Filename: Ashgrove-Laurelwood Priority 180822.j10

Path: C:\Users\COMB3402\OneDrive\Desktop

Report generation date: 18/08/2022 14:55:06

»2022 Model - 2022, AM

»2022 Model - 2022, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2022 Model - 2022												
Stream B-AC	D1	0.0	0.00	0.00	A	172 %	D2	0.0	0.00	0.00	A	93 %
Stream C-AB		0.4	8.35	0.24	A	[Stream C-AB]		0.7	8.42	0.37	A	[Stream C-AB]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	18/08/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\COMB3402
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario	Time Period	Traffic profile	Start time	Finish time	Time segment length	Run
----	----------	-------------	-----------------	------------	-------------	---------------------	-----

	name	name	type	(HH:mm)	(HH:mm)	(min)	automatically
D1	2022	AM	ONE HOUR	08:00	09:30	15	✓
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	2022 Model	✓	100.000	100.000

2022 Model - 2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ashgrove Road - Laurelwood Avenue	T-Junction	Two-way	Two-way	Two-way		2.97	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	172	Stream C-AB	2.97	A

Arms

Arms

Arm	Name	Description	Arm type
A	Ashgrove Road (East)		Major
B	Laurelwood Avenue		Minor
C	Ashgrove Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Ashgrove Road (West)	6.43			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Laurelwood Avenue	One lane	4.08	0	0

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (m)	Crossing time (s)
B - Laurelwood Avenue	1.00	1.00		Distance	5.80	4.14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	530	0.095	0.239	0.151	0.342
B-C	691	0.104	0.263	-	-
C-B	574	0.218	0.218	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ashgrove Road (East)		ONE HOUR	✓	181	100.000
B - Laurelwood Avenue		ONE HOUR	✓	0	100.000
C - Ashgrove Road (West)		ONE HOUR	✓	171	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ashgrove Road (East)		
B - Laurelwood Avenue	[ONEHOUR]	68.00
C - Ashgrove Road (West)		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	14	167
	B - Laurelwood Avenue	0	0	0
	C - Ashgrove Road (West)	58	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	1	1
	B - Laurelwood Avenue	0	0	0
	C - Ashgrove Road (West)	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.24	8.35	0.4	A	115	172
C-A					42	63
A-B					13	19
A-C					153	230

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	51.19	543	0.000	0	0.0	0.0	0.000	A

C-AB	92	23		575	0.160	91	0.0	0.2	7.522	A
C-A	37	9				37				
A-B	11	3				11				
A-C	126	31				126				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	61.13	531	0.000	0	0.0	0.0	0.000	A
C-AB	112	28		575	0.194	112	0.2	0.3	7.844	A
C-A	42	10				42				
A-B	13	3				13				
A-C	150	38				150				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	74.87	516	0.000	0	0.0	0.0	0.000	A
C-AB	140	35		576	0.243	140	0.3	0.4	8.340	A
C-A	48	12				48				
A-B	15	4				15				
A-C	184	46				184				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	74.87	515	0.000	0	0.0	0.0	0.000	A
C-AB	140	35		576	0.243	140	0.4	0.4	8.352	A
C-A	48	12				48				
A-B	15	4				15				
A-C	184	46				184				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	61.13	531	0.000	0	0.0	0.0	0.000	A
C-AB	112	28		575	0.194	112	0.4	0.3	7.864	A
C-A	42	10				42				
A-B	13	3				13				
A-C	150	38				150				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	51.19	543	0.000	0	0.0	0.0	0.000	A
C-AB	92	23		575	0.160	92	0.3	0.2	7.542	A
C-A	37	9				37				
A-B	11	3				11				
A-C	126	31				126				

2022 Model - 2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	B - Laurelwood Avenue - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ashgrove Road - Laurelwood Avenue	T-Junction	Two-way	Two-way	Two-way		3.60	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	93	Stream C-AB	3.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Ashgrove Road (East)		ONE HOUR	✓	156	100.000
B - Laurelwood Avenue		ONE HOUR	✓	0	100.000
C - Ashgrove Road (West)		ONE HOUR	✓	345	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Ashgrove Road (East)		
B - Laurelwood Avenue	[ONEHOUR]	0.00
C - Ashgrove Road (West)		

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
From	A - Ashgrove Road (East)	0	2	154
	B - Laurelwood Avenue	0	0	0
	C - Ashgrove Road (West)	188	157	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - Ashgrove Road (East)	B - Laurelwood Avenue	C - Ashgrove Road (West)
A - Ashgrove Road (East)	0	1	1
B - Laurelwood Avenue	0	0	0
C - Ashgrove Road (West)	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.37	8.42	0.7	A	197	295
C-A					120	180
A-B					2	3
A-C					141	212

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	528	0.000	0	0.0	0.0	0.000	A
C-AB	151	38		647	0.234	150	0.0	0.4	7.303	A
C-A	108	27				108				
A-B	2	0.38				2				
A-C	116	29				116				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	513	0.000	0	0.0	0.0	0.000	A
C-AB	190	48		662	0.287	189	0.4	0.5	7.707	A
C-A	120	30				120				
A-B	2	0.45				2				
A-C	138	35				138				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	493	0.000	0	0.0	0.0	0.000	A
C-AB	249	62		682	0.365	248	0.5	0.7	8.380	A
C-A	131	33				131				
A-B	2	0.55				2				
A-C	170	42				170				

00:45 - 01:00

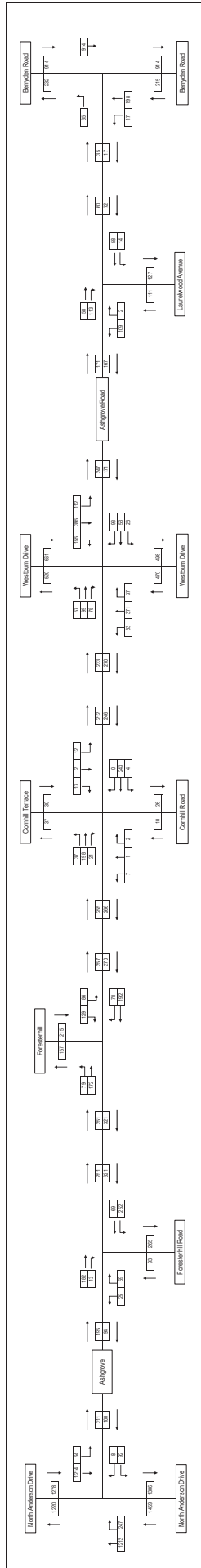
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	492	0.000	0	0.0	0.0	0.000	A
C-AB	249	62		682	0.365	249	0.7	0.7	8.416	A
C-A	131	33				131				
A-B	2	0.55				2				
A-C	170	42				170				

01:00 - 01:15

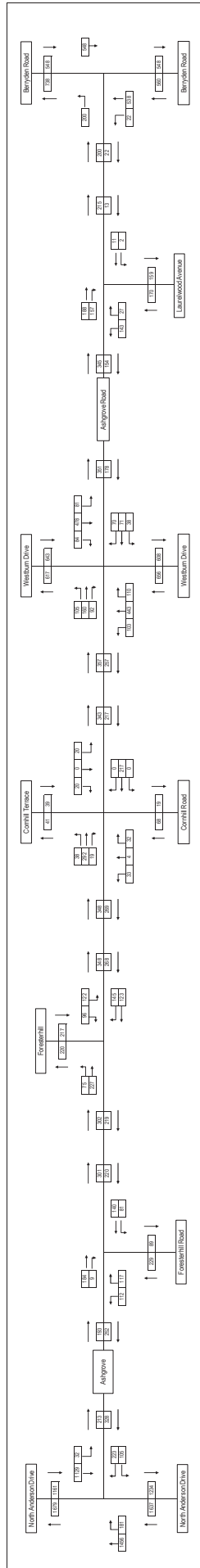
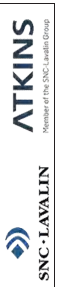
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	513	0.000	0	0.0	0.0	0.000	A
C-AB	190	48		662	0.288	191	0.7	0.5	7.753	A
C-A	120	30				120				
A-B	2	0.45				2				
A-C	138	35				138				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.00	528	0.000	0	0.0	0.0	0.000	A
C-AB	152	38		647	0.235	152	0.5	0.4	7.366	A
C-A	108	27				108				
A-B	2	0.38				2				
A-C	116	29				116				

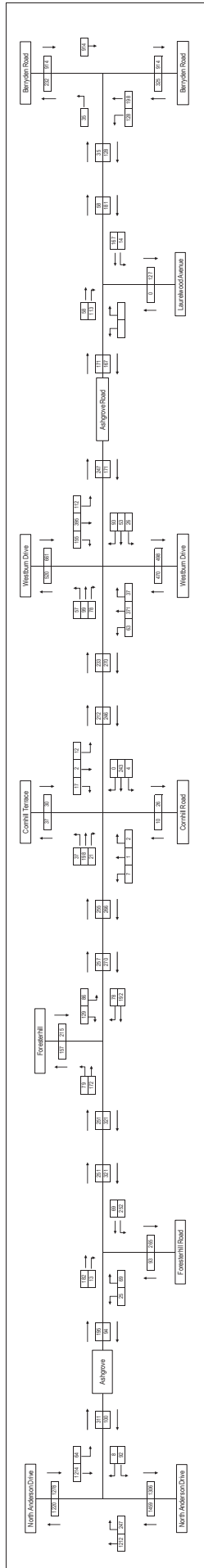


Aberdeen Abhigrove Road
 Project No: 5212138
 Figure 6b.8. 01
 Supplied Flows
 Weekday AM Peak Hour (08:00 - 09:00)

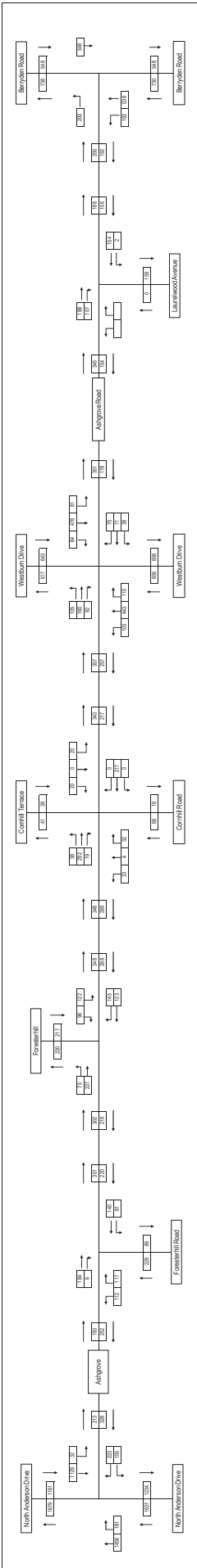


Aberdeen Abhigrove Road
 Project No: 5212138
 Figure 6b.8. 02
 Supplied Flows
 Weekday PM Peak Hour (17:00 - 18:00)





Aberdeen Ashgrove Road
 Project No: 5212138
 Redistributed Flows at Laurelwood Avenue /
 Ashgrove Road for One-way Southbound
 Weekday AM Peak Hour (18:00 - 19:00)
 Figure CR-B-03



Aberdeen Ashgrove Road
 Project No: 5212138
 Redistributed Flows at Laurelwood Avenue /
 Ashgrove Road for One-way Southbound
 Weekday PM Peak Hour (17:00 - 18:00)
 Figure CR-B-04



Constituent Report CR-C

Monitoring & Evaluation Plan

Ashgrove Connects

Stage 1-2 Monitoring & Evaluation Plan

Aberdeen City Council

08 September 2022

1.2

Notice

This document and its contents have been prepared and are intended solely as information for Aberdeen City Council and Nestrans in relation to the Ashgrove Connects Project.

Atkins Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 21 pages including the cover.

Document history

Document title: Stage 1-2 Monitoring & Evaluation Plan

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft M&E Plan	AC	ED	CJ	AM	09/08/22
1.1	Revised Draft M&E Plan	AC	KD	CJ	AM	06/09/22
1.2	Final update	AC	CJ	AM	AM	08/09/22

Client signoff

Client	Aberdeen City Council
Project	Ashgrove Connects
Job number	5212138
Client signature/date	

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1. Introduction

This document sets out the Monitoring and Evaluation Plan (M&E Plan) for the Ashgrove Connects Project. The plan developed in subsequent chapters has been prepared in order to establish a framework which would be used to capture, analyse and present data required to evaluate the likely impact of the project in future. This takes considerations of current Aberdeen City Council (ACC), Nestrans, Transport Scotland and other industry best practice guidance.

This document also outlines a series of project outcomes and performance indicators which would be used to evaluate the project's impact and details the monitoring strategy for future stages of the project. It is noted appropriate budget to undertake the proposed scope of monitoring works (surveys and reporting) would need to be agreed in addition to associated design, construction and management costs etc.

The implementation timescales associated with project delivery have not been provided at this stage.

1.1. Monitoring & Evaluation Plan – Purpose

An M&E Plan is a guide as to what you should monitor and evaluate, information and data required, and who you are evaluating for. It is a reference tool which guides future monitoring activities throughout the lifecycle of a transport or other infrastructure project. As most infrastructure projects typically require five to seven years to design and plan prior to implementation, it is often not possible to anticipate the likely impacts a given project will have when completed, particularly after an extended period.

An M&E Plan also outlines the evaluation criteria and questions and details a proposed data collection and monitoring approach used to establish the impact of the project. The main output of an M&E Plan is a data collection table/matrix, this is the critical tool used in the planning and management of surveys and analysis of data.

1.2. Guiding Policy

In preparing this study, the following policy documents have been taken into consideration and their defining principles carried forward to develop monitoring and evaluation tools specific to the Ashgrove Road and Ashgrove Road West study area. While the documents discussed below are not required to be explicitly followed these generally provide good practice guidance for smaller / non-trunk road projects such as Ashgrove Connects.

[Design Manual for Roads and Bridges \(DMRB\), National Highways, Updated July 2022](#)

DMRB Volume 5, SH 1/97 details the aims of evaluation schemes for transport intervention projects, these include:

- “To satisfy the demands of good management and public accountability by providing the answers to questions about the effects of a new or improved road.
- To identify the strengths and weaknesses in the techniques used for appraising projects, so that confidence in the roads programme is maintained.
- To allow the predictive ability of the traffic or transport models used to be monitored to establish whether any particular form of model is consistently more reliable than others when applied to particular types of projects; and
- To assist in the assessment of compensation under Part 1 of the Land Compensation (Scotland) Act 1973.”

Scottish Transport Appraisal Guidance (STAG), Transport Scotland, Updated January 2022

Transport Scotland's monitoring and evaluation principles are set out in the Scottish Transport Appraisal Guidance (STAG). STAG advocates for evaluation indicators and targets derived from a series of transport planning and design objectives set for the project, STAG criteria and relevant policy directives, the aim of which is to identify:

- *“Whether the project is performing as intended.*
- *Whether, and to what extent, it is contributing to established policy directives; and*
- *Whether the implemented project continues to represent value for money.”*

Scottish Trunk Road Infrastructure Project Evaluation (STRIPE), Transport Scotland, Updated January 2022

Transport Scotland's Scottish Trunk Road Infrastructure Project Evaluation (STRIPE) Guidance also sets out the specific requirements for the evaluation of roads-based projects. STRIPE states there should be two evaluations carried out during a projects post-implementation stage, this includes:

- *“A one-year after construction (1YA) Evaluation – to be undertaken one year after a given scheme's opening, this aims to provide an early indication that the project is operating as planned and is on-track to achieve its monitoring objectives. Information gathering for this should be supported by sources such as site visits/observations and stakeholder interviews.*
- *A Detailed Evaluation – undertaken three to five years (3YA-5YA) after a scheme's opening. This second evaluation considers a project's impacts, whether it has achieved its objectives and reviews the actual impacts against forecasts and determines the causes of any variances.*

2. Project Context

Ashgrove Connects is a proposed project to get local people involved in making Ashgrove Road and Ashgrove Road West work better for those who live, work, study and visit here. This is being progressed by Aberdeen City Council and funded by Nestrans as part of a programme of improvements across the city that will help provide people with more sustainable transport and lifestyle options.

Still at an early stage, the project currently includes proposals which would give greater space and priority to people, improve access to local shops and facilities and give people additional choice of travel mode. The project also aims to compliment proposed infrastructure changes along the Berryden Corridor, looking to further relieve local congestion, enhance journey time reliability, and improve infrastructure for walking and cycling in the area.

2.1. Location

The project focuses on areas to the north of Aberdeen city centre, between North Anderson Drive and Berryden Road. This area includes the communities of Stockethill, Cornhill, Ashgrove and Foresterhill. It is noted that Stockethill and Ashgrove are areas prioritised within the Aberdeen City Centre Locality Plan (2021-26).

The 'Design Area' for Ashgrove Connects is shown in Figure 2-1 below. It covers the full length of Ashgrove Road West and Ashgrove Road, between North Anderson Drive to the west and the A96 Powis Terrace to the east, and also includes Laurelwood Avenue.

Full details of the current road network and local environment are described in the Baseline Assessment and Final Report.

Figure 2-1 - Ashgrove Connects Design Area



2.2. Design Objectives

During Stages 1-2 (Concept Design) six design objectives have been developed based on current ACC, Nestrans and other policy guidance, analysis of the existing street's operation and from community and stakeholder engagement undertaken to date. These are shown in Figure 2-2 below.

Figure 2-2 - Design Objectives

 <p>Traffic</p> <p>The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.</p>	 <p>Crossings and Junctions</p> <p>Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.</p>	 <p>Place Quality and Greenspace</p> <p>The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced, and an overall net gain of 'green'.</p>
 <p>Walking</p> <p>People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.</p>	 <p>Cycling</p> <p>People of all ages and abilities are able to move around by bicycle safely, comfortably and independently.</p>	 <p>Parking and loading</p> <p>Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.</p>

These objectives set out what the project should achieve and will be used to ensure the designs remain in line with community priorities as they develop

2.3. Stage 1-2 Community and Stakeholder Feedback

A breakdown of engagement activities undertaken during Stages 1 and 2 and their relevant target stakeholder groups are provided in Appendix A.

Upon analysing the comments and feedback collated throughout these engagement activities, a number of key themes and transport issues (both perceived and actual issues) emerged, these include:

Key Feedback

- Ashgrove Road and Ashgrove Road West have distinct feel to them which should be retained.
- A majority of people support measures to reduce motor vehicle traffic and traffic speeds in the area
- There is a lack of continuity for people walking/wheeling and cycling in the area
- There are currently difficulties accessing local amenities
- There is a lack of awareness of ACC's policy direction and concerns that projects which and prioritise vehicle traffic (and potentially increase congestion) are being proposed nearby.
- There are frustrations, particularly from residents at a lack of action to respond to current issues date

Perceived and actual transport/accessibility issues

- High traffic speeds cause an increase rate of collisions and perceived safety concerns.
- High traffic volumes, particularly on Laurelwood Avenue, is a concern for quality of life.
- Business customers park on Ashgrove Road, often blocking driveways and pavements, rather than using the off-street car parks provided nearby.
- The junction of Ashgrove Road with Berryden Road is heavily congested, resulting an increase rate of collisions and perceived noise and safety concerns.
- Restrictive visibility for road users, particularly at the Laurelwood Avenue-Ashgrove Road junction and Berryden Road-Laurelwood Avenue junction, results in perceived safety concerns.
- Trees enhance quality of street environment but create issues for footway accessibility/quality and access to properties.

3. Monitoring and Evaluation Framework

The M&E framework set out below in Table 3-1 aims to facilitate the effective assessment of the Ashgrove Connect project's performance pre and post construction, therefore allowing Aberdeen City Council, Nestrans and project team to achieve the expected results of the design's implementation.

Monitoring activities would be oriented towards tackling identified (actual and perceived) issues within the design area and achieving the design objectives. Evaluation of the project, similarly, will be oriented to assess the extent to which these issues have been mitigated and objectives have been achieved.

Performance Indicators and M&E Criteria

Progress towards the design objectives would be measured against a series of transport-based indicators and monitoring criteria identified at this stage by Atkins and as amended (if required) during subsequent design stages.

Performance indicators are intended to be SMART (specific, measurable, achievable, relevant and time-based) where possible and include both qualitative (community and stakeholder opinions) and quantitative (changes in traffic flows, journey times etc.) elements. Survey evidence gathered to measure these indicators should also incorporate respondent characteristics (such as age, gender, ethnicity) and geographic location, allowing for a more detailed analysis and consideration of potential equalities impacts.

Development of indicators and M&E criteria at this stage have been informed by The Scottish Government's Accessibility, Active Travel and Road Safety monitoring frameworks.

Table 3-1 - Monitoring & Evaluation Framework

Objective	Indicators	Evaluation Criteria	Data Source / Data Collection Requirements	Definition of Success
<p>Traffic, Parking and Loading –</p> <p>The street is a slower, quieter and calmer environment where traffic access is retained by people feel safer, and traffic is less of a barrier to community activity.</p> <p>Provide parking and loading within a reasonable distance from homes.</p>	<ul style="list-style-type: none"> Vehicle movements by street and vehicle class Vehicle speeds, Rate of traffic collisions and casualties Parking demand, duration and occupancy, by vehicle class, by road and type of parking facility 	<ul style="list-style-type: none"> Peak and daily through traffic movements in the area. Percentage of LGV/HGV movements within peak and daily traffic flows Mean, max and 85%ile traffic speeds. Road collisions and casualties Perceptions of safety in the design area Walking Audit scoring for 'Feeling safe', 'Identity and belonging', 'Moving around', 'Public transport' and 'Social contact', 'Streets and spaces' and 'Traffic and parking' criteria. Daily parking demand Average and maximum parking duration Maximum daily parking occupancy 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> Stage 1-2 traffic speed and volume surveys Road collision statistics to-date Stage 1-2 engagement feedback Baseline walking audits Scottish Transport Statistics Department for Transport Traffic Counts Cycling Scotland Data <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> Stage 3-4 engagement feedback Post-construction online/household surveys. Post-construction traffic speed and volume surveys and walking audits Aberdeen City Council Active Travel Action Plan Aberdeen City Local Outcome Improvement Plan 	<ul style="list-style-type: none"> Design interventions result in decreased vehicular traffic (and heavy vehicle traffic) travelling east-west along Ashgrove Road and Ashgrove Road West. Design interventions result in decreased vehicular traffic speeds and maximum speeds on the street A reduction in traffic collisions and the severity of collisions in the area. A reduction in the rate of collisions involving active travel users. All users of the street feel safer when moving around The design provides sufficient parking capacity to satisfy current and future anticipated demand. Updates to Walking Audits highlight improvements across the relevant criteria.
<p>Walking –</p> <p>People of all ages and abilities can more easily walk to access facilities safely, comfortably and independently</p>	<ul style="list-style-type: none"> % of Walking/wheeling travel mode share % of Walking/wheeling travel for recreation / leisure trips Walking/wheeling journey times to local facilities % of short journeys made by walking/active travel modes Distance of walking trips Public awareness of active travel modes Perceived barriers to active modes Perceived journey quality for active modes 	<ul style="list-style-type: none"> Weekday and weekend pedestrian movements at junctions and bus stops Pedestrian movements and behaviour at the Ashgrove Road-Back Hilton Road junction Walking audit scoring for all criteria Perceptions of safety in the design area 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> Stage 1-2 active travel surveys Road collision statistics to-date Stage 1-2 engagement feedback Baseline walking audits Scottish Transport Statistics Department for Transport Traffic Counts Cycling Scotland Data <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> Stage 3-4 engagement feedback Engagement and findings of Behavioural Change Plan Post-construction online/household surveys. Post-construction traffic speed and volume surveys and walking audits Aberdeen City Council Active Travel Action Plan Aberdeen City Local Outcome Improvement Plan 	<ul style="list-style-type: none"> An increased number of people are observed to walk/wheel around the street each day. Design interventions increase the likelihood of local residents walking/wheeling in the area. Active modes become an attractive alternative to vehicle-based travel in the area. All users of the street feel safer when moving around People are more encouraged to dwell within the street. Survey findings point to increased comfort when walking within the design area. Updates to Walking Audits highlight improvements across all criteria. Engagement feedback highlights the improved quality of walking journeys.

Objective	Indicators	Evaluation Criteria	Data Source / Data Collection Requirements	Definition of Success
<p>Cycling – People of all ages and abilities are able to move around by bicycle safely, comfortably and independently.</p>	<ul style="list-style-type: none"> • % of Cycle travel mode share • % of Cycling travel for recreation / leisure trips • Cycle journey times to local facilities • % of short journeys made by cycling/active travel modes • Distance of cycling trips • Public awareness of active travel modes • Perceived barriers to active modes • Perceived journey quality for active modes 	<ul style="list-style-type: none"> • Weekday and weekend cycle movements at junctions and bus stops • Walking audit scoring for 'Moving around' and 'Streets and spaces' criteria • Uptake of cycle training/cycle skills courses, bike-ability training in schools etc. 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> • Stage 1-2 active travel surveys • Road collision statistics to-date • Stage 1-2 engagement feedback • Baseline walking audits • Scottish Transport Statistics • Department for Transport Traffic Counts • Cycling Scotland Data • Hands up Scotland Survey <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> • Stage 3-4 engagement feedback • Engagement and findings of Behavioural Change Plan • Post-construction online/household surveys. • Post-construction traffic speed and volume surveys and walking audits • Aberdeen City Council Active Travel Action Plan • Aberdeen City Local Outcome Improvement Plan 	<ul style="list-style-type: none"> • An increased number of people are observed to cycle around the street each day. • Design interventions increase the likelihood of local residents cycling in the area. • Active modes become an attractive alternative to vehicle-based travel in the area. • A reduction in traffic collisions and the severity of collisions involving cyclists. • All users of the street feel safer when moving around • Updates to Walking Audits highlight improvements across the relevant criteria. • Engagement feedback highlights the improved quality of cycling journeys.
<p>Crossings and junctions – Using junctions and crossings is an easier and more comfortable experience</p>	<ul style="list-style-type: none"> • % active travel mode share • Walking/wheeling journey times to local facilities • % of short journeys made by walking/active travel modes • Perceived barriers to active modes • Perceived journey quality for active modes • Queuing and delays at junctions. • Vehicle journey time reliability 	<ul style="list-style-type: none"> • Pedestrian and cycle crossing movements at junctions • Peak and daily through traffic movements in the area. • Mean, max and 85%ile traffic speeds. • Road collisions and casualties • Perceptions of safety at crossings and junctions • Walking audit scoring for 'Feeling safe', 'Moving around' and 'Traffic and parking' criteria 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> • Stage 1-2 active travel surveys • Road collision statistics to-date • Stage 1-2 engagement feedback • Baseline walking audits • Scottish Transport Statistics • Department for Transport Traffic Counts • Cycling Scotland Data <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> • Stage 3-4 engagement feedback • Post-construction online/household surveys. • Post-construction traffic speed and volume surveys and walking audits • Aberdeen City Council Active Travel Action Plan • Aberdeen City Local Outcome Improvement Plan 	<ul style="list-style-type: none"> • An increased number of people are observed to use active modes each day. • Active modes become an attractive alternative to vehicle-based travel in the area. • A reduction in traffic collisions and the severity of collisions at crossing points and junctions. • All users of the street feel safer when moving around • Pedestrian desire lines are more direct and dwell times are reduced at the Back Hilton Road – Ashgrove Road Junction • Updates to Walking Audits highlight improvements across the relevant criteria. • Engagement feedback highlights the improved quality of crossings and junction performance.

Objective	Indicators	Evaluation Criteria	Data Source / Data Collection Requirements	Definition of Success
<p>Place Quality and Greenspace – The street feels more attractive and safer for people to spend time in, with improved access to and through local green spaces, the distinctive feel of local spaces is enhanced and an overall net gain of 'green'.</p>	<ul style="list-style-type: none"> Vehicle movements by street and vehicle class Vehicle speeds Rate of traffic collisions and casualties Transport emissions / Air quality Parking demand & vehicle types Community health and wellbeing Perception of safety travelling by public transport and active modes Attitudes towards/pronensity to walking, cycling and other active modes Quality of walking and cycling infrastructure Public awareness of active travel 	<ul style="list-style-type: none"> Peak and daily through traffic movements in the area. Percentage of LGV/HGV movements within peak and daily traffic flows Mean, max and 85%ile traffic speeds. Road collisions and casualties Perceptions of safety in the design area Time people spend in the design area SIMD classification of the design/engagement area Perceived attractiveness of the design area Perceived friendliness of pedestrian, walking/wheeling and cycling in the design area Walking Audit scoring for, 'Feeling safe', 'Identity and belonging' and 'Social contact' criteria. 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> Stage 1-2 traffic speed and volume surveys Road collision statistics to-date 2020 SIMD Data Stage 1-2 engagement feedback Baseline walking audits Scottish Household Survey Scottish Transport Statistics Scottish Health Survey Department for Transport Traffic Counts <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> Stage 3-4 engagement feedback Post-construction online/household surveys. Post-construction traffic speed and volume surveys and walking audits 	<ul style="list-style-type: none"> Reprioritisation of road space results in a lower speed environment for vehicles. Design interventions result in decreased vehicular traffic (and heavy vehicle traffic) travelling east-west along Ashgrove Road and Ashgrove Road West. Design interventions result in decreased vehicular traffic speeds and maximum speeds on the street The long-term changes to travel patterns positively contribute to public health and well-being and SIMD classification of the area. A reduction in traffic collisions and the severity of collisions in the area. All users of all abilities can become more independent when moving around the area. All users of the street feel safer when moving around People are more encouraged to dwell within the street.
<p>Public Transport – Retain essential access for bus travel, improving its comfort, reliability, and safety.</p>	<ul style="list-style-type: none"> Public transport mode share Bus journey times to local facilities Satisfaction with public transport Perceived barriers to public transport use and access Local bus services and their frequency Bus journey time reliability Public transport patronage 	<ul style="list-style-type: none"> Peak and daily bus movements in the area. Road collisions and casualties Walking Audit scoring for 'Public transport' criteria 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> Stage 1-2 traffic speed and volume surveys Baseline walking audits First Bus Aberdeen and Stagecoach service provision & patronage reporting Scottish Household Survey Scottish Transport Statistics Department for Transport Traffic Counts <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> Stage 3-4 engagement feedback and event attendance. Post-construction online/household surveys. Post-construction traffic speed and volume surveys and walking audits 	<ul style="list-style-type: none"> Design interventions result in increased uptake of public transport in the area. Local bus services see an increase in journey time reliability Engagement feedback highlights improvements to bus service operation. Additional bus services/more frequent services are provided locally. Updates to Walking Audits highlight improvements to the 'public transport' criteria.

Objective	Indicators	Evaluation Criteria	Data Source / Data Collection Requirements	Definition of Success
<p>Engagement – Engage with the local communities, businesses and stakeholders within the 'engagement area', so that they become more actively involved in the project and decision-making.</p>	<ul style="list-style-type: none"> No. of people attending events/activities No. of website views/clicks No. of survey respondents % of positive survey responses No. of stakeholder groups and local businesses involved/informed Community/stakeholder connections created through project activities 'Sense of community' within the design area 	<ul style="list-style-type: none"> Quality of gathered feedback throughout the design process Number of community engagement activities held and attendances Number of comments / responses received. Number and diversity of community stakeholders engaged (e.g. community groups, businesses) Diversity of demographic profile of those engaging with online material and the project team Number of respondents (self-reporting) which are from protected characteristic groups Number of working group meetings held and their attendance 	<p>Existing Sources of data:</p> <ul style="list-style-type: none"> Activities log Stage 1-2 engagement feedback and event attendance. Stakeholder Working Group meetings Project website updates and social media posts. <p>Future Data Collection Requirements</p> <ul style="list-style-type: none"> Activities log Stage 3-4 engagement feedback and event attendance. Stage 3-4 working group meetings Project website updates and social media posts. Post works focus group with working group members 	<ul style="list-style-type: none"> Local residents, businesses and stakeholders enthusiastically participate with engagement activities and events throughout the remaining design stages and post-construction updates. Feedback gathered provided, specific, relevant and actionable comments for the project team. A majority of comments and feedback received is positive Drop-in style community events are well attended. Continued feedback is received from those with protected characteristics (particularly mobility/sensory impairments). An increasing number of local businesses and community stakeholder groups in the engagement process. Increased online and social media attention for the project Engagement feedback highlights stakeholders and the public feel their feedback is valued and part of the decision-making considerations.

4. Monitoring Strategy

This chapter outlines the proposed monitoring tools and methods to evaluate the impact of the project, including how data is currently being captured, how data is proposed to be captured in future and considerations going forward. Utilising all publicly available sources of data and the required scope of future surveys will be a consideration during subsequent design stages.

4.1. Baseline (Stage 1-2) Monitoring Tools

Traffic Speed and Volume Surveys

A 24-hour Traffic Speed and Volume survey was used to understand the current flows, classifications and speeds of vehicles in the area. This was done using three Automated Traffic Counters (ATCs) placed on Ashgrove Road West at Castleton Drive and University of Aberdeen Institute of Medical Science and Ashgrove Road (adjacent to Elder Place) between 12th-20th March 2022. Survey locations are shown below in Figure 4-1.

Figure 4-1 - ATC Survey Locations



Pedestrian and Cycle Crossing Counts

Walking and cycle crossing surveys were undertaken to understand the current levels of pedestrian and cycle movements and crossing behaviour in the area. These were performed using video-based surveys and manually enumerated for each approach up to 20m back from the junction from 06:00am-10:00pm between 12th-20th March 2022. These surveys were undertaken at five key junctions (with North Anderson Drive, Foresterhill Road, Cornhill Road/Cornhill Terrace, Westburn Drive and Laurelwood Avenue), and the three pairs of bus stops on Ashgrove Road West. These are shown below in Figure 4.2, and

Figure 4-3.

Figure 4.2 – Pedestrian / Cycle Crossing Survey Locations

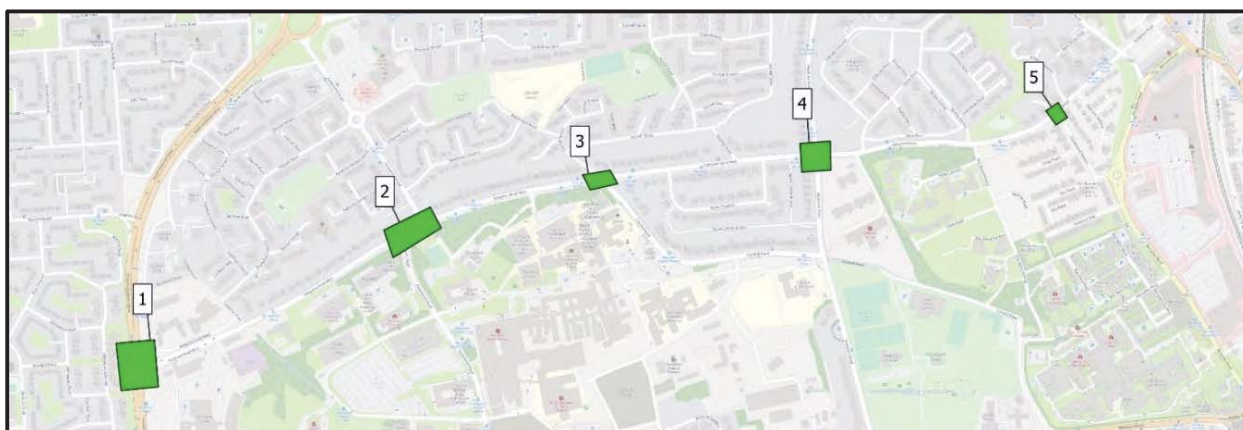
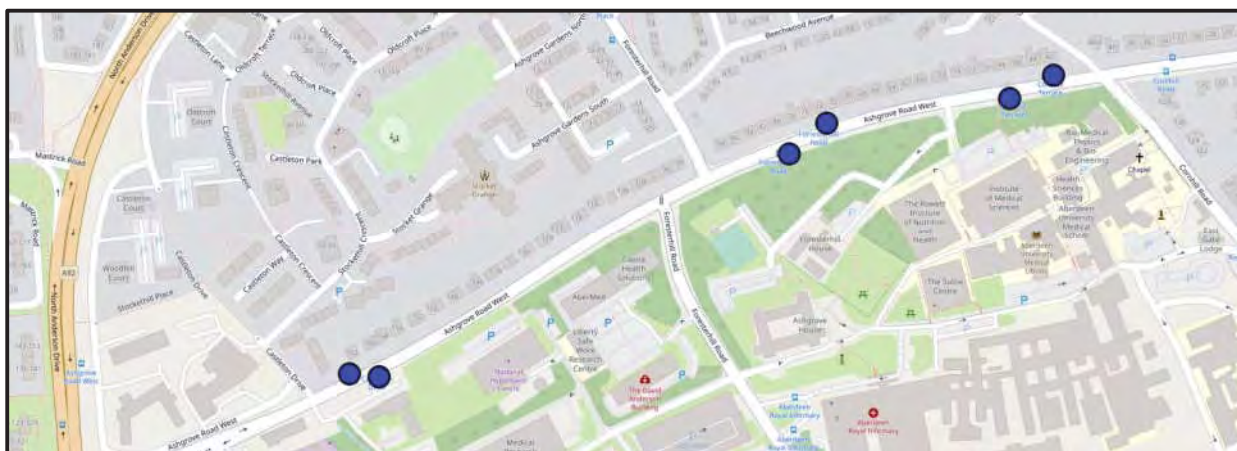


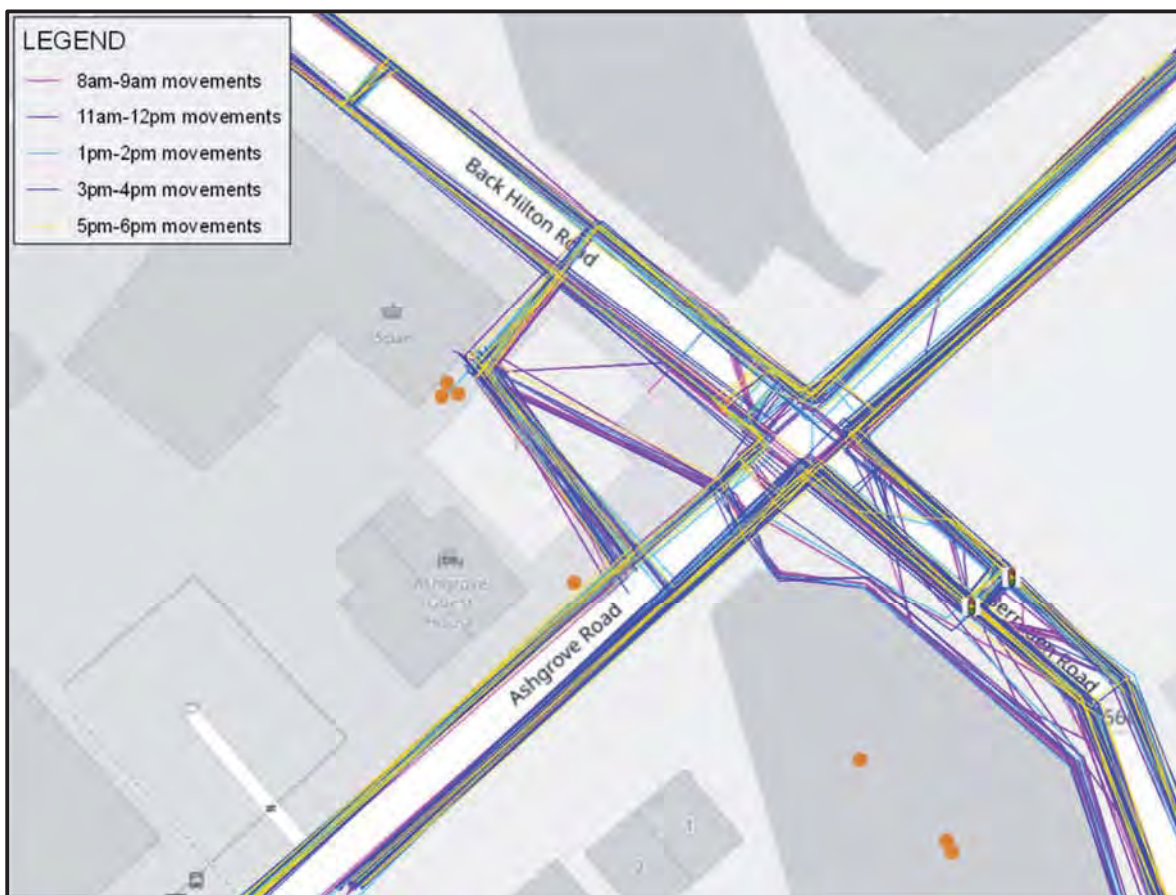
Figure 4-3 - Bus Stop Survey Locations



Public Life Survey

A Public Life Survey (PLS) was undertaken to understand pedestrian movements, current activity levels and to understand how users interact with the key local junction of Ashgrove Road-Berryden Road-Black Hilton Road. This was undertaken using half-hour video-based 'snapshots' taken of the busiest periods of activity. From these snapshots a pedestrian tracing plan was produced to illustrate key desire lines and crossing behaviours. Tracing results gathered are shown in Figure 4-4.

Figure 4-4 - Public Life Survey Location



Parking surveys

Car parking and loading surveys were undertaken to understand current parking demand on Ashgrove Road, Ashgrove Road West and the first 20m of adjacent side roads. These were performed from 06:00am-10:00pm between 26th-30th April 2022. Parking outwith kerbside/defined parking bays and presence of parking permits were also be recorded. The parking areas surveyed are shown in Figure 4-5.

Figure 4-5 - Parking Survey Area



Walking Audit

A total of 6 walking audits of the street were arranged with residents and members of stakeholder groups such as Aberdeen University, NHS Grampian and local schools, between 8th-23rd March 2022. The purpose of these audits was to gather environment and stakeholder and public opinions on the quality of the current street environment. This was done using a scoring exercise based on 7 key themes relating to place quality including:

- Feeling safe
- Identity and belonging
- Moving around
- Public transport
- Social contact
- Streets and spaces
- Traffic and parking

Engagement Activities

To assist the design process, a programme of engagement activities (Appendix A) was conducted. This included consultation via the project website, Aberdeen City Council's own consultation hub, public webinars, and survey questionnaires. Where possible additional survey questions regarding respondent's connection to the area, preferred mode of travel, characteristics (such as gender, age, ethnicity) and postcode have been included in order to gather baseline information of respondent's demographics and travel behaviour.

4.2. External Data Sources

Many of the indicators and monitoring criteria developed above are based on publicly available sources of data. Incorporating these allows the project team and those monitoring the project to set a more detailed baseline position prior to the construction stage and allows for trend-based analyses over time. These sources include:

Cycling Scotland Data – Scottish Government, Aberdeen City Council
 DFT Annual Traffic Counts – UK Department for Transport
 Hands Up Scotland Survey (HUSS) – Sustrans
 Scottish Census – Scottish Government
 Scottish Index of Multiple Deprivation (SIMD) – Scottish Government
 Scottish Health Survey Data – Scottish Government, Aberdeen City Council
 Scottish Household Survey Data – Scottish Government, Aberdeen City Council
 Scottish Transport Statistics & Road Traffic Statistics – Scottish Government, UK Government

4.3. Future (Design Stages 3-4 and Post Construction) Monitoring Tools

The continued collection of both and qualitative quantitative data is key to inform the Monitoring and Evaluation Framework, understand progress towards overarching project outcomes/objectives and relative changes in performance indicators.

During Stages 3 and 4 it is anticipated further rounds of community and stakeholder engagement will be undertaken. These events will be used to attain feedback on the developing designs, better understand stakeholder requirements and monitor public sentiment and the overall success of the project.

4.4. Reporting Requirements

In line with Sustrans and Transport Scotland guidance detailed above, there are three main outputs of an M&E Plan, these are.

- Baseline Monitoring reports, which evidence the baseline performance and potential impacts of a proposed route/project and its surrounding study area from inception to project handover to / adoption by local authorities (in this instance Aberdeen City Council).
- 1YA (1 Year After) (Interim) Monitoring Studies, which presents the findings from data gathered and surveys undertaken one full year after a project's construction and certification. The 1YA study represents a benchmark for short-term objectives.
- 3YA-5YA (Final) Monitoring Studies, these present the findings from data gathered and surveys undertaken after the scheme has been operation for 3 or 5 years. 3YA or 5YA studies are used to evaluate longer-term objectives. These also serve as the final output of the Monitoring & Evaluation Plan.

Responsibilities

Members of the project team (with support from Aberdeen City Council and/or Nestrans) would be responsible to oversee data collection, survey activities and reporting during later stages of the project. Similar to the approach taken at this stage, this is anticipated to be conducted by third-party contractors.

4.4.1. Baseline Monitoring Report

Prior to the construction stage, a Baseline Monitoring & Evaluation Report should be prepared. Building upon the data Stage 1-2 Scheme Assessment Report and ongoing engagement activities this would contain the baseline data gathered throughout Stages 1-4 required to evidence the project's outcomes/objectives and performance indicators.

The following is anticipated to be included in order to provide a thorough baseline operational summary of the design/engagement area, relevant source data where possible could also be shared in an MS Excel format, including summary tables and graphs.

Baseline Traffic Speed and Volume survey findings

- Average daily, 5-day, 7-day traffic flows
- Vehicle flows by class, including HGV%
- Average, maximum and 85%ile traffic speeds

Parking survey findings

- Weekday and Weekend parking demand and occupancy by road
- Weekday and Weekend parking demand and occupancy by vehicle class
- Weekday and Weekend parking duration and average duration by road
- Parking demand by type of parking facility, designated bays, zone permits etc.

Active Travel Survey and Findings

- Weekday and weekend pedestrian and cycle crossing movements at junctions
- Weekday and weekend pedestrian and cycle movements at junctions, by approach
- Weekday and weekend pedestrian movements at bus stops
- Key desire lines and pedestrian behaviour at the Ashgrove Road-Back Hilton Road

Walking audit findings

- Considering scoring and comments from stakeholders such as residents, local businesses and community groups.

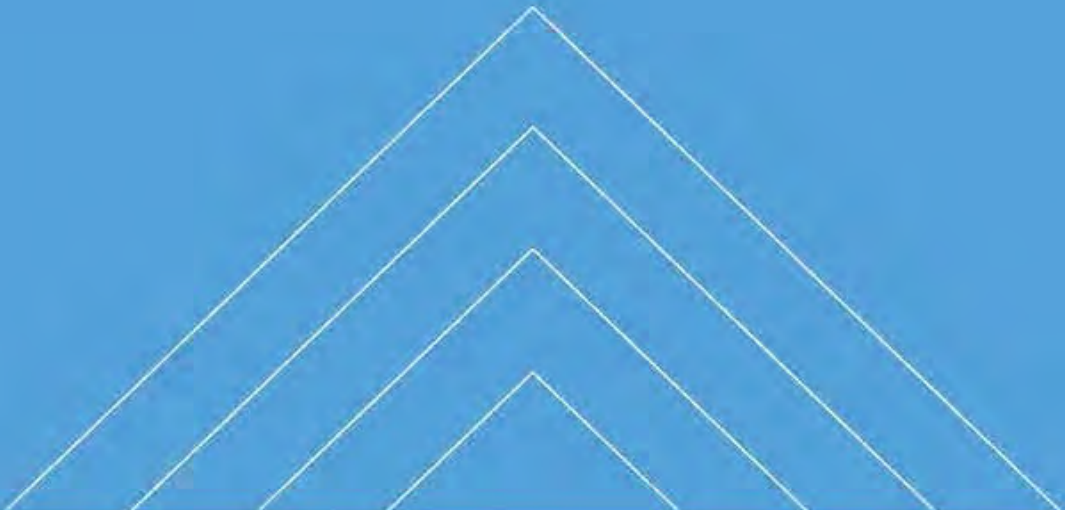
4.4.2. One Year After (1YA) and Three-Five Years After (3-5YA) Studies

Post construction of the finalised design, a One Year After monitoring study (1YA) and a Three or Five Years After (3YA - 5YA) monitoring study would be commissioned. These studies are anticipated to be supported by a programme of surveys and engagement with local residents and community groups, businesses and internal stakeholders (ACC and Nestrans) to gather their opinions of the benefits and drawbacks of the design when in operation.

Based on the indicators and monitoring criteria developed above, examples of comparative analyses which could be undertaken within the 1YA and 3YA or 5YA studies includes.

- Comparisons between baseline and post construction traffic flows, by vehicle class (e.g. bus and LGV/HGVs)
- Comparisons between baseline and post construction collisions rates, collision severities and user groups involved.
- Comparisons between baseline and post construction journey times and journey time reliability
- Comparison between baseline and post construction vehicles speeds, including mean and max speeds

Appendices



Appendix A. Stage 1-2 Engagement and Communications Activities

Stage 1 Engagement Activities

Date	Engagement Activity	Delivery method	Target audience
Stage 1: 'Define'			
07 March	Press release issued	Email	Local media / community
08 March	Briefing issued	Email	Local members
08 March	Introduction emails/letters issued	Email	All key stakeholders
08 March	Consultation opens	Website	All stakeholders
08 March	Door knocking	In person	Residents and businesses
08 March	Walking audit with NHS Grampian	In person	Street user representative
09 March	Walking audit with Community Groups	In person	Street user representative
14 March	Local member briefing held	Online meeting	Local members
16 March	Webinar	Online webinar	All stakeholders
21 March	Meetings with local residents	In person	Local residents
21 March	Walking audit with local residents	In person	Local residents
23 March	Walking audit with Cornhill Primary School	In person	Street user representative
23 March	Walking audit with Aberdeen University	In person	Street user representative
25 March	Consultation extended	Website	All stakeholders
3 April	Consultation closed	Website	All stakeholders
27 April	Stakeholder Working Group meeting held	Online meeting	Key stakeholders

Stage 2 Engagement Activities

Date	Engagement Activity	Delivery method	Target audience
Stage 2: 'Develop'			
18 May	Stakeholder Working Group meeting held	Online meeting	Key stakeholders
15 June	Stakeholder Working Group meeting held	Online meeting	Key stakeholders
21 June	Press release issued	Email	Local media / community
22 June	Email issued to stakeholders and local members	Email	Key stakeholders / local members
22 June	Consultation opens	Website	All
22 June	Door knocking	In person	Residents and businesses
22 June	Cairncry Primary School workshop	In person	Key stakeholder group
27 June	Local member briefing	In person	Key stakeholder group
28 June	Webinar	Online	All
5 July	Drop-in events	In person	All
6 July	Crosby House Care Home workshop	In person	All
12 July	Resident's workshop	In person	All
17 July	Consultation closes	Online	All
24 August	Stakeholder Working Group meeting held	Online	Key stakeholders

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Constituent Report CR-D1

Engagement Report (Stage 1)

Ashgrove Connects

Stage 1 Engagement Report

Aberdeen City Council

09 September 2022

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1. Introduction

1.1 Purpose

This report summarises the responses received during the initial engagement period for Ashgrove Connects which commenced on Tuesday 8th March and closed on Sunday 3rd April 2022.

The purpose of this initial engagement period was to raise awareness and understanding of the project locally and gather information from the community on their experiences of using the streets. The information gathered has been used to define priorities and objectives that the project will seek to achieve.

This report is intended to summarise the activities held, respondents and contributions received. The report does not seek to respond to or comment on responses. All contributions that have been verified by respondents can be viewed on the Comments Map of the project website: <https://ashgroveconnects.commonplace.is/>.

1.2 Methodology

Analysis of the responses received has been undertaken by Atkins using the data obtained from the methods used during the initial engagement period. These have been summarised below.

Project website

Participants on the project website were invited to drop pins on a map of the Ashgrove Connects design area to share their experiences of the streets. Upon dropping a pin, respondents were asked the following questions:

- What would you like to comment on? (Single choice with an open text “other” option)
- How do you feel about this? (Single choice scale from positive to negative)
- Why do you feel this way? (Multiple choice with an open text “other” option)
- How could we improve this? (Multiple choice with an open text “other” option)
- Any other comments? (Open-text response)

The topic choices provided under ‘what would you like to comment on’ were adapted from the Scottish Government’s Place Standard Tool which provides a framework to structure conversations about place.

Participants could also agree with comments submitted by others. All demographic questions were optional.

There was a high level of variation in the detail of responses that people left, with some filling in the multiple-choice options, while others gave longer, more detailed responses in the open-text boxes. A summary of the results has been provided in this report.

Walking audit

Participants at the walking audits were able to discuss their experiences and score each of the topics being asked about on the project website in situ. The weather conditions and chosen route differed on each walk.

The discussions and results from the walking audits have been recorded separately to those submitted through the project website as these were conducted in groups. A summary of the discussion and scores from each walking audit has been provided in this report.

Other

Participants were also able to send contributions directly to the project team by email, phone, paper survey and through the chat function during the live webinar. Where possible, comments posted on social media were also recorded. Contributions submitted through these methods were entered into the project website by the project team.

2. Engagement activities

This chapter provides an overview of the activities held during the initial engagement period.

2.1. Project website

A dedicated project website was launched on Tuesday 8th March to act as the main communication reference point for the project moving forward: <http://ashgroveconnects.commonplace.is>.

Visitors to the website could read more about the project, interact with the Comments Map, watch a recording of the webinar and keep up to date with the latest news.

Figure 2-1 - Level of engagement through the project website



2.2. Walking audits

Walking audits were organised with stakeholder groups representing different street users to discuss their experiences of using the streets in situ with members of the project team. A total of 24 people participated at 6 walking audits. Following interest at the webinar, additional walking audits were organised with residents and the activity was also made available on the project website.

Participant at the walking audit: *“It was interesting to think critically about a street I’ve always used but never actively thought about.”*

Figure 2-2 - Walking audits with community groups, Cornhill Primary School and Aberdeen University



2.3. Webinar

A live webinar was held on Wednesday 16th March to introduce the project, explain more about place and answer questions raised before and during the session. A total of 15 people participated at the webinar which was recorded and uploaded to the project website and has been viewed over 90 times.

Participant at the webinar: *“Thank you, very informative and well presented.”*

2.4. Meetings

Meetings were also held with residents of Ashgrove Road West at Cairncry Community Centre on Monday 21st March to explain more about the project, discuss their experiences of the street and distribute paper surveys.

3. Respondents

This chapter provides an overview of the respondents to the initial engagement period. This includes demographic data from those who submitted this information through the project website.

3.1 Connection and travel mode

Respondents were asked about their connection to the area to provide an understanding of their interest in the project. Figure 3.1 shows that most respondents live and work (44%) in the area. Respondents were also asked how they would normally travel through the area to provide an understanding of how people move around. Figure 3.2 shows that most respondents normally travel by active modes when combining on foot and by bike (55%) followed by car (39%).

Figure 3-1 - Connection to the area

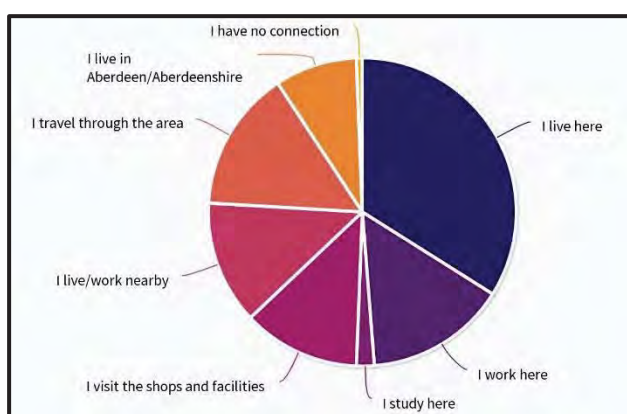
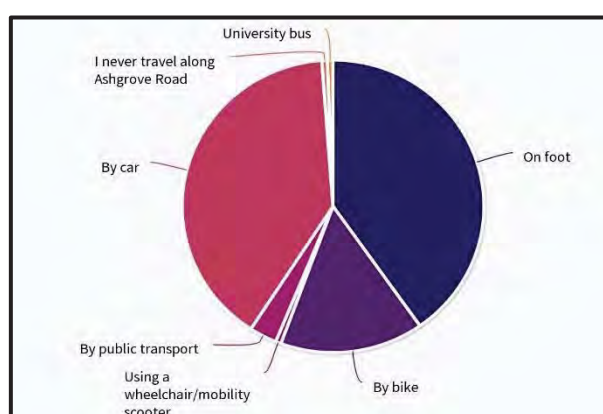


Figure 3-2 - Preferred travel mode



3.1. Gender, age, and ethnicity

Respondents were also asked about their gender, age, and ethnicity to provide an understanding of how balanced the engagement process had been. Figure 3.3 shows there were more female (57%) respondents and Figure 3.4 shows that most respondents fell within the 35-44 (34%) age category. Figure 3.5 shows most respondents were white (98%).

Figure 3-3 - Respondent' gender

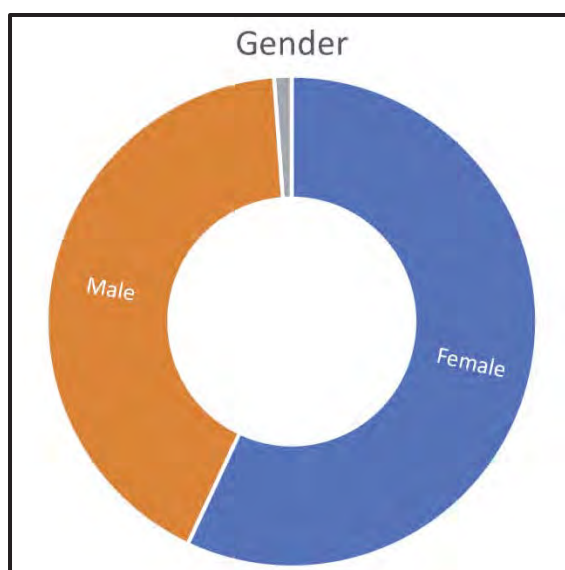


Figure 3-4 - Respondents' age

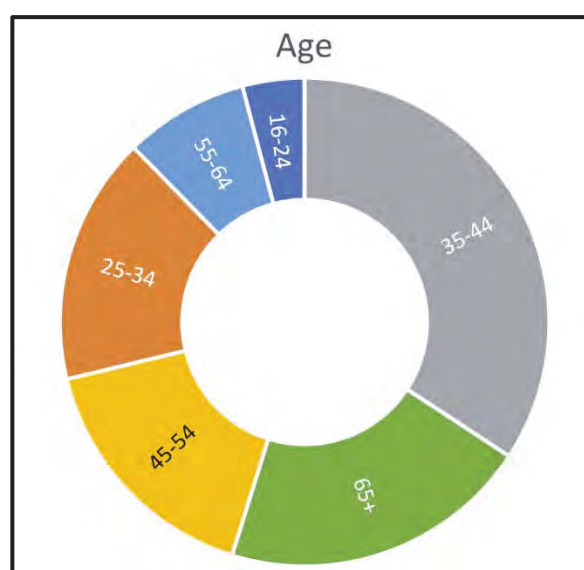
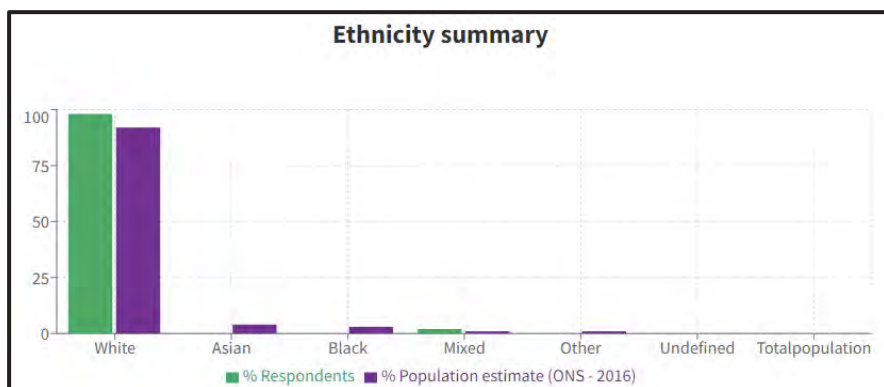


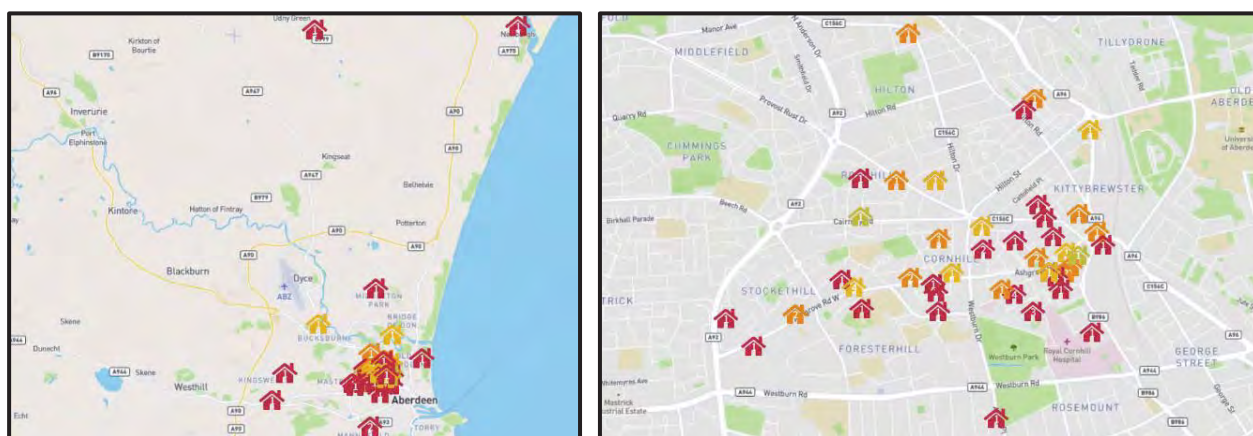
Figure 3-5 - Respondents' ethnicity against the estimated ethnicity of the local population



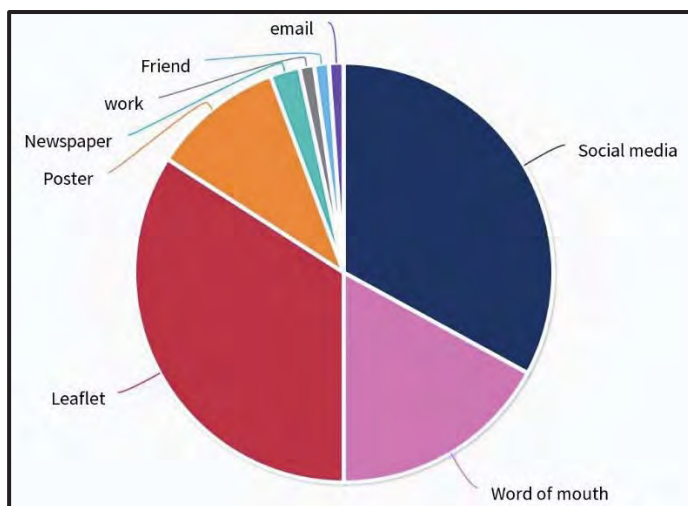
3.2. Postcode

Respondents were asked for their postcode to provide an understanding of where contributions were received from. Figure 3.6 presents the postcode of respondents covering Aberdeenshire and the local area. The colour of the icons corresponds to the average sentiment of the respondent's comments (red = negative; orange = mostly negative; yellow = neutral; light green = mostly positive; and green = positive) and the number represents how many respondents provided the same postcode.

Figure 3-6 - Respondents' postcode



3.3. Communication methods



Respondents were asked how they had heard about the project to provide an understanding of the most successful communication methods.

Figure 3.7 shows social media (32%), leaflets (31%), word of mouth (15%), and posters (11%) were the most successful.

Figure 3-7 - How respondents found out about the project

4. Contributions

This chapter provides an overview of all the contributions received during this initial engagement period. This does not include findings from the walking audits which are provided separately in Chapter 5.

4.1. Overview

The total number of contributions received was 677 of which 245 were comments and 432 were agreements. Figure 4.1 shows the locations of verified contributions grouped together on the Comments Map. The colours correspond to the sentiment of the comment (red = dislike; amber = neutral; and green = like).

Figure 4-1 - Comments map

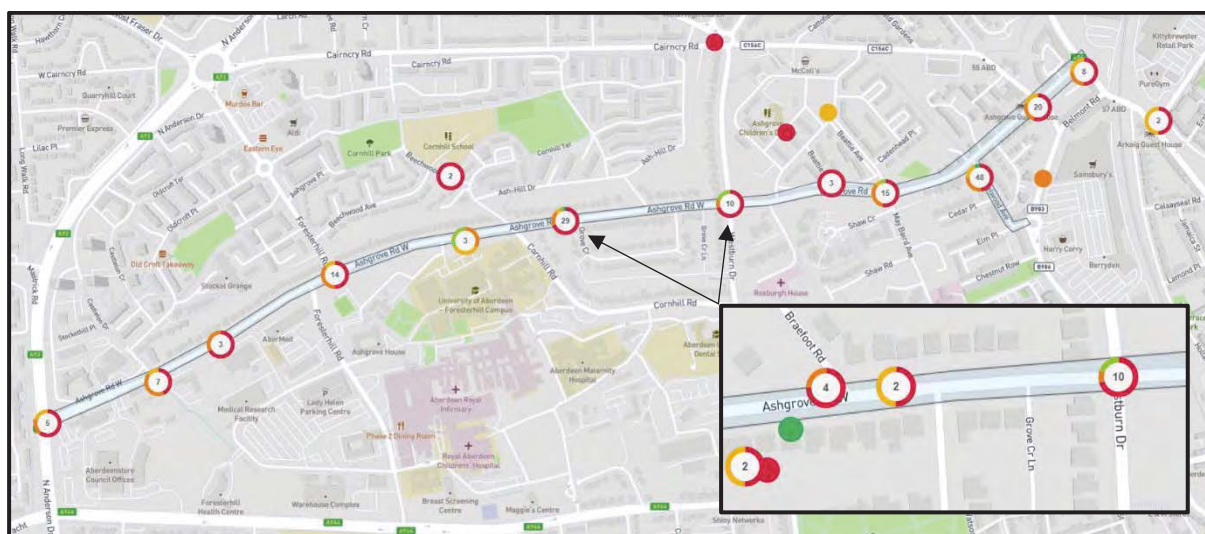


Figure 4.2 presents the topics respondents chose to comment on, with the most popular appearing the largest. Overall, the top three topics respondents commented on were *traffic and parking* (37%), *moving around on foot, by bike or wheelchair* (32%), and *feeling safe* (9%).

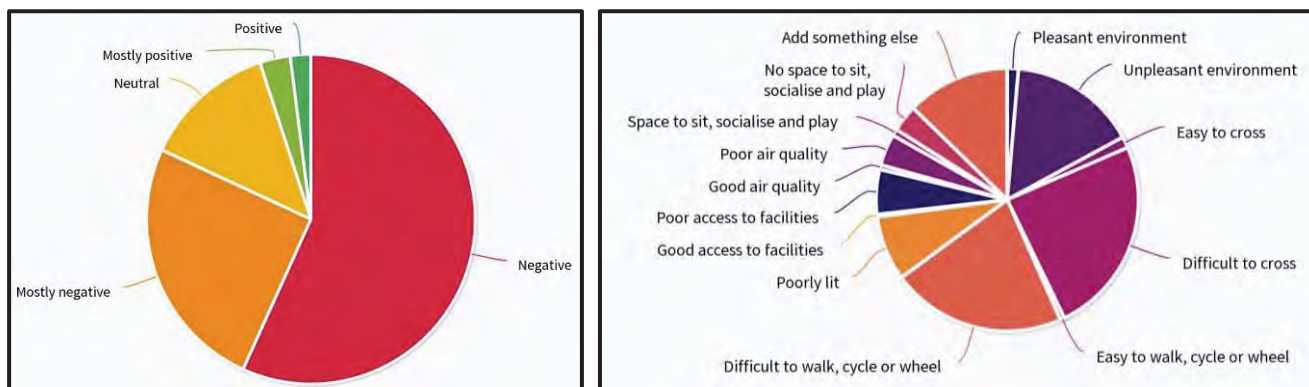
Figure 4-2 - Respondents' answers to what would you like to comment on



Overall, respondents felt negatively or mostly negatively (82%) about the topics they chose to comment on. The top three reasons why respondents felt this way were *difficult to cross* (24%), *difficult to walk, cycle and wheel* (22%) and *unpleasant environment* (16%). Respondents also frequently gave reasons such as high traffic speed and volume, poor junctions, confusing traffic lights and congestion.

Figure 4.3 presents the overall sentiment towards the themes and why respondents felt this way.

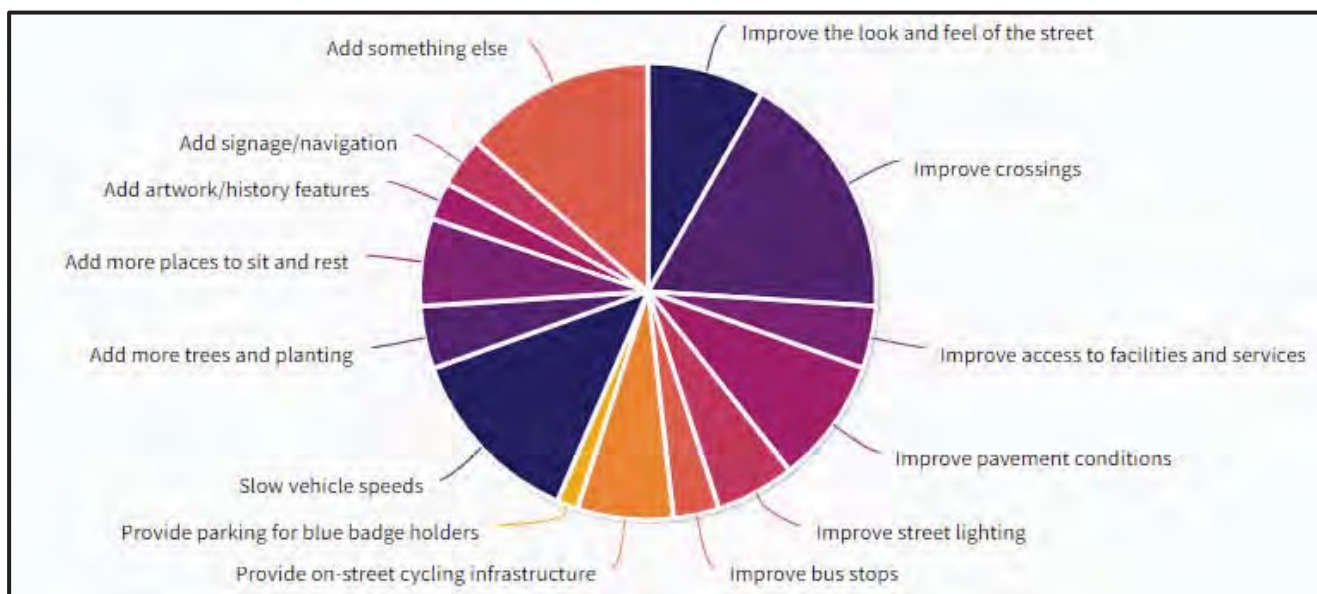
Figure 4-3 - Respondents' overall sentiment and the reasons why



The top three improvements respondents suggested were *improve crossings* (18%), *slow vehicle speeds* (13%) and *improve the look and feel of the street* (8%). Respondents also frequently suggested improve access to greenspace, better maintenance, safer conditions for people cycling, reduce traffic volume and add more bins.

Figure 4.4 presents the improvements respondents suggested overall.

Figure 4-4 - Respondents' suggested improvements overall



Survey response with the most agreements overall was on traffic and parking (17 agreements):

“The Ashgrove Road West/Foresterhil Road staggered junction is confusing and overly complicated. Multiple times as a car driver and cyclist I have experienced near misses due to traffic in the wrong lane. The sequencing of the lights is suboptimal, with traffic getting stopped on the junction, blocking it for cross-traffic, and significant spells in the cycle where no traffic gets to use the crossing.”

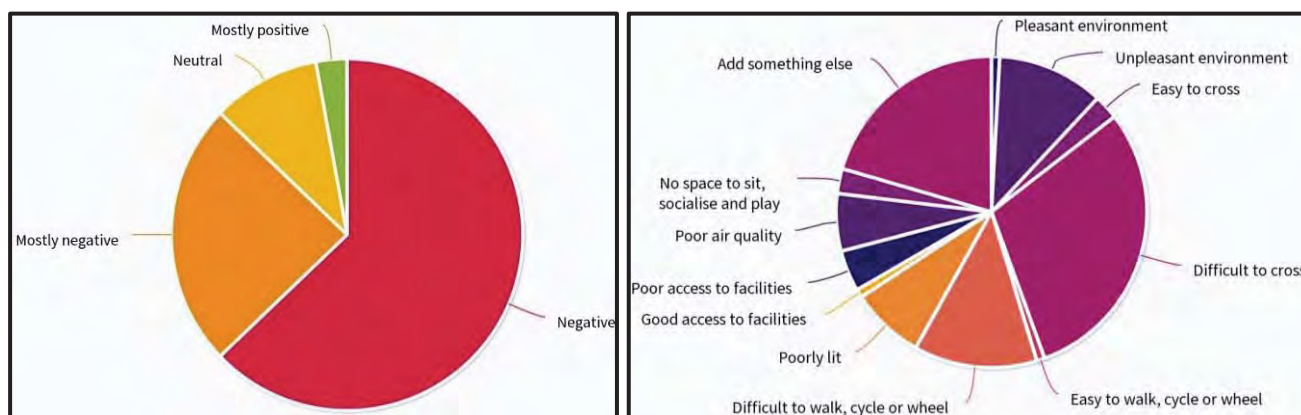
4.2. Traffic and Parking

Respondents felt either negatively or mostly negatively (87%) about traffic and parking due to it being *difficult to cross* (30%), *difficult to walk, cycle or wheel* (13%) and unpleasant environment (11%). Respondents also regularly gave reasons such as: confusing and poor visibility at junctions, high traffic speeds, and too much congestion.

Figure 4.5 presents the sentiment towards traffic and parking and the reasons why respondents felt this way.

Survey respondent on other reasons: *“Congestion in traffic, dangerous for drivers and pedestrians.”*

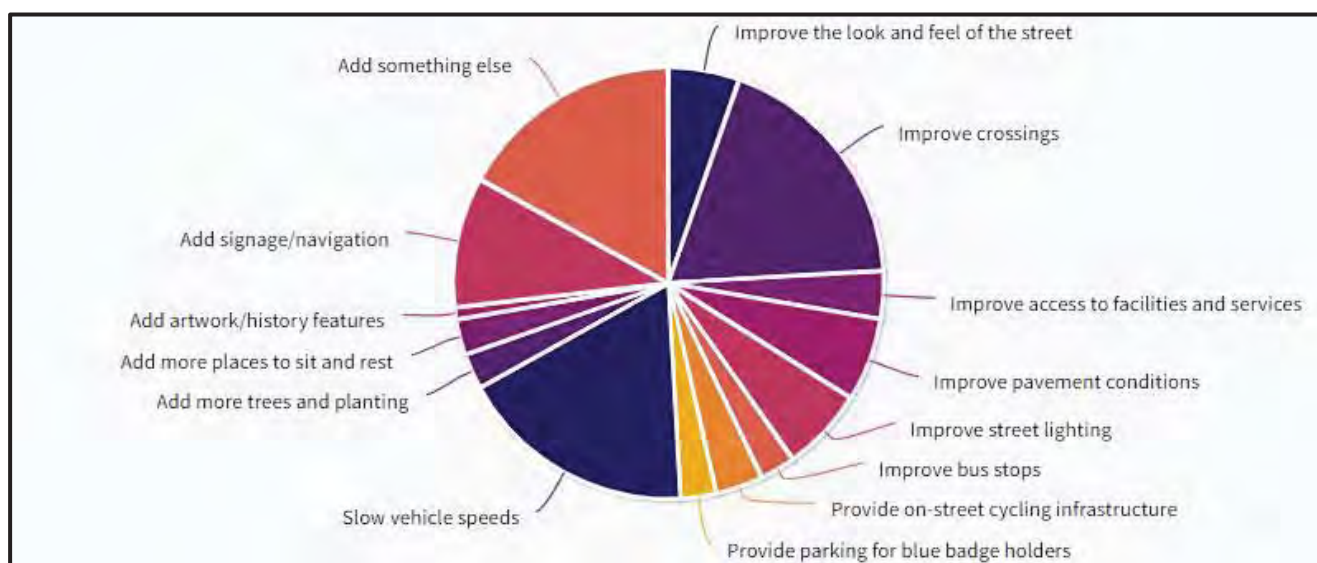
Figure 4-5 - Respondents' sentiment towards traffic and parking and the reasons why



Respondents suggested this could be improved by *improve crossings* (19%), *slow vehicles* (18%) and *add signage navigation* (10%). Respondents also regularly suggested: add traffic lights, restrict parking at junction corners, and add traffic calming measures. Figure 4.6 presents the options respondents selected when describing how they would improve traffic and parking.

Survey respondent on other improvements: *“Traffic Island or similar to stop vehicles travelling from the Foresterhill Road direction cutting the corner at high speed as the turn right into Cornhill Road.”*

Figure 4-6 - Respondents' suggested improvements for traffic and parking



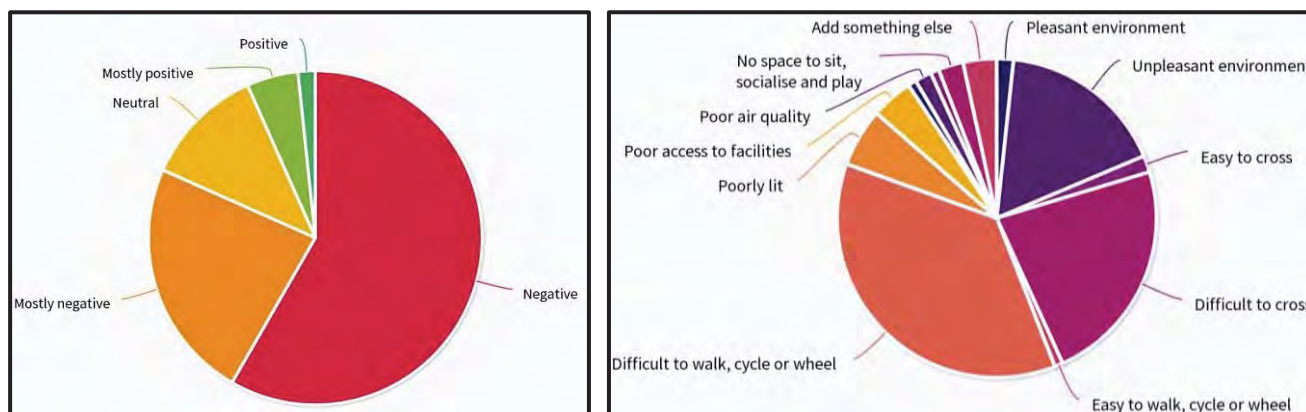
Survey respondent on any other comments: *“Ashgrove Road West was a better place to live when there was street parking. The parking reduced the speed of the traffic. Now at times one takes their life in their hands when crossing the street.”*

4.3. Moving Around on Foot, by Bike and Wheel

Respondents felt negatively or mostly negatively (81%) about moving around on foot, by bike and wheel due to it being *difficult to walk, cycle or wheel* (36%), *difficult to cross* (23%), and *unpleasant environment* (17%). Figure 4.7 presents the sentiment towards moving around on foot, by bike and wheel and the reasons why respondents felt this way.

Survey respondent on other reasons: *“Junction [Cornhill Terrace/Road] is very wide cars enter/exit very fast. Had near misses cycling uphill with vehicles using junction at speed.”*

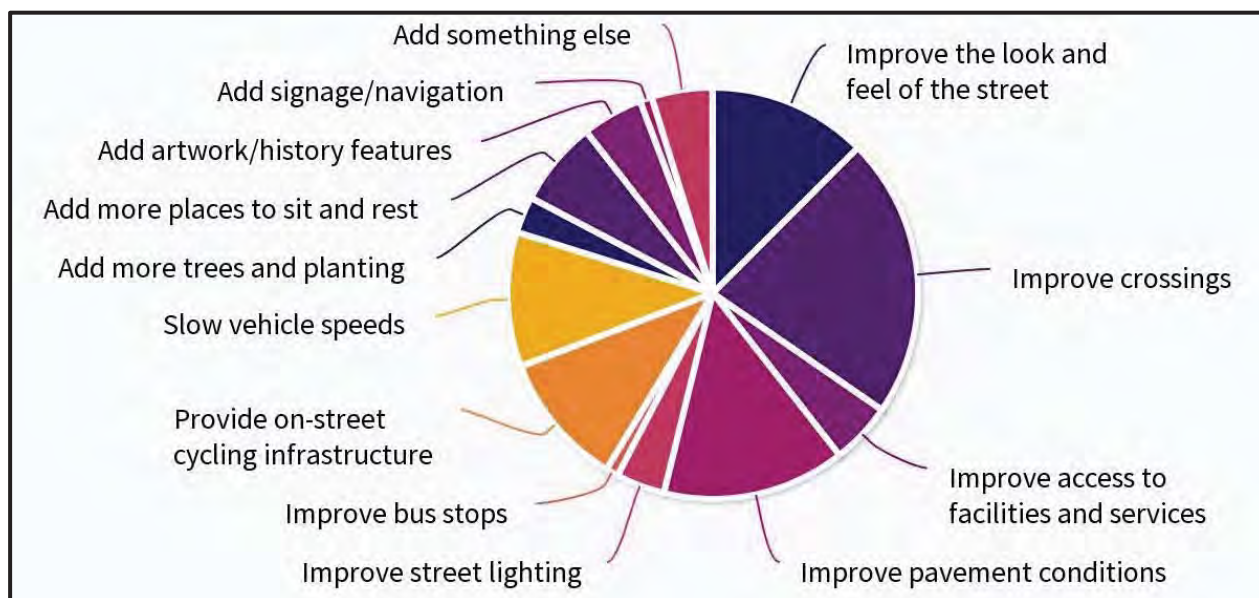
Figure 4-7 - Respondent's sentiment towards moving around and the reasons why



Respondents suggested this could be improved by *improve crossings* (22%), *improve pavements* (14%), and *improve the look and feel of the street* (13%). Figure 4.8 presents the improvements participants suggested.

Survey respondent on other improvements: *“Maintenance of trees - overhanging branches are a problem. Also not enough room on west side for wheelchairs due to trees taking up pavement. Need a safer crossing from Beattie Avenue to May Baird as common route to get to Westburn Playpark or Cornhill Library.”*

Figure 4-8 - Respondents suggested improvements for moving around



Survey respondent on any other comments: *“The Ashgrove Road all the way down from the top is not safe for cyclists, especially using the junctions because of the traffic caused by purely designed parking and lighting systems, and invisible markings and fast riding drivers. It's necessary to build a dual path for both cyclists and*

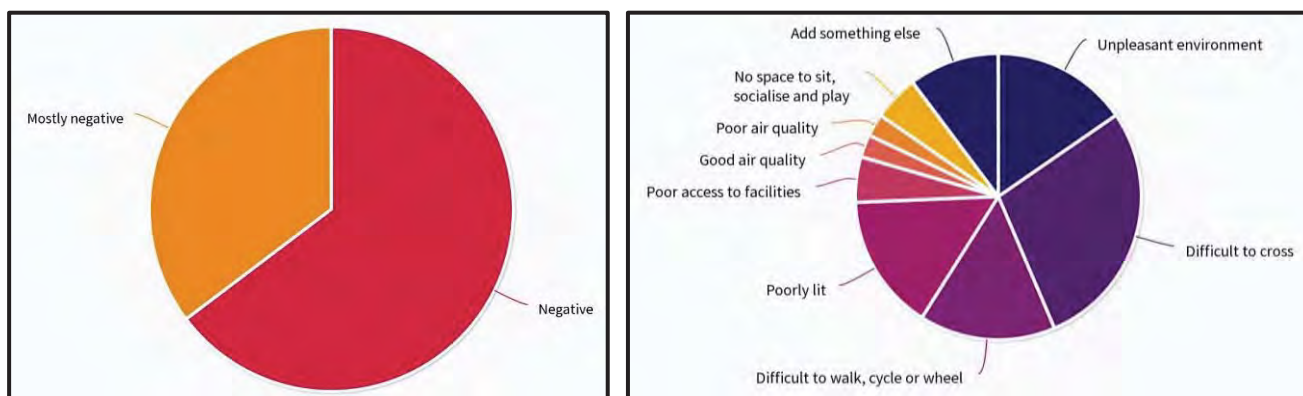
pedestrians and the width of the road is suitable enough to do that. This can encourage more people to cycle around neighbourhood and so the best solution for both traffic and air pollution.”

4.4. Feeling Safe

Respondents felt negatively or mostly negatively (100%) about feeling safe due to it being *difficult to cross* (28%), *difficult to walk, cycle and wheel* (15%), *unpleasant environment* (15%), and *poorly lit* (15%). Figure 4.9 presents the sentiment towards feeling safe and the reasons why respondents felt this way.

Survey respondent on other reasons: “Traffic regularly run a red light, no filter to turn right onto Westburn Drive. Drivers with road rag speeding through junction.”

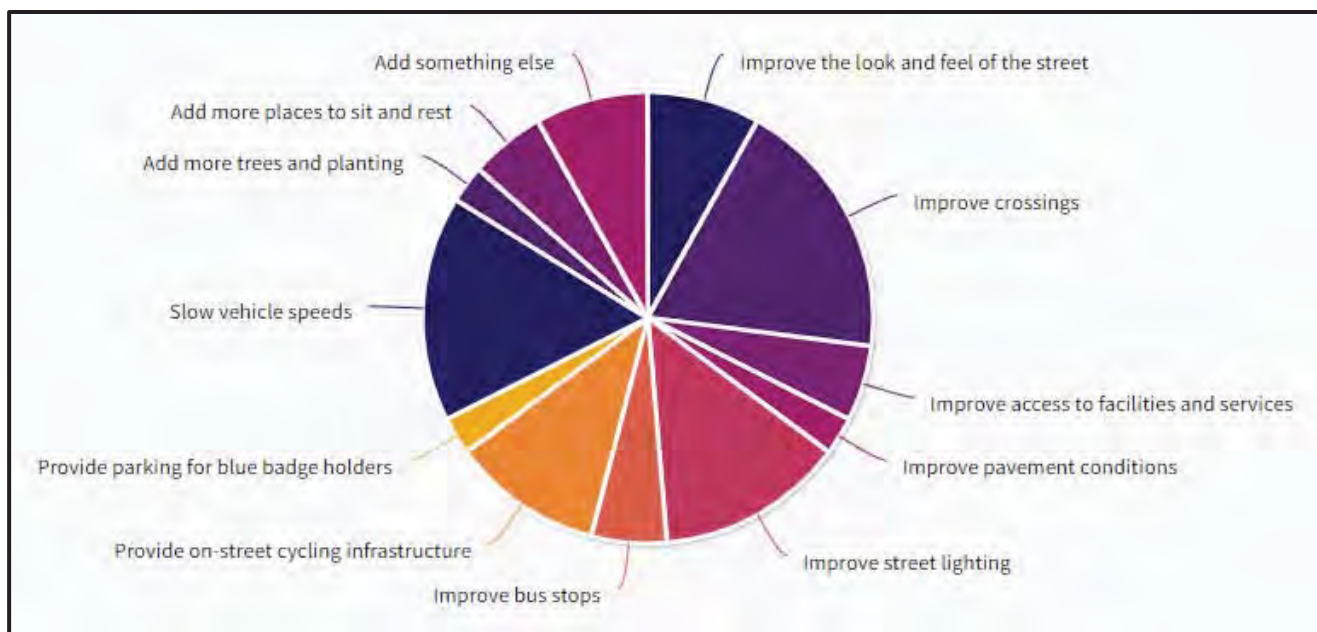
Figure 4-9 - Respondents' sentiment towards feeling safe and the reasons why



Respondents suggested this could be improved by *improve crossings* (19%), *slow vehicle speeds* (16%) and *improve street lighting* (14%). Figure 4.10 presents the improvements participants suggested.

Survey respondent on other improvements: “No new trees should be planted outside 1 to 19 Ashgrove Road.”

Figure 4-10 - Respondents' suggested improvements for feeling safe



Survey respondent on any other comments: “The streetlights are poor and we have a problem with cyclists on the pavement. Once I took the car alongside at 30 mph and the cyclist overtook me on the pavement.”

4.5. Other Topics

Attractiveness and maintenance of streets [n = 21]

Respondents felt negatively or mostly negatively (64%) about attractiveness and maintenance of streets due to it being *unpleasant environment* (45%), *difficult to walk, cycle or wheel* (25%) *difficult to cross* (10%), and *poorly lit* (15%). Respondents felt this could be improved by *improve pavement conditions* (21%), *add more trees and planting* (16%) and *improve the look and feel of the street* (16%). Other suggested improvements included: replace, protect, and maintain trees; and add more bins (including for dog waste).

Survey respondent on attractiveness and maintenance of streets: *“Trees add greatly to the quality of the environment, both physically and in their effect on our sense of wellbeing. Look after them well!”*

Ability to meet people, socialise and play [n = 9]

Respondents felt negatively or mostly negatively (88%) about ability to meet people, socialise and play due to it being *unpleasant environment* (25%), *poor access to facilities* (19%), and *poorly lit* (13%). Respondents felt this could be improved by *add more places to sit and rest* (25%), *add more trees and planting* (17%) and *improve access to facilities and services* (17%). Other suggested improvements included: improve access to playparks.

Survey respondent on ability to meet people, socialise and play: *“Install more charging points for electric cars somewhere along the whole street. Plant for example wildflowers on the green belt in the corner of Ashgrove Rd and Berryden Rd beside bus stop to improve biodiversity. Maybe provide some benches?”*

Bus stop and routes [n = 8]

Respondents felt negatively or mostly negatively (100%) about bus stop and routes due to it being *difficult to cross* (18%), *poor access to facilities* (18%) and *difficult to walk, cycle and wheel* (18%). Respondents felt this could be improved by *improve bus stops* (23%), *improve crossings* (15%), and *add more places to sit and rest* (15%).

Survey respondent on bus stops and routes: *“If the Council are committed to traffic reduction and net zero goals, then the bus service provision need to be addressed. There are no buses on Ashgrove Road West that serve the City Centre.”*

Sense of identity and belonging [n = 2]

Survey respondents on sense of identity and belonging:

“This is a wonderful opportunity to reduce the width of the street. Understanding the critical nature of emergency vehicles and their need to respond to emergencies aside we could have more planting, wider pavements, and places to sit on a quiet street. Pedestrian crossings should be considered intermittently, and a sense of place can be created if the street is going to become a c class ...”

“Ashgrove community seems to not have a place where local information could be provided or people from the area simply meet and get to know each other- there's no community centre. Maybe, at least there could be some sort of information board with history of this area and space provided for local adverts, queries etc.”

Other [n = 12]

Respondents also commented on other topics including the lack of communal bins (including for dog waste), the amount of traffic, pavement and surface conditions on Laurelwood Avenue, the unknown impact of the Berryden Corridor Improvement Project and the safety of junctions.

Survey respondents on other topics:

“Laurelwood Avenue used as a ratrun by cars and Lorries. This makes crossing the road for pedestrians dangerous and difficult.”

“Modelled effect of new Berryden corridor on traffic on Ashgrove Road and West”

5. Walking Audits

This chapter provides a summary of the priorities identified from the walking audits.

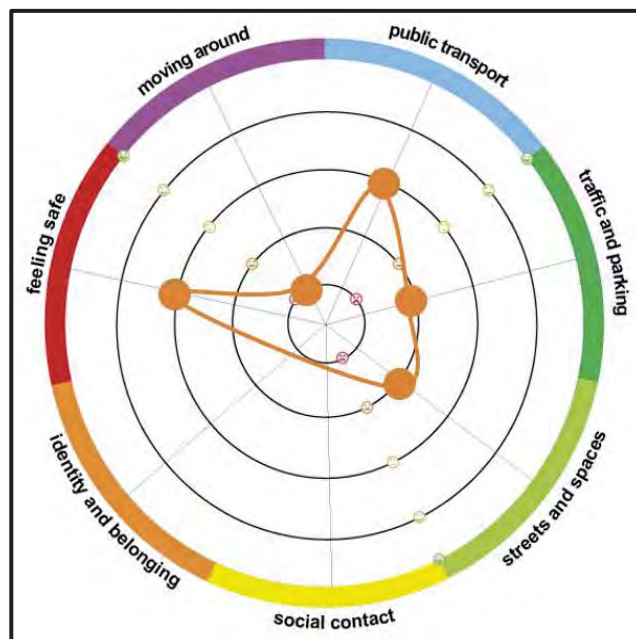
5.1. NHS Grampian

Top priorities identified for improvement by representatives of NHS Grampian were:

- **Moving around:** difficult to cross the road due to the width, and lack of formal crossings points; poor pavement conditions due to tree roots and overhanging vegetation; and poor conditions for cycling due to high speed and volume of traffic resulting in people cycling on the pavement.
- **Traffic and parking:** high traffic speeds due to lack of signage and width of road; confusing junction at Foresterhill Road due to the double traffic light system; and too much space given to parking in places where there is little demand for it.
- **Streets and spaces:** narrow pavements due to overhanging vegetation and tree routes.

Discussions also identified good public transport provision for the high demand at the hospital, good secure cycle parking provision at the hospital and, although the speed of traffic can cause safety concerns, the area feels safe overall. No discussions or scores were recorded for social contact or identify and belonging.

Figure 5-1 - NHS Grampian Scoring Wheel



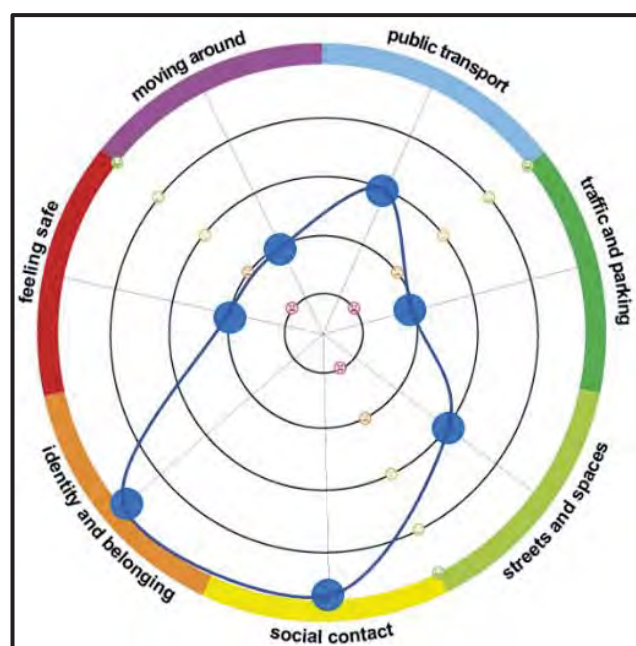
5.2. Community Groups

Top priorities identified for improvement by representatives of Community Groups were:

- **Moving around:** difficult to cross the road due to its width and no priority for people at side roads; people cycling on the pavements cause issues; and junctions of Cornhill Road/Terrace and Beattie Avenue/May Baird Avenue are well used but can be difficult to cross at peak times.
- **Traffic and parking:** high traffic speeds and pollution impact on enjoyment of walking along the road; particularly poor visibility and congestion at the Ashgrove Road/Berryden Road junction a problem.
- **Feeling safe:** although the area feels safe, the high traffic speeds can make the road feel unsafe for people walking; and the high walls along Ashgrove Road can feel isolating and create a dark atmosphere.

Discussions also identified the positive connection the community have to the local area and the potential for cycling demand to increase if changes are made to reduce traffic speed and narrow the road.

Figure 5-2 - Community Groups Scoring Wheel



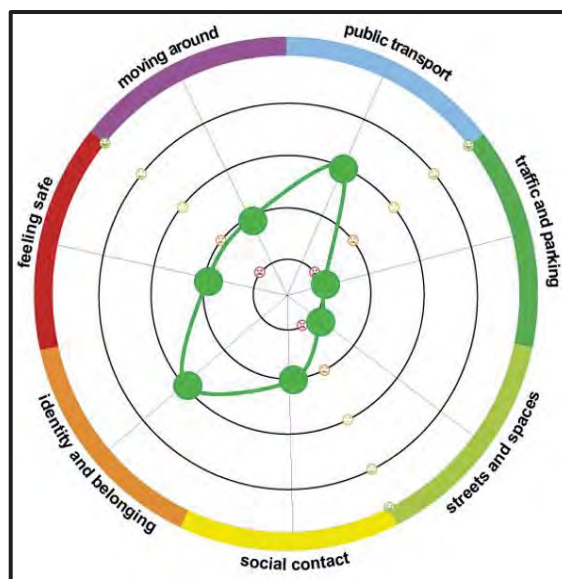
5.3. Residents

Top priorities identified for improvement by residents were:

- **Traffic and parking:** noisy and busy environment at peak times due to traffic congestion; environment feels unsafe due to high traffic volume and speed; poor visibility at side roads and confusion at the Foresterhill Road /Ashgrove Road West junction due to parking provision being too close to traffic lights.
- **Streets and spaces:** litter on pavements and dog waste on grassy area dues to a lack of bins; unpleasant environment on Ashgrove Road due to large communal bins; and area can look messy due to a lack of regular maintenance.
- **Moving around:** difficult to cross at junctions during peak times; narrow pavements due to communal bins on Ashgrove Road and tree roots and busy bus stops on Ashgrove Road West; difficult to cycle so people end up on the pavement; and junctions of Cornhill Road/Terrace and Beattie Avenue/May Baird Avenue are important but are too wide and don't align, making them difficult to cross.
- **Feeling safe:** poor visibility from parked cars, overhanging vegetation and bins make it feel unsafe to cross the street and junctions; when working, lights help to make a big difference to feeling safe; and grassy areas help to create a safety barrier between people and traffic, particularly on Ashgrove Road.
- **Social contact:** limited social contact between neighbours across the road due to high volume of traffic.

Discussions also identified the enjoyment residents get from seeing students walking to the university and the potential opportunity to have more information on the community and local history displayed on the street.

Figure 5-3 - Residents Scoring Wheel

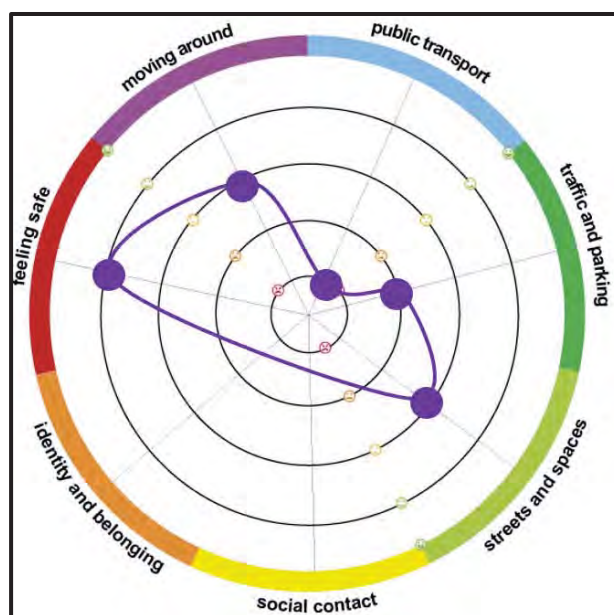


5.4. University of Aberdeen

Top priorities identified for improvement by representatives of the University of Aberdeen were:

- **Public transport:** bus stops outside the university campus can get busy at peak times and narrow pavements for people walking along the street; and, although there is university shuttle bus between campuses, there are limited alternatives heading northeast without going into the city centre.
- **Traffic and parking:** streets can feel narrow, busy and fast; people who cycle don't feel respected on the road and it can be a challenge to make themselves feel visible due to parked vehicles; signage for on-street parking can be confusing.
- **Moving around:** walking is OK but can be difficult for people to cycle due to busy road and lack of signage directing people where to go.
- **Streets and spaces:** Ashgrove Road can feel dark and isolated due to high walls; and there are limited places to sit outside for lunch.

Figure 5-4 - Aberdeen University Scoring Wheel



Discussions also identified the opportunity to look at creating more space at the main university bus stop on Ashgrove Road West and the future roll out of more e-bikes for use between campuses.

5.5. Cornhill Primary School

The route for the walking audit with pupils focused on the immediate streets around the primary school and the topic headings were adapted to enable better understanding.

- **Walking and cycling**

Most pupils walk to school as they live close by. Not many pupils cycle although some would like to. On Ashgrove Road West, pupils noticed the tree roots causing problems for the pavements and didn't feel the painted cycle lane offered much protection from the speed of traffic.

"It is safe to walk and cycle but sometimes the cars speed"

- **Buses, trains and other ways of getting places**

Not many pupils use the bus services but, those who do, say they are not frequent.

"The bus takes me where I want to go but they sometimes take a while"

- **Cars and traffic**

Pupils think Ashgrove Road West is a nice street but they think the traffic goes too fast. Pupils don't feel they can cross Ashgrove Road West safely on their own to get to Westburn Park so they will walk to Westburn Drive to cross at the traffic lights.

"The road is very dangerous and the tree roots are unsafe."

- **Streets, parks and other outdoor places**

Pupils really like Cornhill playground next to the school and that's where they meet friends. Pupils felt there was potential to make more of the greenspace at the corner of Ashgrove Road West and Braefoot Road as they noticed it's popular for people walking to and from Cornhill.

"I like the trees. On the main road, it is noisy and smelly. Add more play stuff in the area."

- **Meeting and talking with other children**

Most of the pupils play near their houses but they also use the playground next to the school. They don't meet friends on Ashgrove Road West or Ashgrove Road.

"We meet at my house and park then we play on the swing."

- **Feeling proud and part of your neighbourhood**

Pupils like their neighbourhood and feel proud to be part of Cornhill Primary School.

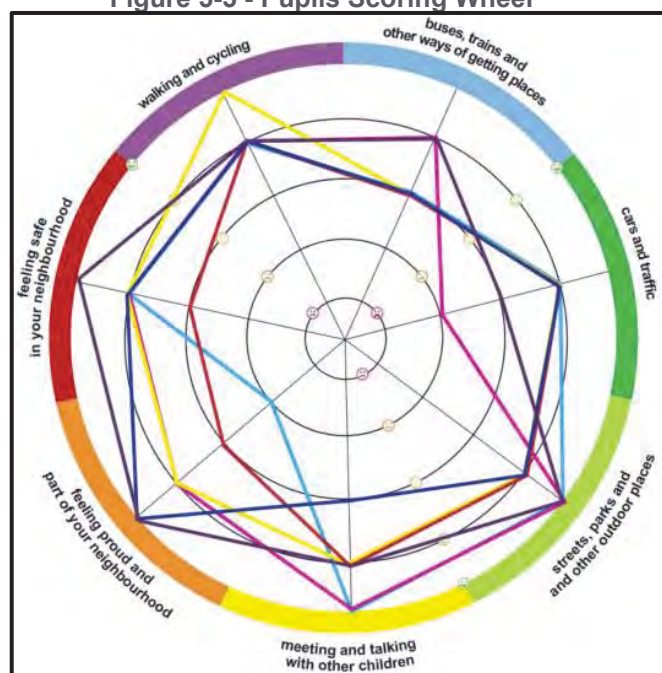
"I feel proud to be part of this neighbourhood."

- **Feeling safe in your neighbourhood**

Most of the pupils feel safe in the area but suggested crossings could be improved to help them feel more confident when crossing the road.

"More zebra crossings."

Figure 5-5 - Pupils Scoring Wheel



6. Summary

This chapter provides a summary of respondent's priorities, early improvements that could potentially be made and other improvements highlighted during the initial engagement period that could be considered in the future.

6.1. Priorities

Traffic and parking, moving around on foot, by bike and wheel and feeling safe are clearly the biggest priorities for respondents.

Of particular concern is the perception that traffic speed and volume is too high and not appropriate for the area. Many respondents feel exposed and vulnerable to motor traffic passing through the area which was echoed by those on the walking audits. Respondents also commented on there being too much congestion and raised concerns that future changes to Berryden Road may bring more traffic to the local area, particularly through Laurelwood Avenue which already experiences a high volume of traffic.

Another concern for respondents is visibility and confusion at junctions for people who drive as well as walk, cycle, and wheel. Respondents highlighted the angle, width, staggered signals, and parking too close to junctions as reasons why the streets feel unsafe to move about and spend time in.

A lack of formal crossing points and protection from traffic are reasons why respondents spoke negatively about moving around. This was highlighted particularly between Foresterhill Road and Westburn Drive, Beattie Avenue and Mary Baird Avenue, and the junction of Berryden Road with Ashgrove Road where there is a strong movement of people accessing local amenities. Respondents also highlighted the issue of people cycling on the pavement, mainly due to how hostile the road environment feels, as another reason why it feels unsafe to move about in. There is recognition that if conditions for cycling were improved, the potential is there for demand to increase but onward journeys should be considered.

A few respondents also noted that the pavement conditions are poor in places, especially around trees where the roots are causing issues and overhanging vegetation and busy bus stops can narrow the width of the pavements in some areas.

Trees, particularly along Ashgrove Road West, are very popular and respondents re-enforced the need to protect and maintain these while also protecting properties. A few respondents also highlighted the opportunity to make more of the pockets of greenspace that exist along the street, particularly on the corner of Beattie Avenue.

Overall, respondents felt place quality, access to greenspace and street lighting could be improved. A lack of direct bus routes into the city centre was also highlighted as a barrier to people travelling sustainably into the city centre and for students heading between campuses in the northeast.

Finally, respondents recognise the distinctiveness of Ashgrove Road West, Ashgrove Road and Laurelwood Avenue and the need to ensure future proposals enhance the individual character of each street.

6.2. Potential Early Improvements

Respondents highlighted several opportunities that could be considered for early improvements while the wider project is developing. These include:

- Providing additional waste bins throughout the area which can also take dog waste.
- Trimming of overhanging vegetation back to improve the width of pavements.
- Fixing the streetlights on the north side of Ashgrove Road West which are currently out.
- Fixing the wall that has been damaged by fallen trees on Ashgrove Road.
- Providing better signage on the controlled parking zone along Ashgrove Road West.

- More regular maintenance of the street.
- Review street signage on Belmont Gardens
- Consideration by the Scottish Ambulance Service of the use of sirens at night on residential streets.

6.3. Other Improvements

Respondents also highlighted several improvements that could be made to areas out with the scope of this project. These will be passed to the most appropriate council departments for future consideration and include:

- Attractiveness and maintenance of Belmont Gardens playpark.
- Lighting in Westburn Park and Victoria Park.
- Lighting for off-road path between Ashgrove Road and Carnie Drive.
- Condition of the surface on Elm Place.
- Condition of paths to and through Gillespie Crescent.
- Condition of path between Grove Crescent and Cornhill Road.
- Condition of paths to Beattie Avenue playground and lighting.
- Conditions for people cycling along North Anderson Drive and Bedford Road.
- Pedestrian crossings at Six Roads roundabout.
- Consideration of a coffee shop and community centre in Carnie Drive/wider Ashgrove area.
- Bus services along Berryden Road.
- Pavement conditions on Beechwood Road leading to Cornhill Primary School.

Constituent Report CR-D2

Engagement Report (Stage 2)

Ashgrove Connects

Stage 2 Engagement Report

Aberdeen City Council

09 September 2022

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1. Introduction

1.1 Purpose

This report summarises the second public engagement period for Ashgrove Connects which commenced on Tuesday 21st June and closed on Sunday 17th July 2022. The first engagement period for the project has been reported on separately within the Baseline Assessment (CR-K).

The purpose of the second engagement period was to collect feedback on the initial design ideas in order to steer the development of a concept design.

This report is intended to summarise the activities held, respondents and contributions received. The report does not seek to respond to or comment on responses. All contributions that have been verified by respondents can be viewed on the project website: <https://ashgroveconnects.commonplace.is/>.

This report does not include consultations with Aberdeen City Council Officers or the Stakeholder Working Group, which is reported separately within the Final Report.

1.2 Methodology

Analysis of the responses received has been undertaken by Atkins using the data obtained from the methods used during the initial engagement period. These have been summarised below.

1.2.1 Survey

A survey was made available on the project website, at Cornhill Library, and at events/activities in order to invite people to consider the different design ideas and feedback on what they liked and what they would change, combine or improve. The survey was divided into two parts: Part A on Ashgrove Road West; and Part B on Ashgrove Road and Laurelwood Avenue. The questions asked were:

- What do you like about this design idea? (Multiple choice options)
- What should we improve or change in this design idea? (Open-text response)
- What would you like to see included in the design for this public space? (Multiple choice options)
- Thinking about the overall design ideas, broadly speaking, do you think these will: (Single sentiment)
 - Create a slower, quieter, and calmer street environment?
 - Make crossing the road and using the junctions easier and a more comfortable experience?
 - Make the street feel more attractive and safer for people to spend time in?
 - Make it easier to walk?
 - Enable people of all ages and abilities to move around by bicycle?
 - Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all?
- Do you have any other comments on the initial design ideas? (Open-text response)

Participants could agree with comments submitted by others online. All demographic questions were optional. Participants were also able to send contributions directly to the project team by email, phone, and through the chat function during the live webinar. Where possible, comments posted on social media were also recorded. Contributions submitted through these methods were surveyed into the project website by the project team. A summary of the feedback received through the survey has been provided in Chapter 5.

1.2.2 Activities

Activities were held with residents and local groups representing those with protected characteristics under the Equalities Act. Each activity had a different purpose which is described in Chapter 2. The key findings from the activities have been summarised in Chapters 5 and 6.

1.2.3 Stakeholder notifications

Key stakeholders including disability forums, Emergency Services and Bus Operators were also invited to comment on the initial design ideas. The responses received have been summarised in Chapter 7.

2. Engagement activities

This chapter provides an overview of the activities held during the second engagement period.

2.1. Project website

The project website re-opened on Tuesday 21st June to present and enable people to feedback on the initial design ideas: <http://ashgroveconnects.commonplace.is>.

Visitors to the website could read more about the project and findings from Stage 1, feedback on the initial design ideas, watch a recording of the webinar and keep up to date with the latest news.

Figure 2-1 - Level of engagement during Stage 2



Participant said: *“The website looks great by the way, so thank you for that.”*

2.2. Public display

The initial design ideas went on public display at Cornhill Library on Wednesday 22nd June to ensure those without access to the internet could view and feedback on the initial design ideas. All completed surveys were uploaded to the project website by the project team.

Participant said: *“Thanks for the opportunity to view the designs. We did so at Cornhill Library this morning. We found these well-presented and so please accept our thanks to you and your team.”*

2.3. Local member briefing

An online briefing for Local Members covering Wards 5 (Hilton/Woodside/Stockethill) and 7 (Midstocket/Rosemount) was held on Monday 27th June.

2.4. Webinar

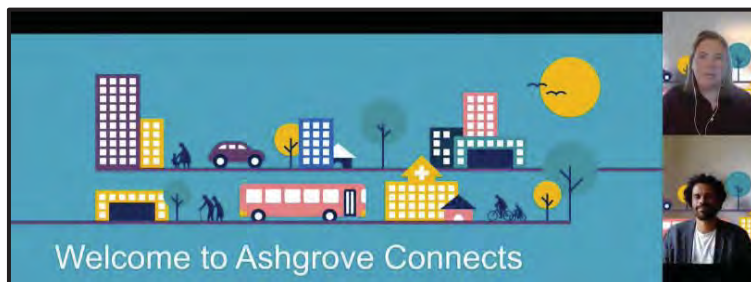
A live webinar was held on Tuesday 28th June to present the findings from Stage 1, how this has developed and an overview of the initial design ideas. Participants were able to submit comments via the chat function.

A total of 5 people participated at the webinar which was recorded and uploaded to the project website and has been viewed over 10 times.

Figure 2-2 - Public display



Figure 2-3 - Webinar



2.5. Drop-in events

Two drop-in events were held on Tuesday 5th July, between 10am-1pm at Cornhill Community Centre and between 4-7pm at Westburn Outdoor Centre. Participants were able to drop-in to meet members of the team, view and discuss the initial design ideas in more detail and complete a survey.

A total of 44 people attended both events. All completed surveys were uploaded to the project website.

Figure 2-4 - Drop-in events



2.6. Workshops

Four workshops were held with residents and local groups representing those with protected characteristics under the Equalities Act. Each workshop had a different purpose.

The first workshop took place on Wednesday 22nd June with Primary 6 pupils from Cornhill Primary School to present, discuss and develop design ideas with a 3D model. A total of 6 pupils attended.

The second workshop took place on Wednesday 6th July with residents and staff of Crosby House Care Home to understand their travel behaviour, identify barriers to moving around and improvements. A total of 15 people attended with 40 surveys completed by those who could not attend.

The final workshops took place on Tuesday 12th July with residents of Ashgrove Road and Laurelwood Avenue to discuss the issues they face as residents of the streets and to understand their priorities for change between movement and place. A total of 9 people attended the two workshops.

Figure 2-5 - Workshop with Cornhill Primary School and residents



3. Communication

This chapter provides an overview of the communication methods used during the second engagement period. A copy of the communication material issued can be found in Appendix 1.

3.1. Stakeholder notifications

During the week commencing 20th June, notifications were issued to all stakeholders with an interest in the project by email. The stakeholders notified included Council Officers, schools and universities, community groups, Emergency Services, Bus Operators, and disability forums.

This included an invitation to take part in the consultation on the initial design ideas and a request for support to help communicate this opportunity to the wider community. A follow up email was sent on Friday 8th July to remind stakeholders of the consultation deadline and request further communication support.

3.2. Resident notifications

On Wednesday 22nd June, leaflets were hand delivered by the project team to all residents living on Ashgrove Road West, Ashgrove Road, Laurelwood Avenue, Elm Place, Cedar Place, Belmont Gardens and Ashgrove Avenue.

A poster was placed at various locations across the wider neighbourhood.

A letter was also distributed to all residents of Ashgrove Road and Laurelwood Avenue on Wednesday 22nd June inviting them to specific workshops to discuss the ideas for traffic flow, parking and greenspace. A reminder was distributed to the same residents on Wednesday 6th July.



Figure 3-1 - Poster

3.3. Business notifications

On Wednesday 22nd June, leaflets were hand delivered by the project team to all accessible businesses along Ashgrove Road West and Ashgrove Road. A follow up letter was sent by recorded delivery on Monday 4th July.

3.4. Online blogs

Regular news blogs were posted by the project team on the project website's Latest News page. The last blog was sent to 176 people who had signed up to receive project updates.

Figure 3-2 - Stage 2 blog



3.5. Local and social media

A press release was issued to local media on Tuesday 21st June. This was covered on Aberdeen City Council's website, the Press and Journal and Aberdeen Live on Thursday 23rd June.

The consultation was also promoted on social media through local accounts including Aberdeen City Council, Nestrans, Rosemount and Mile End Community Council, Stockethill Church, Get About, NHS Grampian and Aberdeen University.

4. Respondents

This chapter provides an overview of the respondents to the second engagement period. This includes demographic data from those who submitted this information through the project website. Respondents who previously submitted this information during Stage 1 did not have to re-enter this information.

4.1. Connection and travel mode

Respondents were asked about their connection to the area to provide an understanding of their interest in the project. Figure 4-1 shows that most respondents live and work in the area. Respondents were also asked how they would normally travel through the area to provide an understanding of how people move around. Figure 4-2 shows that most respondents normally travel by active modes when combining on foot and by bike followed by car.

Figure 4-1 - Connection to the area

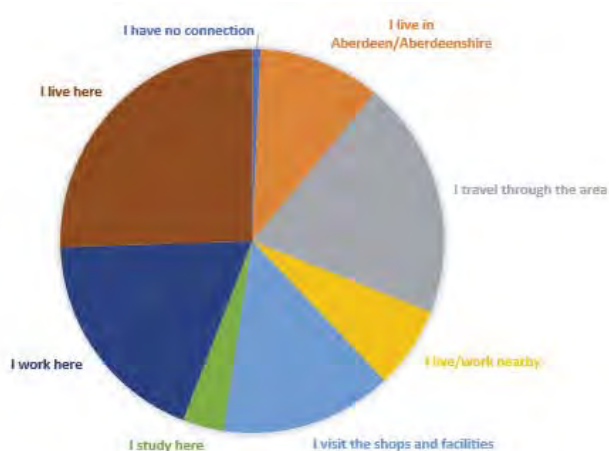
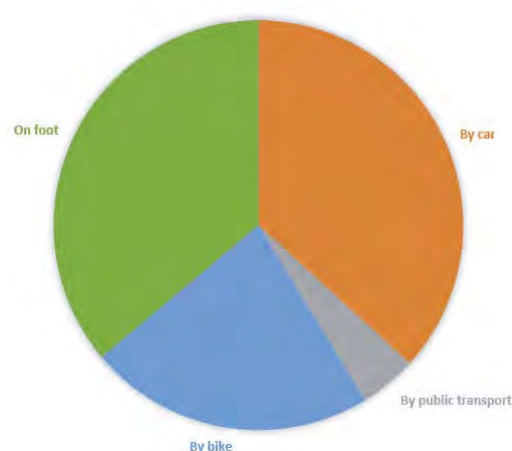


Figure 4-2 - Preferred travel mode



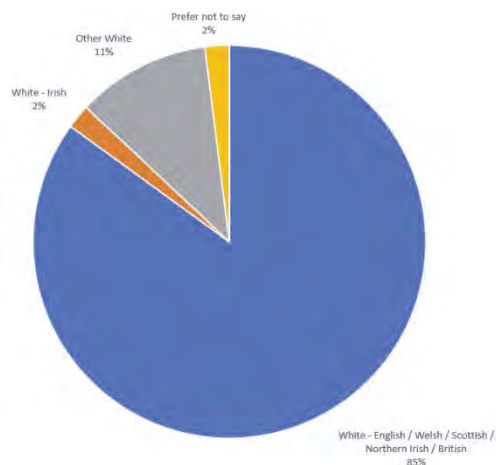
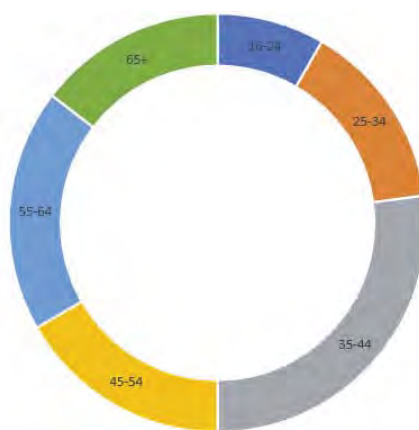
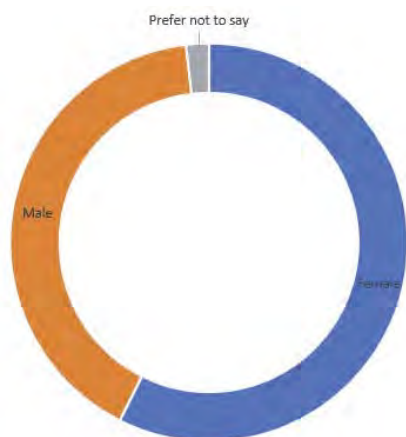
4.2. Gender, age, and ethnicity

Respondents were also asked about their gender, age, and ethnicity to provide an understanding of how balanced the engagement process had been. Figure 4.3 shows there were more female respondents and Figure 4-4 shows that most respondents fell within the 35-44 age category. Figure 4-5 shows most respondents were white.

Figure 4-3 – Respondents’ gender

Figure 4-4 - Respondents age

Figure 4-5 – Respondents’ ethnicity

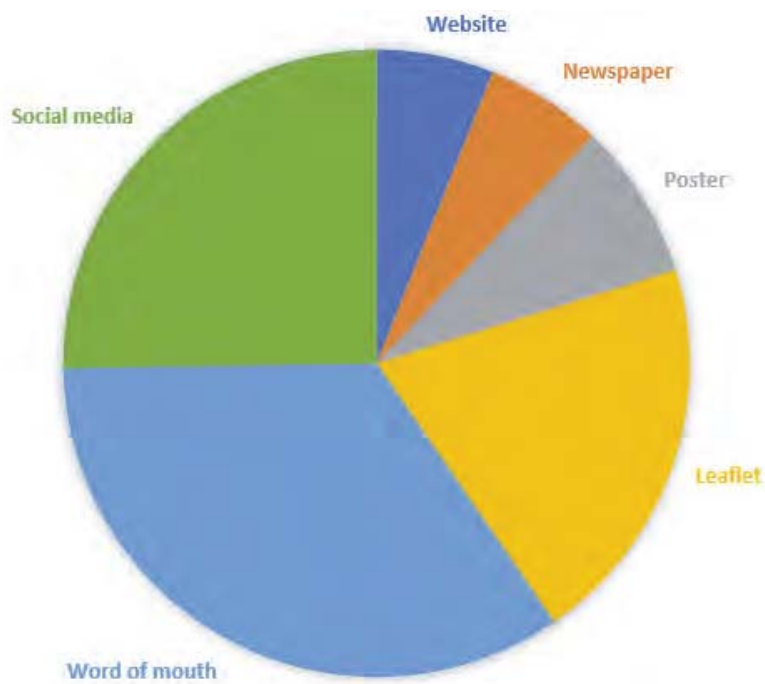


4.3. Communication methods

Respondents were asked how they had heard about the project to provide an understanding of the most successful communication methods.

Figure 4-6 shows word of mouth, social media and leaflets were the most successful.

Figure 4-6 - How respondents found out about the project



5. Responses

This chapter provides an overview of all the responses received during the second engagement period, either through the website, at events, Cornhill Library, or directly to the project team. This does not include findings from the workshops or feedback from stakeholders, which are provided separately in Chapter 6 and 7.

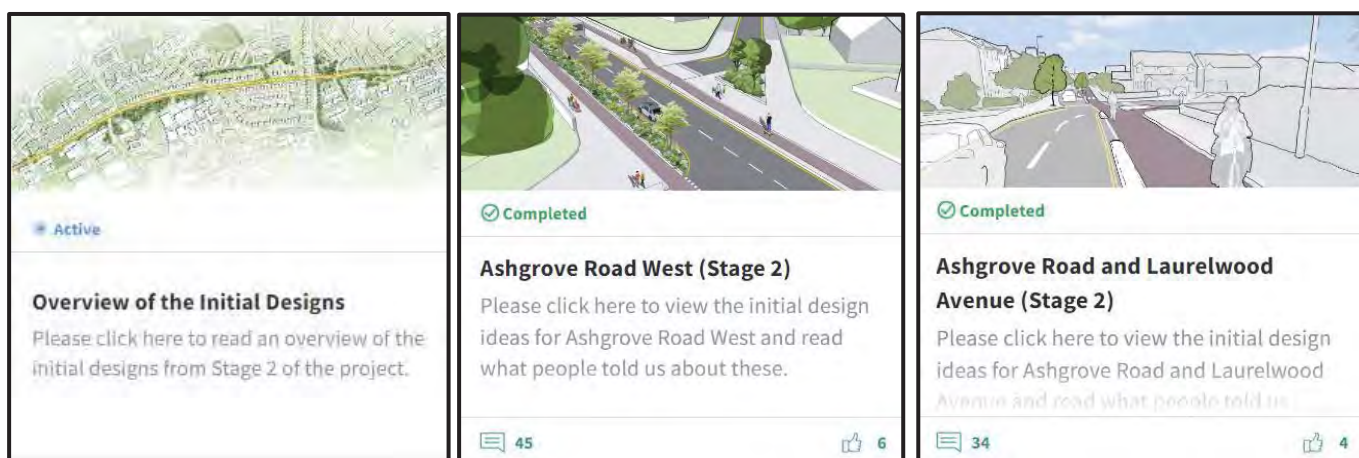
5.1. Overview

The total number of contributions received was 92, of which 82 were comments and 10 were agreements.

The initial design ideas were split into two areas: Ashgrove Road West; and Ashgrove Road and Laurelwood Avenue. Figure 5-1 shows the two areas presented on the project website.

Analysis of the feedback received on the initial design ideas has been split into two: Ashgrove Road West; and Ashgrove Road and Laurelwood Avenue.

Figure 5-1 - Presentation of initial design ideas on the website



5.2. Ashgrove Road West

5.2.1. Feedback on overall design ideas for Ashgrove Road West

Respondents were asked to feedback on the overall design ideas for this area against the design objectives:



80% of respondents **agreed or mostly agreed** about the designs “*creating a slower, quieter street environment.*”



84% of respondents **agreed or mostly agreed** about the designs “*making crossing the road and using junctions easier and a more comfortable experience.*”



89% of respondents **agreed or mostly agreed** about the designs “*making the street feel more attractive and safer for people to spend time in.*”



84% of respondents **agreed or mostly agreed** about the designs “*making it easier to walk.*”



80% of respondents **agreed or mostly agreed** about the designs “*enabling people of ages and abilities to move around by bicycle.*”



49% of respondents **agreed or mostly agreed** and **37%** were **neutral** about the designs “*providing parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.*”

Respondents made the following general feedback on the overall designs for Ashgrove Road West:

- Support for:
 - The level of ambition shown.
 - A 20mph speed limit but concern people will not adhere to this without enforcement such as speed cameras.
 - Dissuading through traffic but scepticism about whether the design will be able to reduce levels to prevent congestion, particularly at key junctions.

Respondent: *“Very impressed with the plans, especially the separate pedestrian, cycle, road ways.”*

- Concern about:
 - Emergency service access and impact on response times if the road is narrowed.
 - Future maintenance of areas of greenspace, trees, and cycle lanes.
 - Impact on access to and visibility from driveways from trees and cycle lanes.

Respondent: *“Not sure how drive accesses can be maintained and have safe cycle ways. All this planting is good but current maintenance of green in the city is rubbish.”*

- Suggestion to:
 - Improve signage for parking at the Foresterhill Health Campus.
 - Improve bike storage for those in flats.
 - Demonstrate how the designs will integrate with wider infrastructure changes.

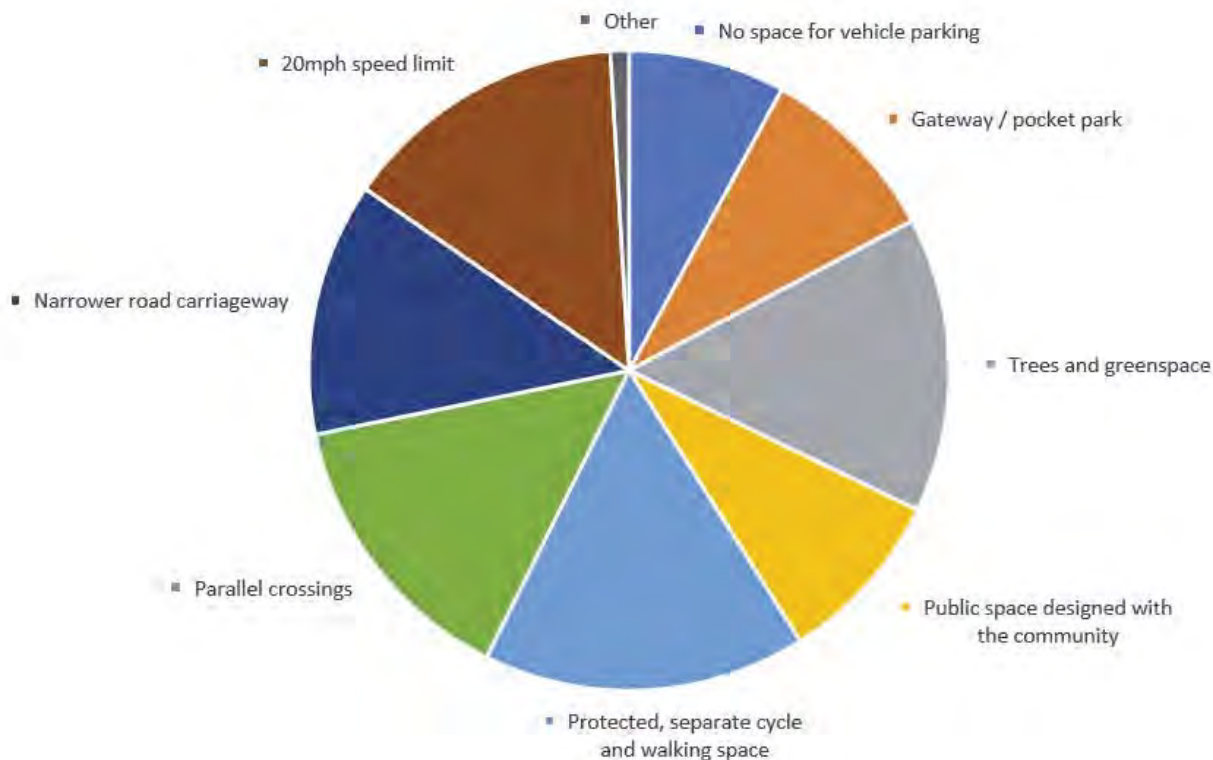
Respondent: *“20mph speed limit now! We can't wait for later phases.”*

The changes clearly need to be integrated into an overall design in relation to Berryden Corridor and Anderson Drive potential revisions.”

5.2.2. Feedback on North Anderson Drive Idea

Respondents were asked about what they like about the idea for North Anderson Drive. The top three responses were: protected, separate cycle and walking space (70%), trees and greenspace (64%), *parallel crossings* (62%) and *20mph speed limit* (62%).

Figure 5-2 - What do you like about the idea for North Anderson Drive?



Respondents were asked about what we should improve or change in this design idea.

- People like:

- Change of environment to encourage slower speeds
- New public space (particularly for those in high rise flats / care homes)
- Improved crossings with protected space for those cycling, walking and driving through the junction
- People have concerns about:
 - Impact of proposed McDonalds on traffic, litter, noise, and aim of Ashgrove Connects
 - Traffic congestion from removal of filter lane onto North Anderson Drive
 - Enforcement of traffic speeds
- People suggested:
 - Improve the sequencing of lights to reduce congestion
 - Provide screening to protect public space
 - Install automated vehicle speed signs / cameras
 - Install signs to direct/encourage hospital traffic to use the Westburn Road entrance

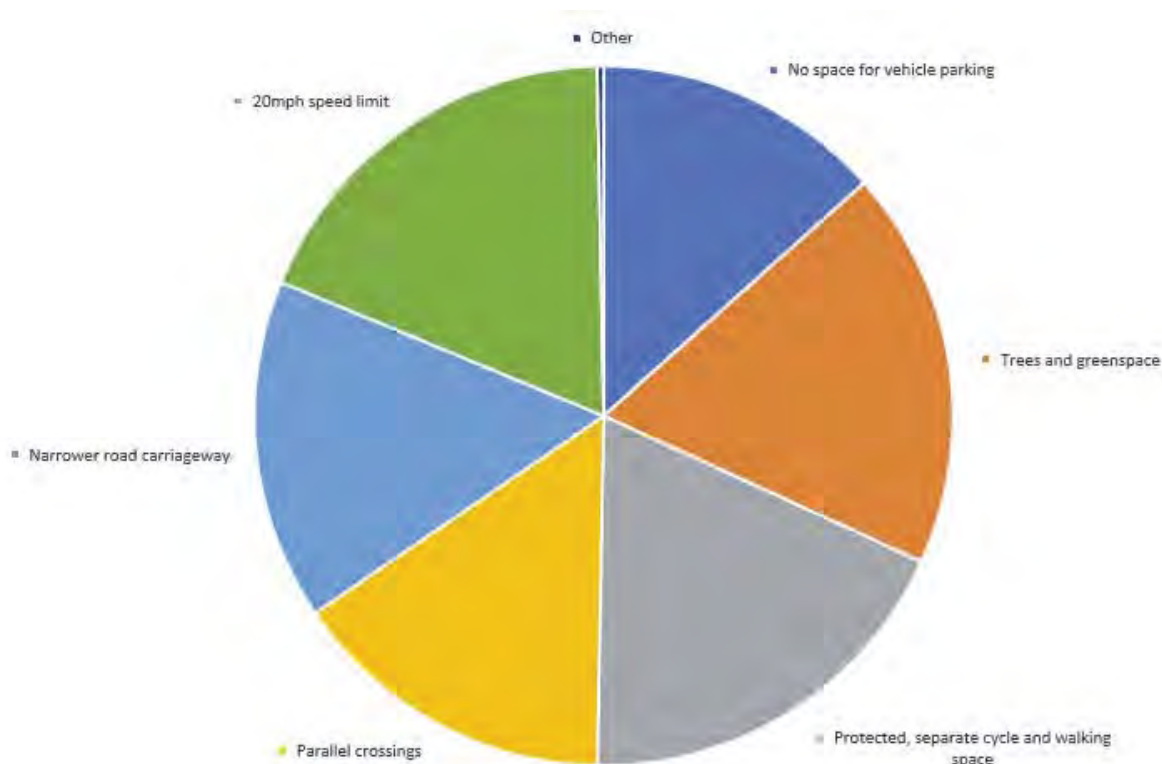
Respondent said: *"I like that the crossings will be improved. I am not sure people will listen to the 20mph speed limit here especially as many use it to access hospital car parks."*

Respondents were also asked what they would like to see in the public space for North Anderson Drive. The top three responses were; *planting and trees* (53%), *lighting* (47%), and *seating* (34%).

5.2.3. Feedback on Foresterhill Idea

Respondents were asked about what they like about the idea for Foresterhill. The top three responses were; protected, separate cycle and walking space (62%), trees and greenspace (62%), and 20mph speed limit (62%).

Figure 5-3 - What do you like about the idea for Foresterhill?



Respondents were asked about what we should improve or change in this design idea.

- People like:
 - Simplified junction

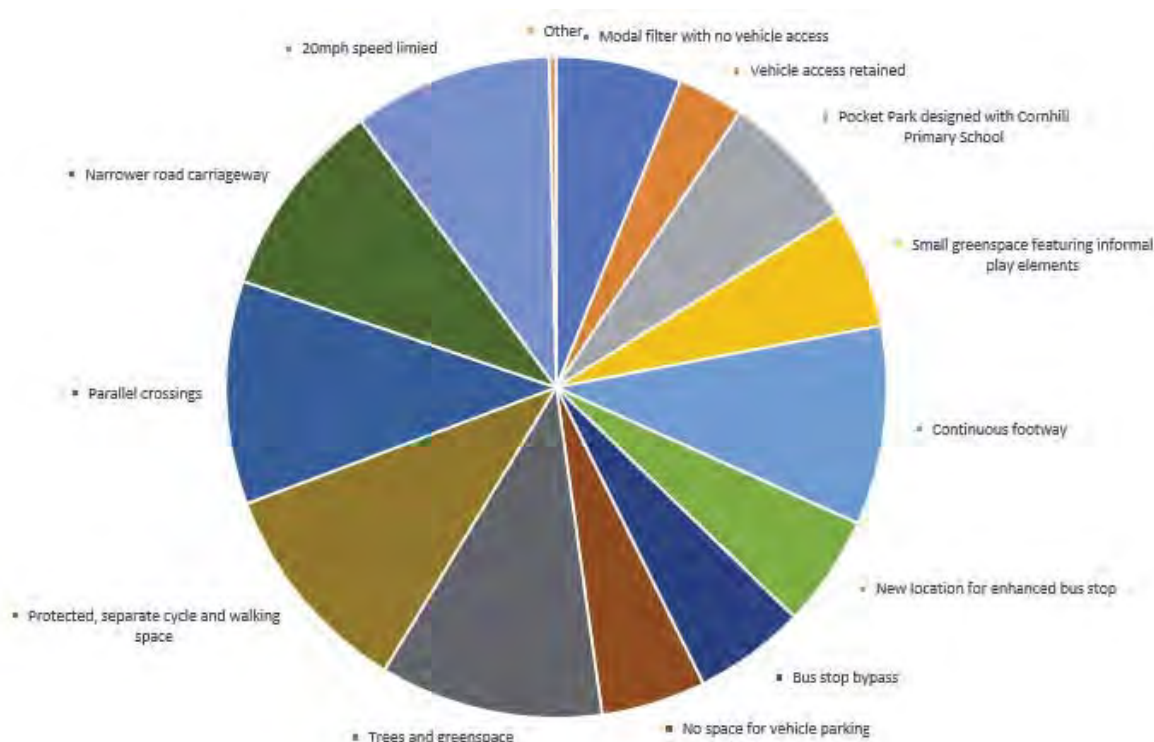
- Improved crossings with emphasis on people walking and cycling
- Removal of parking spaces on approach to junction
- People have concerns about:
 - The transition from the cycle lane back onto road is too close to junction
 - Traffic congestion at lights from removal of filter lanes, potentially blocking driveway access / creating pollution
 - Impact of narrowed roads on ambulance response times/access
- People suggested:
 - Improve the sequencing of lights to reduce traffic congestion
 - Bus only lane through the junction
 - Give way signage when cyclists re-join carriageway
 - Pedestrian crossings to follow desire lines (note: alignment issue on drawing for ped crossing on Foresterhill Road arm)

Respondent said: *“Less lanes will simplify this for unfamiliar drivers, but the operation of lights also needs fixing. It would be better to remove the lights between the Foresterhill roads and make this a yellow box zone (no waiting), giving the light sequencing enough time to allow cars to fully clear the short area of road. This would also prevent this part from being obstructed when Ambulances need to get into the Hospital. Further measures should be considered to prevent non-essential traffic using Ashgrove Road West, given the importance of hospital access by ambulances and the good bus service.”*

5.2.4. Feedback on Cornhill Ideas

Respondents were asked about what they like about the idea for North Anderson Drive. The top three responses were: *trees and greenspace* (64%), *parallel crossings* (64%) and *protected, separate cycle and walking space* (62%).

Figure 5-4 - What do you like about the idea for Cornhill?



Respondents were asked about what we should improve or change in this design idea.

- People like:
 - Easier to cross

- Safer junction
- More greenspace
- Improved lighting
- People have concerns about:
 - Noise impact on closest residents from potential signalised crossing
 - Reduced visibility for those exiting Cornhill Road from rain garden/greenspace
 - Increase demand for parking on Cornhill Road
 - Potential for vehicles to block the continuous footway/cycle lane in Idea B
 - Access to school if road closed to vehicles
 - Bus stop moved further away from pedestrian path into Foresterhill Health Campus
- People suggested:
 - Close Braefoot Road to vehicles instead of Cornhill Terrace
 - Install speed cameras to help with enforcement
 - Swap bus stop (closer to path to Foresterhill Health Campus) and parallel crossing (closer to Cornhill Terrace / Road) to follow desire lines
 - Larger footway at bus stop to accommodate passengers and reduce conflict

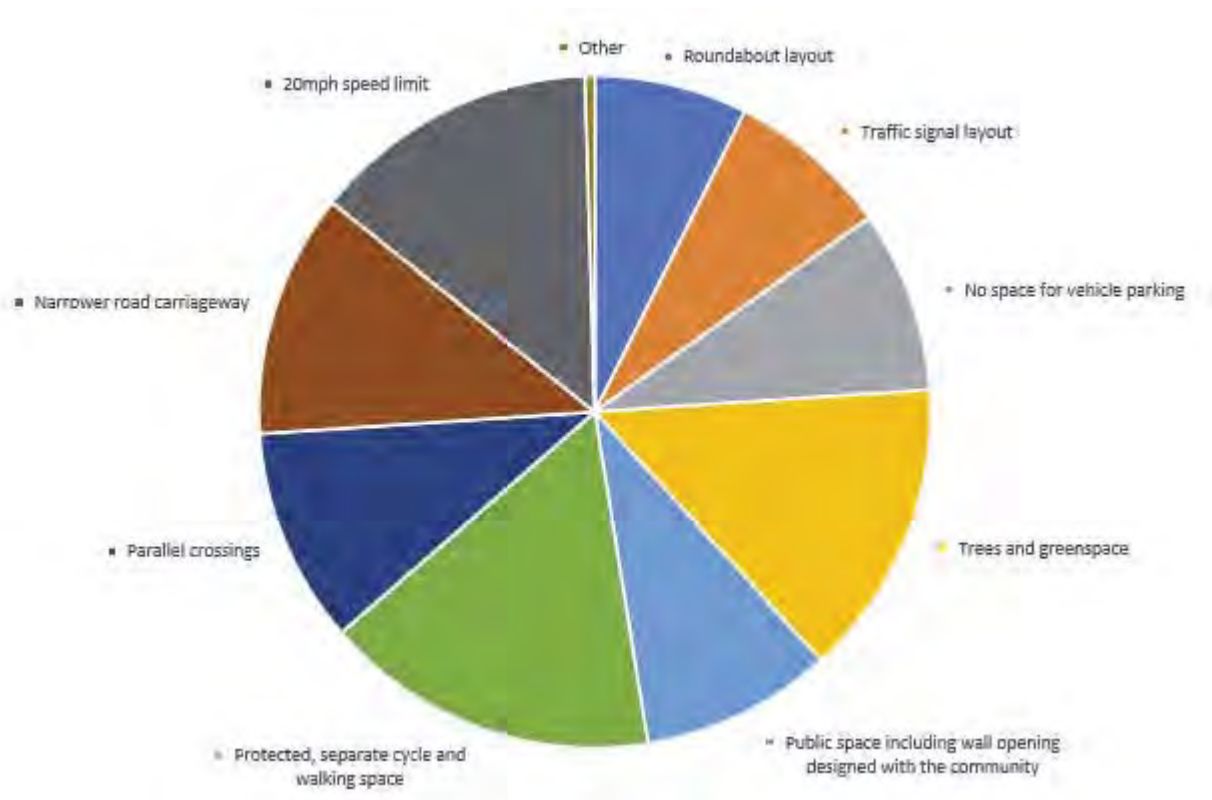
Respondents were also asked what they would like to see in the public space for North Anderson Drive. The top three responses were: *planting and trees* (51%), *seating* (32%), and *lighting* (45%).

Respondent said: “Move the bus stop to the west to allow the parallel crossing to be east of it, so nearer the junction?”

5.2.5. Feedback on Westburn Ideas

Respondents were asked about what they like about the idea for North Anderson Drive. The top three responses were: *protected, separate cycle and walking space* (70%); *trees and greenspace* (64%), and *20mph speed limit* (60%).

Figure 5-5 - What do you like about the idea for Westburn?



Respondents were asked about what we should improve or change in this design idea.

- People like:
 - Priority for those walking and cycling through junction
 - Slowing approach to Westburn Drive on Ashgrove Road West and Ashgrove Road
- People have concerns about:
 - Driver behaviour at/understanding of roundabout layout
 - Difficult turning right onto Westburn Drive from Ashgrove Road West and Ashgrove Road
 - Reduced visibility from trees/planting in middle of roundabout
 - Impact of opening the high wall on noise and safety for residents behind the wall (currently provides protected greenspace children/dogs)
- People suggested:
 - Improve the sequencing of lights to reduce congestion
 - Slow down vehicles approaching the junction on Westburn Drive too
 - Add right filter lane to Westburn Drive

Respondents were also asked what they would like to see in the public space for North Anderson Drive. The top three responses were; *planting and trees* (55%), *seating* (36%) and *lighting* (36%).

Respondent said: “I like the roundabout but worry how safe crossings would be. Concerned with the lights that turning right (south) onto Westburn Drive would be harder.”

5.3. Ashgrove Road and Laurelwood Avenue

5.3.1. Feedback on overall design ideas for Ashgrove Road and Laurelwood Avenue

Respondents were asked to feedback on the overall design ideas for this area against the design objectives:



77% of respondents **agreed and or mostly agreed** about the designs “*creating a slower, quieter street environment.*”



69% of respondents **agreed and or mostly agreed** about the designs “*making crossing the road and using junctions easier and a more comfortable experience.*”



67% of respondents **agreed and or mostly agreed** about the designs “*making the street feel more attractive and safer for people to spend time in.*”



69% of respondents **agreed and or mostly agreed** about the designs “*making it easier to walk.*”



69% of respondents **agreed and or mostly agreed** about the designs “*enabling people of ages and abilities to move around by bicycle.*”



50% of respondents **agreed and or mostly agreed** about the designs “*providing parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.*”

Respondents made the following general feedback on the overall designs for Ashgrove Road and Laurelwood Avenue:

- Support for:
 - A 20mph speed limit.
 - Improved visibility and crossings.
 - Aesthetic improvements.

Respondent: “*Really hope that some combination of these ideas actually comes to fruition!*”

- Concern about:
 - Location of parking bays
 - Emergency service access and impact on response times if the road is narrowed.
 - Moving traffic volume and parking problem onto other residential streets.

Respondent: “*Reducing parking spaces will shift the cars to other streets - not necessarily solving any issues in the larger sense.*”

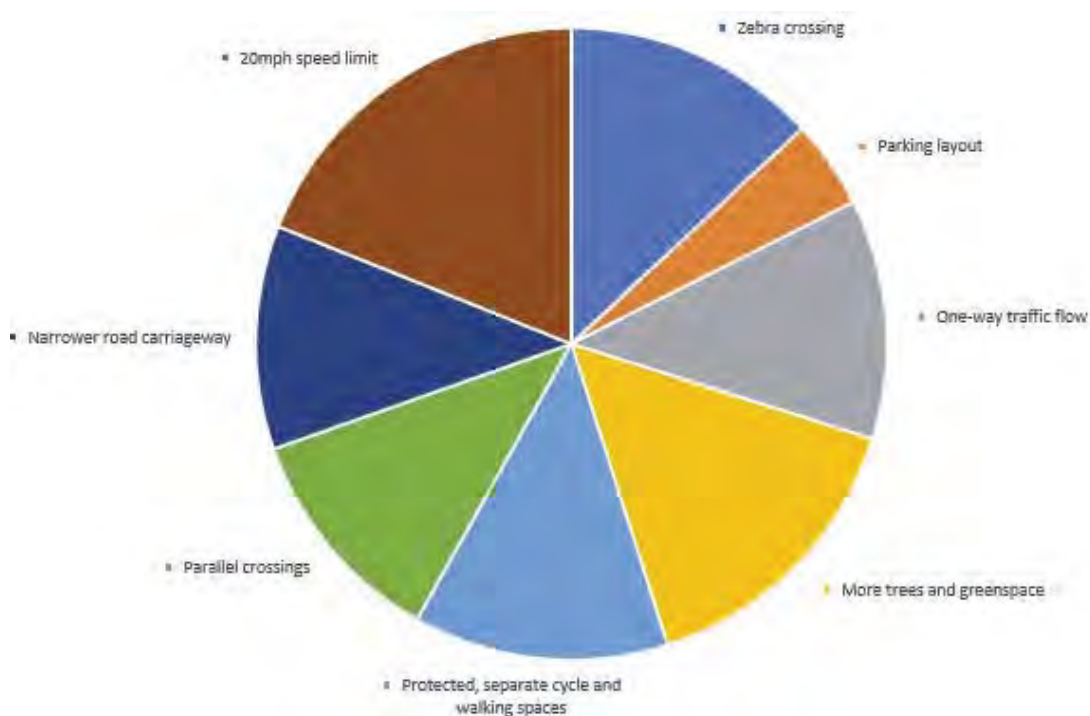
- Suggestion to:
 - Focus on reducing traffic volume further.
 - Extend 20mph zone to Elm Place.
 - Encourage businesses to promote their off-street customer car parks.

Respondent: "More greenery should be planted, not just trees, and Ashgrove Road is wide enough to accommodate this along with a cycle path."

5.3.2. Feedback on Idea A

Respondents were asked what they like about Idea A. The top three responses were: *20mph speed limit (71%), more trees and greenspace (57%), protected, separate cycle and walking spaces (49%), and zebra crossing (49%).*

Figure 5-6 - What do you like about Idea A?



Respondents were asked about what we should improve or change in this design idea.

- People like:
 - Improved visibility from removal of parking to east of Laurelwood Avenue on Ashgrove Road
 - Reduced traffic conflict on Ashgrove Road and Laurelwood Avenue
 - Space to improve aesthetics/greenspace to east side of Ashgrove Road
- People have concerns about:
 - Increased risk of vandalism to residents' vehicles parked further away from houses, nearer high walls between May Baird and Laurelwood Avenue
 - Increased traffic volume on Laurelwood Avenue from one-way system on Ashgrove Road
 - Increased journey time for residents from one-way system
 - Location of crossing on Ashgrove Road being too close to junction with Berryden Road
 - Reduced visibility from additional tall trees
 - Increased traffic speeds from one-way system
 - Two-way cycle lane not as comfortable as one-way
- People suggested:
 - Move parking bays on Ashgrove Road (west) to south side of road, closer to houses
 - Remove the speed bumps on Laurelwood Avenue
 - Locate parking bays between cycle lane and footway to reduce conflict
 - Focus on reducing traffic volume rather than proposing cycle lanes on Laurelwood Avenue

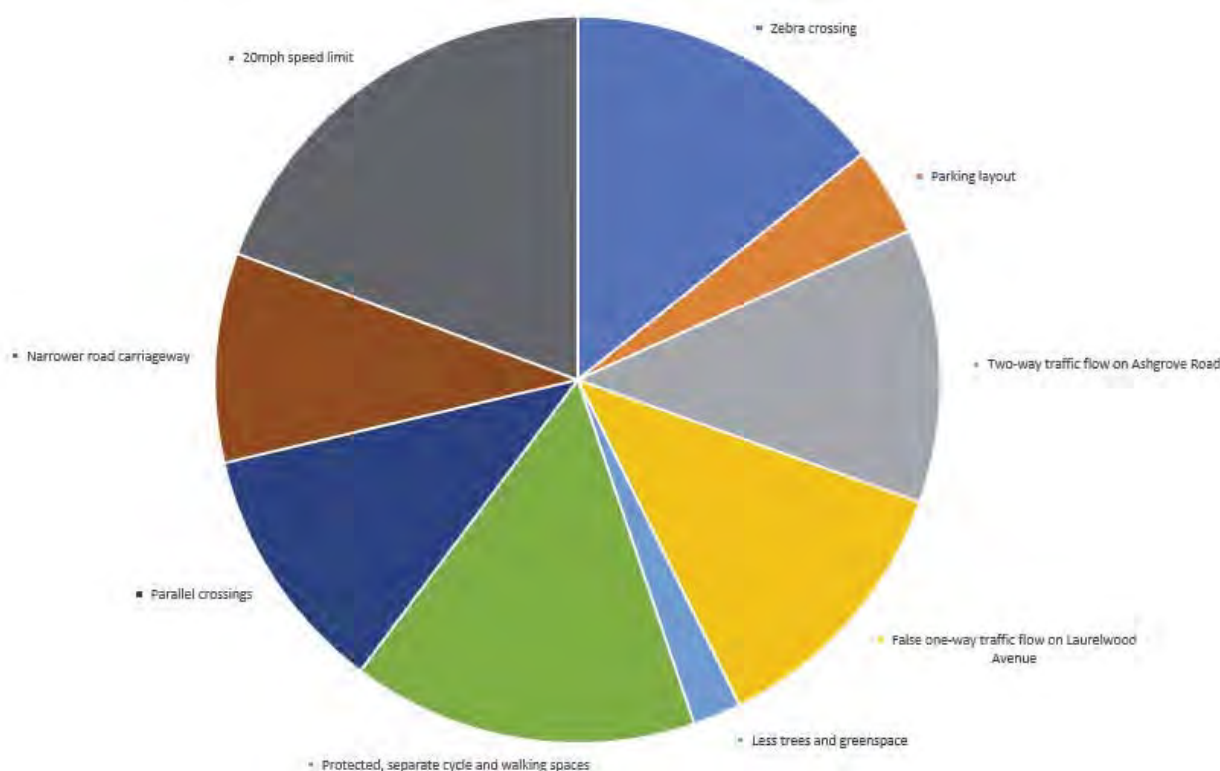
- Contra-flow cycle lane in one-way system
- Replace larger trees with smaller trees (e.g. Siberian/Silver birches)
- Encourage business customers to park in off-street car parks to reduce displacement

Respondent said: *“It would be good to keep a good amount of on-street parking to make the roads useful to residents and their visitors. The narrower carriageway here isn’t so important. To me, the priority is to reduce traffic on Laurelwood Avenue.”*

5.3.3. Feedback on Idea B

Respondents were asked what they like about Idea A. The top three responses were: *20mph speed limit (54%), protected, separate cycle and walking spaces (43%), and zebra crossing (40%).*

Figure 5-7 - What do you like about Idea B?



Respondents were asked about what we should improve or change in this design idea.

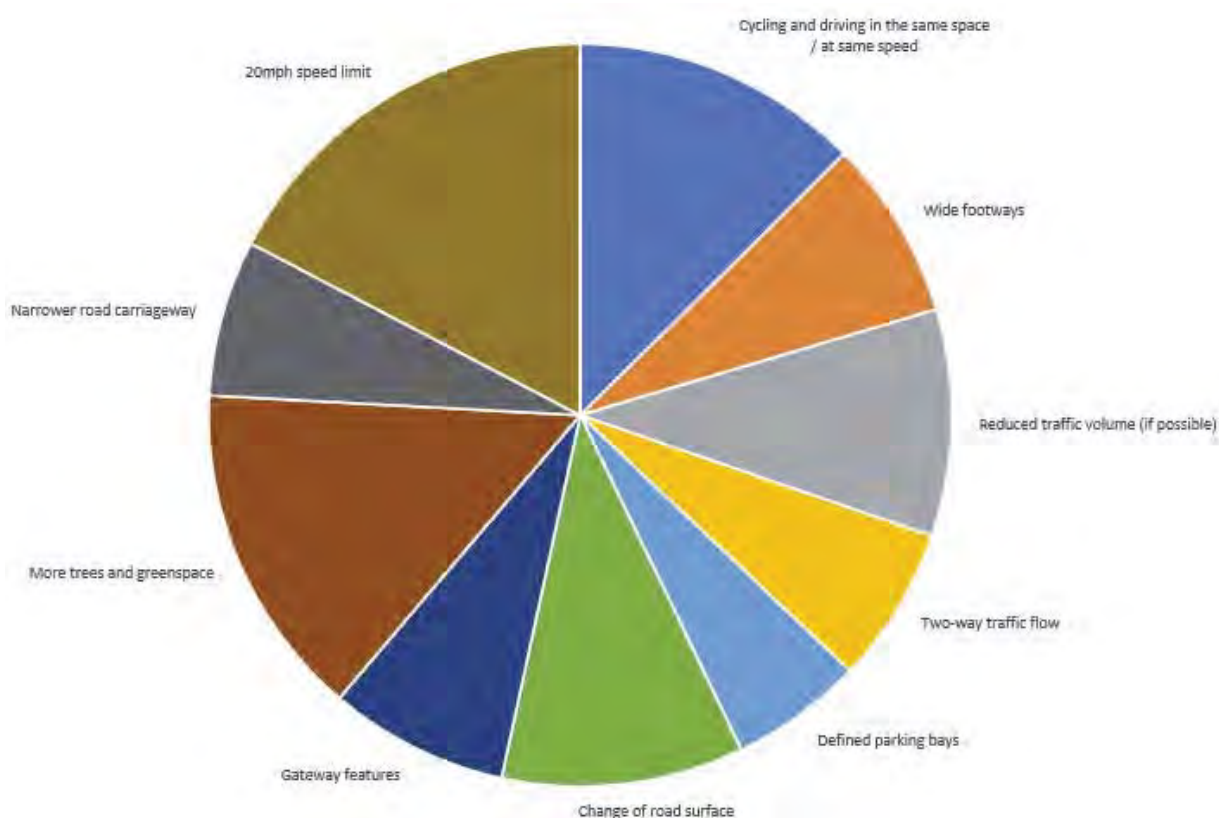
- People like:
 - Increased visibility from removal of parking from east side of Ashgrove Road
 - Two-way on Ashgrove Road won’t force easterly traffic down Laurelwood Avenue
 - Allows for resident’s access and helps slow vehicles
- People have concerns about:
 - Increased risk of vandalism to residents’ vehicles parked further away from houses, nearer high walls between May Baird and Laurelwood Avenue
 - Two-way on Ashgrove Road not as environmentally pleasing (less green)
 - Location of crossings on Ashgrove Road and Laurelwood Avenue too close to Berryden Road
 - Two-way cycle lane not as comfortable
 - Increased journey time for residents on Laurelwood Avenue and smaller residential streets
- People suggested:
 - Move parking bays on Ashgrove Road (west) to south side of road, closer to houses
 - Encourage business customers to park in off-street car parks to reduce displacement
 - Resident only entry/exit egress to Laurelwood Avenue
 - Move cycle lane on northeast side of Laurelwood Avenue, away from ‘door zone’

Respondent said: “Plan B is a better option than Plan A as long as there is two way traffic on Ashgrove Road to the junction with Berryden Road. The junction must not direct traffic travelling east on Ashgrove Road on to Laurelwood Avenue. It has to be borne in mind that Laurelwood Avenue, Cedar Place and Elm Place are residential streets, they should not be seen as a short cut between Ashgrove Road and Berryden Road.”

5.3.4. Feedback on Idea C

Respondents were asked what they like about Idea A. The top three responses were; 20mph speed limit (51%), more trees and greenspace (43%), and cycling and driving in the same space / at the same speed (37%).

Figure 5-8 - What do you like about Idea C?



Respondents were asked about what we should improve or change in this design idea.

- People like:
 - Gives the streets back to residents
 - Transforms character of the road from through routes to residential streets
 - Reduces noise and traffic pollution
- People have concerns about:
 - Unsure if a ‘quiet street’ is achievable
 - Unknown impact and integration with future changes to Berryden Corridor
- People suggested:
 - Remove speeds bumps on Laurelwood Avenue
 - Close Laurelwood Avenue (or residents only access)

Respondent said: “If the Berryden Corridor work were to go ahead, would it be more possible for Laurelwood Avenue to be a quiet street? Or having a dead end for cars at Ashgrove Road (but still allowing bicycles to pass through)”

5.4. Findings from Stage 2

A report summarising these findings has been communicated to the community through the project website.

6. Workshop Responses

This Chapter provides a summary of the key findings from the workshops with residents and local groups representing those with protected characteristics under the Equalities Act.

6.1. Cairncry Primary School

Key findings included:

- Pupils responded positively to many of the key design features, particularly more crossings, gateway features, secure cycle parking, modal filters, pocket parks and informal play areas. Pupils re-iterated the need for secure cycle parking to enable more people to cycle, particularly for those living in high rise flats.
- Ideas for the Ashgrove Road West/Cornhill junction included planting low level bushes on grass verges to further protect people walking and cycling from the road and signalling crossings to ensure drivers stop for people crossing. The pupils designed two layouts showing the difference between a one-way and two-way cycle lane on Ashgrove Road West. Opinion was split on the preference.
- Having considered Idea B (modal filter) in more detail, pupils suggested trialling this design could allow people to weigh up the benefits before making a final decision.
- Ideas for the Ashgrove Road West/Cornhill pocket park/small greenspace included adding picnic benches, wooden blocks (as play features), art and bins. Artwork could be designed by pupils and the community to provide greater ownership of the space.
- Pupils suggested the Primary School could develop poems to encourage people to use waste bins rather than drop litter.

Figure 6-1 - Idea A with one-way cycle lane Figure 6-2 - Idea B with two-way cycle lane



6.2. Crosby House Care Home

Key findings included:

- Many of the residents and their families travel by foot, wheelchair, and car/taxi to access the care home. Residents tend to travel along Ashgrove Road West, Ashgrove Road, and Laurelwood Avenue to visit the hospital/GP, shop, meet family/friends, and visit the park.
- Many of the staff use the bus, drive, or walk to get to work.

- Some of the issues identified included high traffic speed and volume, high kerbs, no resting places, poor pavement conditions, and bad visibility at junctions, particularly at the Ashgrove Road entrance to May Baird Avenue.
- Although out of the scope of Ashgrove Connects, the issue of through traffic on May Baird Avenue was also raised as an issue near to the care home.
- Some of the suggested improvements included dropped kerbs, gaps in the high walls to provide better access to areas of greenspace, cutting back overhanging vegetation, adding colour and seating, improving access to bus routes and better signage. Creating information boards for local history or community activities could also provide areas of interest outside the care home.
- Many residents stated their desire to be able to get out into the local area more.
- There was agreement from residents on many of the key design features, particularly more crossings, 20mph speed limit, gateway features, continuous footways, and enhanced greenspace.

6.3. Ashgrove Road and Laurelwood Avenue Residents

The workshops with residents included representatives from the westerly section of Ashgrove Road (between May Baird Avenue and Laurelwood Avenue), easterly section of Ashgrove Road (between Laurelwood Avenue and Berryden Road) and Laurelwood Avenue.

- Summary of local issues raised:
 - High traffic speeds cause accidents and safety concerns.
 - High traffic volume, particularly on Laurelwood Avenue, is a concern for quality of life.
 - Business customers park on Ashgrove Road, blocking driveways and pavements, rather than using the off-street car parks provided.
 - Junction of Ashgrove Road with Berryden Road congested, resulting in accidents, noise, and safety concerns.
 - Restricted visibility, particularly exiting Laurelwood Avenue onto Ashgrove Road and exiting Berryden Road via Elm Place onto Laurelwood Avenue, causes accidents and safety concerns.
 - Trees enhance quality of street but create issues for pavements and properties.
- Summary of feedback on initial design ideas:
 - Support for one-way system on east section of Ashgrove Road but concerned about increased traffic volume on Laurelwood Avenue as a result.
 - Support for one-way system on Laurelwood Avenue but concerned about residential access.
 - Support for quiet streets, particularly on Laurelwood Avenue, but unsure whether this is achievable.
 - Support for improved greenspace but need to consider smaller trees/pockets rather than tall trees which create visibility and maintenance issues.
 - Concern at displacing parking to other streets and locating spaces near high walls, increasing risk of vandalism. Opportunity for businesses to encourage customers to park within off-street car parks.
 - Concern about narrowing street for ambulance response times/access.
- Summary of priorities highlighted:
 - Reduce traffic speed and volume
 - Improve crossings
 - Enhance place quality, particularly to the east section on Ashgrove Road
 - Meet parking demand where possible, particularly to the west section of Ashgrove Road and Laurelwood Avenue
 - Improve cycling connections, particularly for families and students
- Additional concerns were raised around future improvements to Berryden Corridor, particularly attracting more traffic and noise pollution, and how this would work with changes implemented through Ashgrove Connects.

7. Stakeholder Responses

This Chapter provides a summary of the responses received from key stakeholders.

7.1. Scottish Ambulance Service

Feedback received from the Scottish Ambulance Service:

- North Anderson Drive junction: dropping to a single lane on the approach to North Anderson Drive from Ashgrove Road West would restrict ability to emerge from the junction. Can consideration be given to retaining two lane, even over a shorter distance, to minimise risk of ambulances being stuck behind general traffic?
- Construction phase: will routes remain open during construction?

7.2. First Bus

Feedback received from First Bus:

- As you will be aware we have limited service on Ashgrove Road/West but do cross over at key junctions. In this respect we would, to assist with the overall smooth operation of our services ask that signalised junction give some considerations to the traffic flows where public transport operate with priority if possible.
- No issues with the proposed active travel options being put forward.

7.3. No response

To date, no response has been received from the following key stakeholders:

- Police Scotland (invited to join Stakeholder Working Group)
- Scottish Fire and Rescue
- Stagecoach
- Aberdeen City Council and Shopmobility were engaged to provide contact details for Disability Equity Partnership (DEP). This was to invite members of the DEP to walking audits, to join the Stakeholder Working Group and to provide feedback on the Initial Design Ideas. Although there has been no response so far, engagement has taken place with residents, staff and families of Crosby House Care Home through a meeting, survey and workshop. The purpose of this was to ensure the project has identified and taken account of accessibility considerations at an early stage in lieu of feedback from disability forums.

8. Next steps

This Chapter provides an overview of the next steps for design development and recommendations for Stage 3.

8.1. Design Development

The Atkins team will take the key messages from the engagement process into the finalisation of concept design proposals as part of RIBA Stage 2. The Stage 2 Handover file will include recommendations for Stage 3 development.

8.2. Stage 3 Engagement

Throughout the project, meaningful engagement has taken place to ensure those with a potential interest have been informed and have had opportunities to be involved early on.

The project has demonstrated that there is strong support for change and, in general, the initial design ideas were positively received. However, the number of respondents to the second consultation was lower than the first. There could be a number of reasons for this including the overlap with the school holiday period, high level of response to the live planning application for the former Rosehill House building, and Covid-19 continuing to be a barrier to people attending events and community facilities. These factors should be taken into consideration as the project moves into Stage 3.

Recommendations for Stage 3 include:

- Continue to review and update the Engagement and Communications Plan to ensure this responds to lessons learned and supports the Behaviour Change Activation Plan.
- Continue to communicate and meet with the Stakeholder Working Group, made up of key stakeholder and community representatives, to discuss progress and validate future outputs.
- Continue to update the project website with regular news blogs to keep people informed of progress.
- Continue to engage people through online webinars (recorded and uploaded to the website), in-person drop-ins/workshops and at the gates of Cornhill Primary School. Consideration should be given for pop up displays outside community facilities such as the SPAR and Foresterhill Health Campus to catch people who may not engage in the project through the organised activities.
- Continue to engage with local groups through workshops/meetings. Consideration should be given for how to involve ACC's Community Development Officers where there is capacity to support further engagement with these groups.
- Continue to try and engage representatives of Disability Equity Partnership. Engagement should continue with Crosby House Care Home to ensure the project continues to identify and take account of accessibility considerations in lieu of responses from disability forums.
- Continue to engage businesses through drop-ins and recorded delivery of leaflets/letters.
- Continue to communicate through leaflets, posters, stakeholder notifications, social media schedules, mailing lists. Consideration should be given to wider a leaflet drop covering the engagement area and the use of on-street display boards, particularly around key junctions, to raise awareness in situ.
- Consideration should also be given to the value of Commonplace's Social Media Outreach Campaign which could boost communication through targeted social media promotion.

Appendices



Appendix A: Communication Material

Stakeholder Notification Letter

Dear Stakeholder,

Welcome to the Design Stage of Ashgrove Connects where you can view and feedback on the initial designs which have been developed from what you told us is important to you.

About Ashgrove Connects

Ashgrove Connects is an exciting new project to get local people involved in making Ashgrove Road, Ashgrove Road West and Laurelwood Avenue work better for those who live, work, study and visit here. A key part of the project is to work directly with people who use the streets through a series of activities to identify and develop what improvements should and could be made to the local area.

The project is being progressed by Aberdeen City Council as part of a programme of improvements across the city that will help provide everyone with more sustainable transport and lifestyle options, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor. The project is being funded by Nestrans.

Stage 1: Define

During the first stage of the project, we asked the community to share their experiences of using the streets through a series of engagement activities. We also investigated current activity levels and constraints along the streets through surveys. These activities have helped us to build up an understanding of how the streets and public spaces are perceived and used locally to inform the development of initial designs. A summary of the first stage of the project and a recording of the first live webinar is available on the project website: <https://ashgroveconnects.commonplace.is/>

Upcoming public engagement on Stage 2: Develop

The second public engagement phase for the project started this week and will run until Sunday 17th July. During this period, we will be asking local people to view and feedback on initial designs, presenting ideas of what could be achieved in the space for discussion between members of the community. A copy of the initial designs can be [downloaded here](#).

People will have the opportunity to view and feedback through the following activities:

- Visit the [project website](#) or public display in Cornhill Library until Sunday 17th June.
- Join the live webinar on Tuesday 28th June between 7-8pm.
- Drop-in to Cairncry Community Centre, anytime between 10-1pm, or Westburn Outdoor Centre, anytime between 4-7pm, on Tuesday 5th July.

There will also be a series of activities planned with specific stakeholder groups and discussions with those living and working directly along Ashgrove Road, Ashgrove Road West and Laurelwood Avenue. The feedback we receive will help us to steer the development of a concept design during the next stage of the project.

Support with wider communication

The project would really benefit from any support you can provide to raise awareness of this second period of engagement through your communication channels and local networks. The more people involved at this early stage, the more aligned the project will be to the needs of those with an interest in the area. To support with this, please find attached the newsletter that was distributed locally this week and can be shared on social media. We'd love to hear from you should you be able to support further with this.

Contact

We have contacted you today as you have been identified as a key stakeholder with a potential interest in Ashgrove Connects. If you do not want to receive further emails about this project, please let me know. Alternatively, please don't hesitate to contact me using the details below if you have any questions or wish to find out more.

We look forward to hearing from you over the coming weeks.

Kind regards,

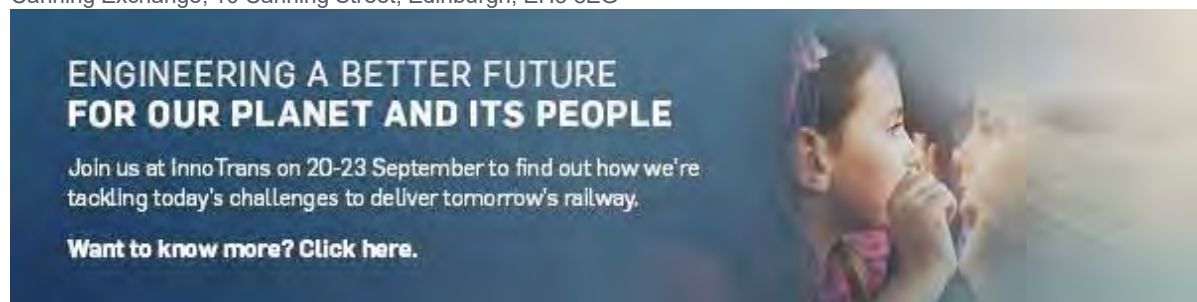
Emily.

Emily Davie

Engagement Lead - Scotland, Transportation
UK and Europe
Engineering, Design & Project Management

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Atkins, member of the SNC-Lavalin Group
Canning Exchange, 10 Canning Street, Edinburgh, EH3 8EG



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Company    

Resident Notification Letter



Dear Ashgrove Road / Laurelwood Avenue Resident,

We are writing to invite you to a workshop for residents of Ashgrove Road and Laurelwood Avenue in relation to the Ashgrove Connects Project.

About Ashgrove Connects

Ashgrove Connects is an exciting new project to get local people involved in making Ashgrove Road, Ashgrove Road West and Laurelwood Avenue work better for those who live, work, study and visit here.

A key part of the project is to work directly with people who use the streets through a series of activities to identify and develop what improvements should and could be made to the local area.

The project is being progressed by Aberdeen City Council as part of a programme of improvements across the city that will help provide everyone with more sustainable transport and lifestyle options, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor. The project is being funded by Nestrans.

Stage 1: Define

During the first stage of the project, we asked the community to share their experiences of using the streets through a series of engagement activities. We also investigated current activity levels and constraints along the streets through surveys.

These activities have helped us to build up an understanding of how the streets and public spaces are perceived and used locally to inform the development of initial designs. A summary of the first stage of the project is available on the project website: <https://ashgroveconnects.commonplace.is/>

Stage 2: Develop

The second stage of the project starts today until Sunday 17th July. During this period, we will be asking local people to view and feedback on the initial designs, presenting ideas which have been developed from what you told us is important to you. The enclosed newsletter outlines more about the upcoming engagement period.

Workshop: Tuesday 12th July

In addition to the activities outlined in the newsletter, we'd like to invite residents of Ashgrove Road and Laurelwood Avenue to a workshop to discuss the design ideas for both streets in more detail. We are presenting initial design ideas for discussion but need to understand your priorities for change before these are developed further. We will be holding two workshops on **Tuesday 12th July between 4-5.30pm and 7-8.30pm at Westburn Outdoor Centre, Westburn Park AB25 3DE**. To register attendance, please contact me using the details below with your preferred time slot.

If you have any questions or wish to find out more, please do get in touch. We look forward to hearing from you over the coming weeks.

Yours faithfully,

Emily Davie

Email: Emily.Davie@atkinsglobal.com

Telephone: 0131 221 5770

Leaflet



Welcome to this newsletter that will update you on the **Ashgrove Connects Project as we now invite you to view and feedback on the initial designs**



What is Ashgrove Connects?

This is an exciting new project to get local people involved in making Ashgrove Road West, Ashgrove Road and Laurelwood Avenue work better for those who live, work, study and visit here.

A key part of the project is to work directly with people who use the streets to identify and develop what improvements should and could be made to the streets and public spaces.

The project is being progressed by Aberdeen City Council as part of a programme of improvements across the city that will help provide everyone with more sustainable transport and lifestyle options, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor. The project is being funded by Nestrans.

What's happened so far?

During the first stage of the project, we asked you to share your experiences of using the streets.

We also investigated current activity levels and constraints along the streets through surveys.

These activities have helped to build up an understanding of how the streets and public spaces are perceived and used locally to inform the design development process.

What did we find out?

The image below presents the topics respondents chose to comment on during the first stage, with the most popular appearing the largest.

You can read more about the findings from the first stage on the project website or contact us for a paper copy.



How has this been developed?

From the information gathered so far, the following themes have emerged:

-  **Traffic:** create a slower, quieter street environment.
-  **Crossings and junctions:** more crossings and improved junctions that feel safer to use.
-  **Place quality and greenspace:** improved place quality and better access to greenspace.
-  **Walking:** more enjoyable and accessible for people walking.
-  **Cycling:** improved conditions for people cycling.
-  **Parking:** improved layout to reduce the impact on people moving around.

These themes have guided the development of design objectives, setting out what the project should achieve, and initial designs, presenting ideas of how this could be achieved for further discussion between members of the community.



How can you get involved?

We now invite you to view, discuss and feedback on the initial designs through the following activities:

- Visit the project website: ashgroveconnects.commonplace.is
- Visit the display in Cornhill Library*
- Join the live webinar on Tuesday 28th June between 7-8pm to find out more.
- Drop-in to Cairnry Community Centre, anytime between 10-1pm, or Westburn Outdoor Centre, anytime between 4-7pm, on Tuesday 5th July to meet the team. Refreshments will be provided.

*Opening hours: Tuesday/Wednesday/Thursday/Saturday: 10-1pm and Tuesday/Wednesday/Thursday: 2-5pm

Please feedback before Sunday 17th July. Your feedback will steer the development of a concept design during the next stage of the project.

Contact Us

If you require support to view and feedback on the initial designs or have any questions, please contact us:

0121 221 5770
smily.davie@atkinsglobal.com
ashgroveconnects.commonplace.is



Poster



Tell us what you think about the initial designs for **Ashgrove Connects**

Ashgrove Connects is an exciting new project to get local people involved in making Ashgrove Road, Ashgrove Road West and Laurelwood Avenue work better for those who live, work, study and visit here.

A key part of the project is to work directly with residents, businesses, pupils, students, and stakeholders to identify and develop improvements to the streets and public spaces.

We need your input to ensure that any proposals developed will do their best to work for everyone in the community.

Get involved: Develop Stage

Following the experiences you shared of using the streets during March, we now invite you to shape the initial designs for Ashgrove Connects.

Please view, discuss and feedback on the initial designs through the following activities by **Sunday 17th July**:

- Visit the project website or display in Cornhill Library* from today
- Join the webinar on Tuesday 28th June, 7-8pm
- Drop in to Caimcry Community Centre between 10-1pm or Westburn Outdoor Centre 4-7pm on Tuesday 5th July

*Opening hours: Tuesday/Wednesday/Thursday/Saturday: 10-1pm and Tuesday/Wednesday/Thursday: 2-5pm

Contact Us

emily.davie@atkinglobal.com
ashgroveconnects.commonplace.is

Please visit the project website or contact us for more information.




Business Notification Letter



Dear Owner/Manager,

We are writing to follow up on previous correspondence on the Ashgrove Connects Project to invite your feedback on the initial designs which have been developed from what the community told us is important to them.

About Ashgrove Connects

Ashgrove Connects is an exciting new project to get local people involved in making Ashgrove Road, Ashgrove Road West and Laurelwood Avenue work better for those who live, work, study and visit here. A key part of the project is to work directly with people who use the streets through a series of activities to identify and develop what improvements should and could be made to the local area.

The project is being progressed by Aberdeen City Council as part of a programme of improvements across the city that will help provide everyone with more sustainable transport and lifestyle options, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor. The project is being funded by Nestrans.

During the first stage of the project, we asked the community to share their experiences of using the streets through a series of engagement activities. We also investigated current activity levels and constraints along the streets through surveys. These activities have helped us to build up an understanding of how the streets and public spaces are perceived and used locally to inform the development of initial designs.

Feedback on initial designs

The second public engagement phase for the project will run until Sunday 17th July. During this period, we are asking the local community and stakeholders to feedback on the initial designs which have been developed from what people told us is important to them. The initial designs aim to reduce traffic speed, dissuade unnecessary through traffic and provide better opportunities for people to travel sustainably and access local facilities.

We are seeking your feedback on the initial designs by Sunday 17th July which will help steer the developed of a concept design during the next stage of the project. You can view and feedback on the initial designs through the project website: <https://ashgroveconnects.commonplace.is/> or by contacting me directly.

Contact

Please don't hesitate to contact me using the details below if you have any questions. If interested, I'd also be happy to arrange a telephone call at a time convenient to you to discuss the project in more detail.

Kind regards,


Emily

emily.davie@atkinsglobal.com | 0131 221 5770



Online blogs

From the [Ashgrove Connects website](#)




Missed the second webinar? Catch up here

We hosted a live webinar on Tuesday as part of the second stage of Ashgrove Connects. This was a great opportunity to present an overview of what we've done so far on the project, how this has developed and the initial designs....

Posted on 1st July 2022
by Emily Davie

Sent to: 168 [Edit](#)




Developing designs with Cornhill Primary School

We were delighted to spend Wednesday morning with P6 pupils of Cornhill Primary School to present, develop and collect their feedback on the initial designs for Ashgrove Connects. What did pupils tell us? During March, the pupils...

Posted on 24th June 2022
by Emily Davie

Sent to: 160 [Edit](#)




Tell us what you think of the initial designs for Ashgrove Connects

Welcome to the Design Stage of Ashgrove Connects where you can view and feedback on the initial designs which have been developed from what you told us is important to you. Idea for Ashgrove Road West at the junction with...

Posted on 21st June 2022
by Emily Davie

Sent to: 155 [Edit](#)




Feedback on the initial designs by Sunday

Thank you to everyone who has taken part in the consultation on the initial designs for Ashgrove Connects so far. We've spent time with residents, businesses, pupils and other users of the street to understand what you like about...

Posted on 13th July 2022
by Emily Davie

Sent to: 176 [Edit](#)




Exploring the designs

Drop in events Thanks to everyone who took the time to come along to the drop-in events this week at Cairncry Community Centre and Westburn Outdoor Centre to explore the initial designs. It was great to see so many of you a...

Posted on 7th July 2022
by Emily Davie

Sent to: 171 [Edit](#)



Drop in events today

We've spent the morning at Cairncry Community Centre speaking to members of the community about the initial designs for Ashgrove Connects. We're heading over to Westburn Outdoor Centre for the second drop-in between 4-...

Posted on 5th July 2022
by Emily Davie

Sent to: 170 [Edit](#)

5212138 | 4.0 | September 2022
Atkins | Ashgrove Connects Stage 2 Engagement Plan

Page 31 of 33

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Local Media

Aberdeen Live (24 June 2022)



Aberdeen council chiefs launch consultation over Ashgrove Road proposals

A council spokeswoman said the project aims at helping people get more healthy

By Ian Healdreich News Editor
10:02 AM GMT+1 24 June 2022

Aberdeen council chiefs have launched a consultation for street improvements near Ashgrove Road.

The next stage of Ashgrove Connects project, being delivered by Aberdeen City Council and paid for by the north-east transport organisation Neustrans, includes a consultation at Cornhill Library and online as well as a webinar and local drop-in sessions, which will shape how the project develops.

A council spokeswoman said the project aims at helping people get more healthy. She said: "The Ashgrove Connects project is initially investigating what improvements could and should be made to the streets and is aimed at enabling people to choose a more active and sustainable lifestyle, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor."

Recommended: Aberdeen bin workers and street cleaners set to strike over 'pitiful' pay offer

Aberdeen City Council (9 March 2022)



Consultation starts for street improvements to Ashgrove Road

Wednesday 9 March 2022

People living or working near Ashgrove Road and Ashgrove Road West are being asked to take part in a consultation which could lead to street improvements for the area.

The Ashgrove Connects project, being delivered by Aberdeen City Council and paid for by the North-east transport organisation Neustrans, comprises stakeholder engagement and a public survey which will help define priorities and shape how the project develops.

It will initially investigate what improvements could and should be made to the streets and is aimed at enabling people to choose a more active and sustainable lifestyle, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor.

Depending on input from the community, plans could include changes to Ashgrove Road and Ashgrove Road West which give greater priority to people, enhance public space, improve access to shops and facilities, and improve active travel.

Press & Journal (24 June 2022)



Ashgrove, Foresterhill and Berryden residents urged to have say on roads revamp

By Denny Andonova June 23, 2022, 10:46 am

Aberdeen University along with several organisations lie on Ashgrove Road.

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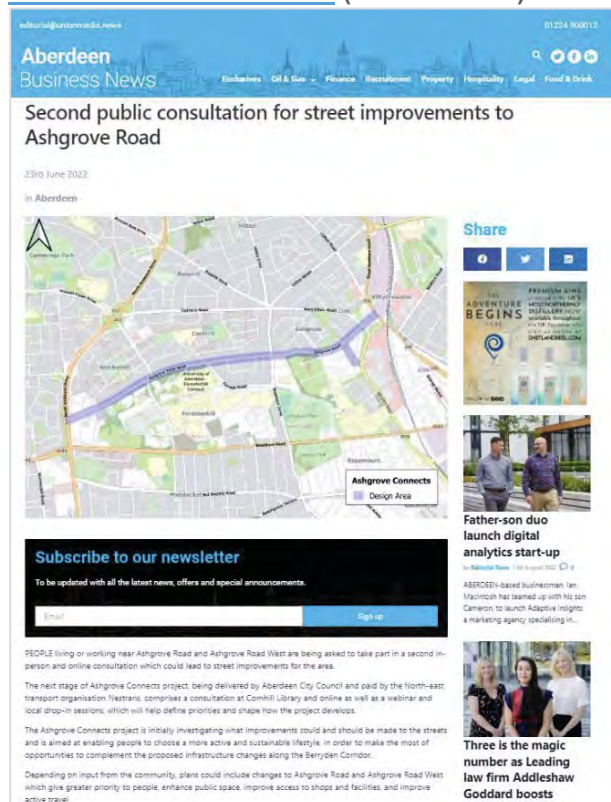
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Aberdeen residents have been asked to have their say on what improvements they would like to see along Ashgrove Road and Ashgrove Road West.

Aberdeen City Council has launched a second consultation for people living and working in the area as the move to the second stage of the Ashgrove Connects project.

Aberdeen Business News (23 June 2022)



Second public consultation for street improvements to Ashgrove Road

23rd June 2022
In Aberdeen

PEOPLE living or working near Ashgrove Road and Ashgrove Road West are being asked to take part in a second in-person and online consultation which could lead to street improvements for the area.

The next stage of Ashgrove Connects project, being delivered by Aberdeen City Council and paid by the North-east transport organisation Neustrans, comprises a consultation at Cornhill Library and online as well as a webinar and local drop-in sessions, which will help define priorities and shape how the project develops.

The Ashgrove Connects project is initially investigating what improvements could and should be made to the streets and is aimed at enabling people to choose a more active and sustainable lifestyle, in order to make the most of opportunities to complement the proposed infrastructure changes along the Berryden Corridor.

Depending on input from the community, plans could include changes to Ashgrove Road and Ashgrove Road West which give greater priority to people, enhance public space, improve access to shops and facilities and improve active travel.

Other news items:
- Father-son duo launch digital analytics start-up
- Three is the magic number as Leading law firm Addresslaw Goddard boosts senior team

Social Media

Aberdeen City Council (23 June 2022)

Aberdeen City Council
23 June at 10:03

People living or working near Ashgrove Road and Ashgrove Road West are being asked to take part in a second in-person and online consultation which could lead to street improvements for the area.

The next stage of Ashgrove Connects project, being delivered by Aberdeen City Council and paid by the North-east transport organisation Nestrans, comprises a consultation at Cornhill Library and online as well as a webinar and local drop-in sessions, which will help define priorities... See more



Nestrans (5 July 2022)

Nestrans
5 July at 13:45

There is a public drop-in for Aberdeen City Council's #AshgroveConnects project between 4pm and 7pm TODAY at the Westburn Outdoor Centre, Westburn Park.

Do you live in, work on or visit the corridor? However we travel, how can we improve how we all get around it?

Pop along, see the initial proposals, make sure to have your say.... See more



Stockethill Church (8 July 2022)

Stockethill Church
38m

A consultation is taking place about changes to the Ashgrove Road/Ashgrove Road West layout. The consultation will close on Sunday 17th July. People can feedback either on the project website <https://ashgroveconnects.commonplace.is/> or at Cornhill Library where there is a small public display



Tell us what you would like to see improved along Ashgrove Road & Ashgrove Road West

ASHGROVECONNECTS.COMMONPLACE.IS

Tell us what you would like to see improved along Ashgrove Road and Ashgrove Road West

GetAbout (27 June 2022)

Getabout
27 June at 09:27

Ashgrove Connects is looking for community feedback during stage 2 of the project. You can read about the findings from the first stage of the project, how the initial designs were created, and then share your views:



Aberdeen City Council
23 June at 10:03

People living or working near Ashgrove Road and Ashgrove Road West are being asked to take part in a second in-person and online consultation which could lead to... See more

Constituent Report CR-J

Network Assessment

Technical Note

Project:	Ashgrove Connects		
Subject:	Walking and Cycling Network Assessment		
Author:	Atkins		
Date:	09/09/2022	Project No.:	5212138
Distribution:	Project Team	Representing:	Atkins

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft for discussion	DL	AM	VK	FA	Mar 22
2.0	Final version	DL	JL	AM	AM	Sep 22
2.2	Final version rev1	DL	JL	AM	AM	09/09/22

Client signoff

Client	Aberdeen City Council
Client ref	BCI + Ashgrove Road / Ashgrove Road West
Project No.	5212138

1. Introduction

1.1. Project Background: Ashgrove Connects

Aberdeen City Council (ACC) is seeking to improve the opportunities for all people (regardless of age or ability) living and working adjacent to Ashgrove Road/ Ashgrove Road West to travel by active and sustainable modes and to engage in community activities, by developing proposals for the built environment.

1.2. Purpose & Scope

The purpose of this assessment is to review existing conditions for walking and cycling in the area around the Ashgrove Connects Project and to recommend network improvement opportunities that will allow walking and cycling to be accessible as an everyday choice for all ages and abilities.

This technical note reports on the following key elements:

- **Context** existing travel patterns in the city
- **Demand** for walking and cycling (existing & potential movement patterns)
- **Existing conditions:** What the current network looks like and existing road conditions
- **Barriers** to walking and cycling and the existing level of service for cycling
- **Opportunities** to complement the Ashgrove Road scheme and provide additional value for money
- **Strategic Connections** covering wider destinations in this part of the city

This assessment is a desktop exercise. While site visits have been undertaken by the Atkins wider project team, with information shared, the Active Travel Network auditor has not visited site. Similarly, the timescales have not permitted direct engagement with stakeholder interest groups around wider barriers and network development. It is recommended that these elements are considered as part of any future active travel work.

The methodology for this assessment is primarily drawn from:

- **Cycling by Design, Transport for Scotland, 2021** (Section 2.0),
- **Design Manual for Road and Bridges GG 142** - Walking, cycling and horse-riding assessment and review

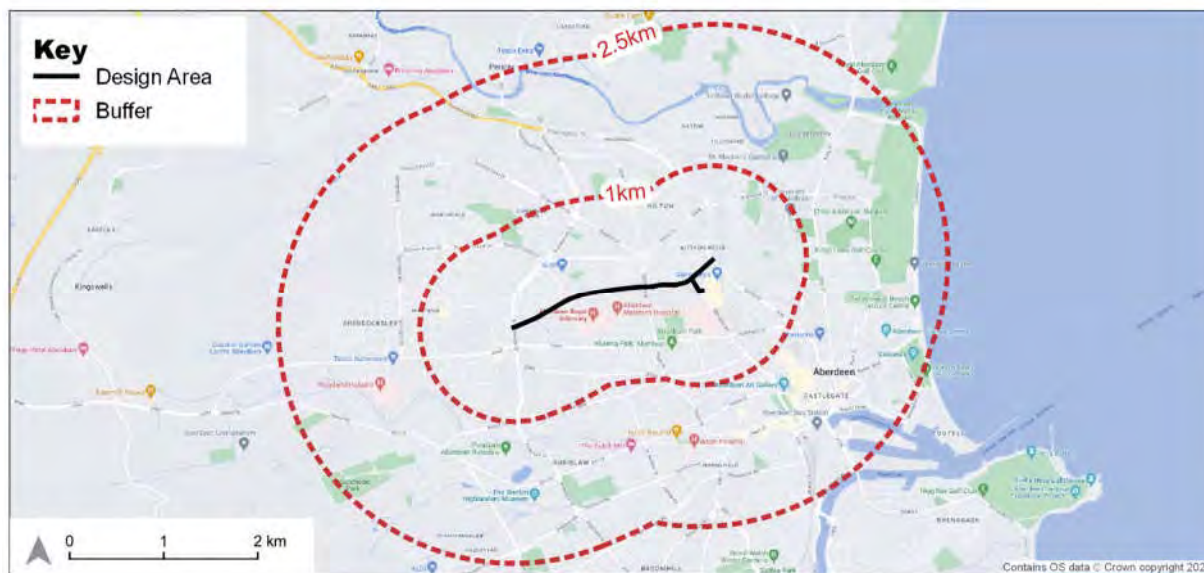
It also draws on good practice from Department for Transport's LTN1-20 Cycle Infrastructure Design, the Active Travel Act Guidance 2021 for Wales and Healthy Streets¹.

¹ [Healthy Streets | Making streets healthy places for everyone](#)

1.3. The Assessment Area

The Design Area incorporates Ashgrove Road / Ashgrove Road West between North Anderson Drive and A96 Powis Terrace, and Laurelwood Avenue. The assessment of existing conditions and local desire lines has been undertaken focusing in detail on the 1km area around the Design Area as shown in figure 1.3. Consideration of the wider context and onward city destinations within a 2.5km buffer has also been considered and is discussed in more detail in section 7.

Figure 1.3: Assessment Area



1.4. Definitions:

For the purposes of this report, the following definitions are used:

The Design Area

The Design Area for Ashgrove Connects covers the full length of Ashgrove Road West and Ashgrove Road between North Anderson Drive to the west and the A96 Powis Terrace to the east, and also includes Laurelwood Avenue & Elm Place.

Walking

In the context of this report 'people walking' refers to

"all pedestrians using the public realm including wheelchair users and people with buggies. Walking activities can be subdivided as utility walking, including walking to and accessing daily services as part of a regular routine as well as recreational walking.

*People do not just move from A to B but are likely to undertake a range of other activities as part of a walked trip including resting, standing and sitting so these activities also need to be considered as part of the planning process. Most journeys involve walking at some point and so the public realm needs to be designed to enable walking, by making it a convenient part of an integrated transport system."*²

Cycling

In the context of this report 'people cycling' refers to any person using a cycle to travel using the public realm. Cycling includes the use of any form of pedal-powered vehicle, including those that also include an electric-assist function, and all modes legally permitted to use facilities designated for cycles. There are a range of cycle vehicles that people cycling choose to use and examples include hand cycles, cargo cycles and cycle trailers.

² The Planning for Walking Toolkit, Transport for London, March 2020

Assessment Area

The assessment area refers to the street environment within a 1km buffer of the Ashgrove Connects design area. Conditions along Ashgrove Road/Ashgrove Road West and Laurelwood Avenue have been considered as part of the assessment however due to project objectives it has been assumed that good quality provision will be provided as part of the design of this scheme therefore recommendations for the design area itself have been excluded from section 6.

Design User

The Design User refers to a person walking, or a person cycling.

For people cycling there are three key elements to Design User needs, these elements define the infrastructure needs of the specific Design User. They include the type of user, their journey purpose and the type of cycle vehicle they use for the trip. Type of user refers to whether the user is new to cycling and less confident, or confident and an existing user.

Designs that meet the needs of only confident cycle users will not be suitable for new cyclists or cyclists that are less confident. The needs of the Design User are reflected in the 'Level of Service'.

Level of Service

This refers to

*"an evaluation framework for assessment of the performance of cycling infrastructure from a 'rideability' perspective. Its purpose is to frame the discussion of design options so that schemes are attractive both for existing cyclists and potential new cyclists."*³ Furthermore, *"it is a critical requirement of Cycling by Design that all new or improved cycling infrastructure, road improvements, new developments and public realm improvements are designed to meet the needs of all cycle users. The level of service (LOS) indicators will help designers to identify the strengths and weaknesses of their design and identify aspects to be improved to achieve a high LOS."*⁴

1.5. User Needs

Understanding user needs and outlining a design user that covers a wide range of pedestrians and cyclists is critical to the provision of infrastructure and networks suitable for all types of people with varying requirements. It is important that, regardless of user type, cycling is recognised as a distinct mode of travel, operating at a significantly higher speed than walking and therefore with different requirements even though in some instances the needs of pedestrians and cyclists overlap. Table 1.5A outlines some typical characteristics and differences between walking and cycling that should be considered in the design process.

Table 1.5A: Example characteristics and needs associated with walking and cycling

	Walking	Cycling
Common Characteristics	<ul style="list-style-type: none"> Commonly a sociable activity with many walked journeys accompanied Also includes a wide range of other activities such as resting, standing and sitting The speed of movement is significantly slower than other modes and varies with age and ability 	<ul style="list-style-type: none"> Cycling is a physical activity requiring both balance and a minimum speed to maintain stability (commonly 10kph) Cycling can also be a social activity Cycle traffic is capable of speed and can travel significantly faster than the mean walked speed. Speed can vary significantly amongst users ranging from 5 to 40kph⁵
User Need	<ul style="list-style-type: none"> Space to walk both alone and with others Ability to cross the street easily Places to stop and rest 	<ul style="list-style-type: none"> Conditions that feel safe and are safe Direct and safe routes⁶ Continuity and legibility of provision

³ London Cycle Design Standards, Transport for London, October 2016

⁴ Cycling by Design, Transport for Scotland, 2021

⁵ Designing For Cycle Traffic, Chapter 3 Principles of design for cycle traffic, J Parkin, 2018

⁶ Annual Cycling Monitoring Report, Cycling Scotland, 2022

1.6. Level of Service

As outlined in Cycling by Design level of service is a critical consideration in cycle network design. Table 1.6A shows how user ability translates to level of service scores and table 1.6B shows what a high level of service looks like in terms of the core principles for cycle design.

Table 1.6A: Level of service classification

Level of Service	Description
High	Suitable for most cyclists, including new and less confident users.
Medium	May not be suitable for some cyclists, particularly novice users.
Low	Will not be suitable for a range of cyclists including novice and intermediate users

Table 1.6B: High Level of Service against the core design principles

Design Principle	Description
Safety	Cycle users are always protected from motor traffic when required.
Coherence	Cycle routes are continuous and fully joined-up. They allow cycle users to maintain consistent speed, are well-signed and intuitive
Directness	Cycle route is at least as direct as the equivalent motor traffic journey, with minimal need to stop or give-way. Delay for cycle users at junctions is less than for motor traffic.
Comfort	Cycle route surfaces are machine laid, smooth and well-maintained (at least as regularly as the road network). Desirable minimum widths and gradients are fully achieved
Attractiveness	Cycle route and parking areas are well lit, overlooked and do not create any personal security issues for users. The cycle route adds to the sense of place in the area, encouraging people to spend time there
Adaptability	Cycle route and parking areas have the flexibility to expand, evolve or adapt to changing demands.

2. Context

Aberdeen is a city of approximately 200,000 people (Council area 280,000). The outer extent of the urban area is no greater than 6km from the centre in any direction, with the majority of the urban population resident less than 5km from Union Street. Most trips could be walked or cycled. The national travel survey (2020) provides a representative sample for all trips within Aberdeen and indicates that 73% of all daily journeys are under 5km. Despite this potential for a high sustainable transport mode share, current levels, for cycling especially are relatively moderate with 3.9% cycling to work and 6% of primary school students cycling in 2020.⁷

Table 2.1: Top 5 Local Authorities ranked by percentage of journeys under 5km⁸

Local Authority	Rank	%
Dundee City	1	83
Aberdeen City	2	73
City of Edinburgh	3	72
Glasgow City	4	71
Argyll and Bute	5	68

Low levels of walking and cycling are normally an indicator of suppressed demand commonly caused by city-wide barriers that stop people walking and cycling more often for more journeys. These barriers need to be addressed before such suppressed demand can be unlocked. For Aberdeen, as with many UK cities, perception of safety as well as actual safety ranks highly as a common barrier. This is illustrated by the national travel survey that showed that 20.9%⁹ of respondents nationally listed safety as the main reason for not cycling more often.

For Aberdeen it's likely that low levels of active travel and issues around safety and comfort can be attributed to the following common features highlighted by recent research from the [Active Travel Academy](#):

- **High speed** and **volume** roads that lack safe crossings and protected provision¹⁰
- The **absence** of a **cohesive joined up network** that provides safe walking and cycling links serving the many daily journeys for work, education and leisure¹¹

It should be noted that existing road conditions in Aberdeen are not well suited to safe all ability access with an existing layout that includes many wide, straight roads that create a motor traffic dominated environment that allows high speeds through residential areas. Roads also tend to create a barrier to the continuity of off-road routes that are more accessible for all ages. This reduces the quality and appeal of the active travel environment and helps lock in car dependence for everyday journeys as well as reducing choice which can have a social exclusionary impact on the community. Wider roads do however present an opportunity to reallocate space to protected infrastructure, wider footways and more accessible crossings.

⁷ Annual Cycling Monitoring Report, Cycling Scotland, 2022

⁸ Annual Cycling Monitoring Report, Cycling Scotland, 2022

⁹ <https://www.transport.gov.scot/publication/transport-and-travel-in-scotland-2019-results-from-the-scottish-household-survey/>

¹⁰ <https://www.sciencedirect.com/science/article/pii/S0001457521000944>

¹¹ <https://www.sciencedirect.com/science/article/pii/S0965856417314866>

3. Demand

3.1. Origin, Destinations and Trip Generators

The main trip generators within the assessment area are mapped out in Figure 3.1. As shown the key destinations around Ashgrove Connects include the city centre, the University of Aberdeen, Berryden & Kittybrewster Retail Park and the collection of destinations around the Aberdeen Royal Infirmary which will generate a strong demand for east/west movement and links to the south of the study area. There are a range of secondary destinations within 1km including primary and secondary schools, green space and a number of smaller shopping centres. Housing across the assessment area is mostly semi-detached or terraced with a moderate level of density. The streets in the immediate vicinity of Ashgrove Connects are mostly residential or associated with the Aberdeen Royal Infirmary with few active frontages

Schools are found throughout the study area with a concentration at the east and west edges. School travel survey data, detailed in **appendix A** shows existing high levels of active travel mode share however only 4.5% of these journeys are currently cycled with 65% of journeys made by foot.¹² This 4.5% is in line with the national average but represents a significant opportunity with low levels likely to be the result of the barrier effect of the busy roads that divide up the assessment area. It is worth noting that schools across the UK that achieve high mode share for cycling such as Cherwell School in Oxford (58% cycle¹³) often have good quality safe all ability cycle connections linking the school to the local area. Future cycle routes should provide a high Level of Service to ensure such user needs are met.

Figure 3.1: Trip Generators



¹² [Hands Up Scotland Survey - Sustrans.org.uk](https://www.sustrans.org.uk/hands-up-scotland-survey)

¹³ [Propensity to Cycle Tool - Oxfordshire \(pct.bike\)](https://www.pct.bike/pro propensity-to-cycle-tool-oxfordshire)

3.2. Potential Demand

To better understand walking and cycling potential several census datasets have been combined and scored to give an indication of potential demand within the 1km buffer. The following method was used to produce this score:

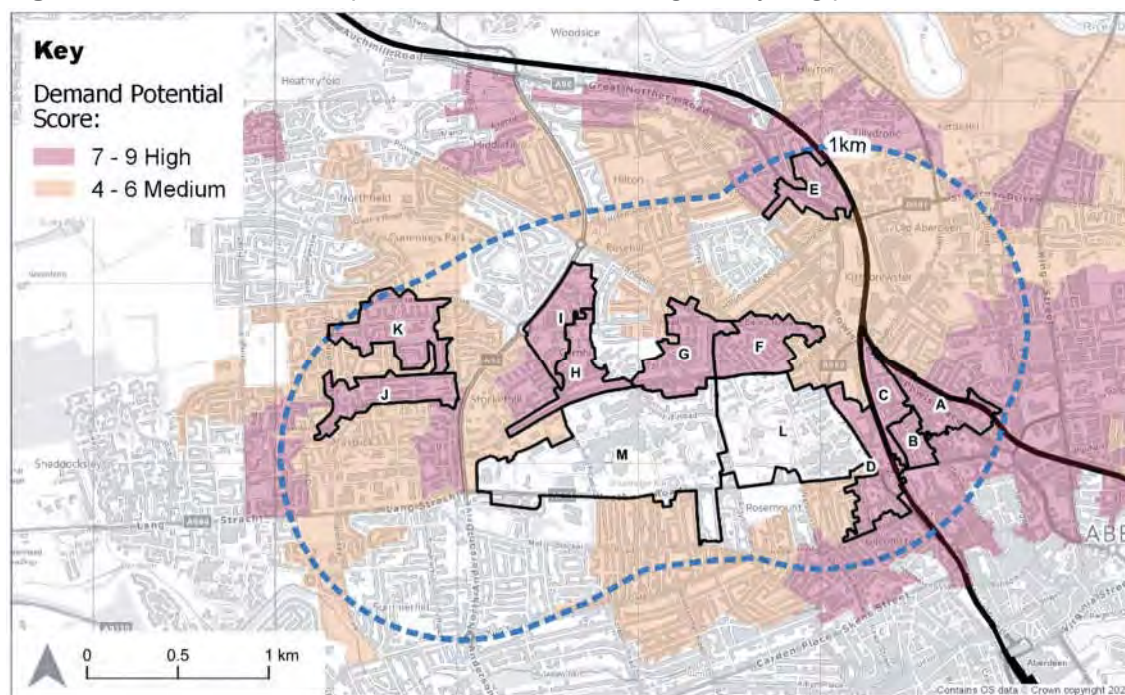
1. Census areas were given a score for each criteria
2. If they fall within the top 30% across Scotland then they were scored according to Table 3.2
3. If they fall outside the top 30% then a 0 score was given
4. Areas were then given a total score out of 9 representing a combination of the criteria

Table 3.2: Census scoring

Criteria	Score
High Population Density	3
High % of homes with no access to a car	3
High % who walk to work	1
High % who cycle to work	1
High % who get the bus to work	1

As shown in figure 3.2 there is strong potential demand for areas close to the city centre (Areas A to D) due to both high sustainable transport mode share for travel to work, low car ownership and a high population density. This supports the common principle of network design to focus on unlocking safe access to the city centre then building the network outward. The scores also show strong potential north of Ashgrove Road West and over the A92 in Mastrick (Areas F to K). The current scoring covers origin-based demand only and returns low scores for areas M and L which have significant destination-based demand such as the Foresterhill Campus

Figure 3.2: Census 2011 output areas scored for walking and cycling potential



3.3. Desire Lines

Mapping of desire lines is based on methods outlined in recent English¹⁴ and Welsh¹⁵ national guidance. Given the spread of origins and destinations as well as the spatial layout of this part of the city demand for east/west movement is most likely for employment, to access the city centre or the University of Aberdeen. This is supported by cycle percentages shown in **appendix A** table A3 that highlight an existing demand for east/west movements along Westburn Drive, Ashgrove Road West and Mid Stocket Road as well as north/south movements along Hilton Road. As shown in figure and table 3.3 there will need to be several strategic connections running east/west and north/south across the assessment area to provide for the movement patterns outlined.

Figure 3.3: Desire line Mapping

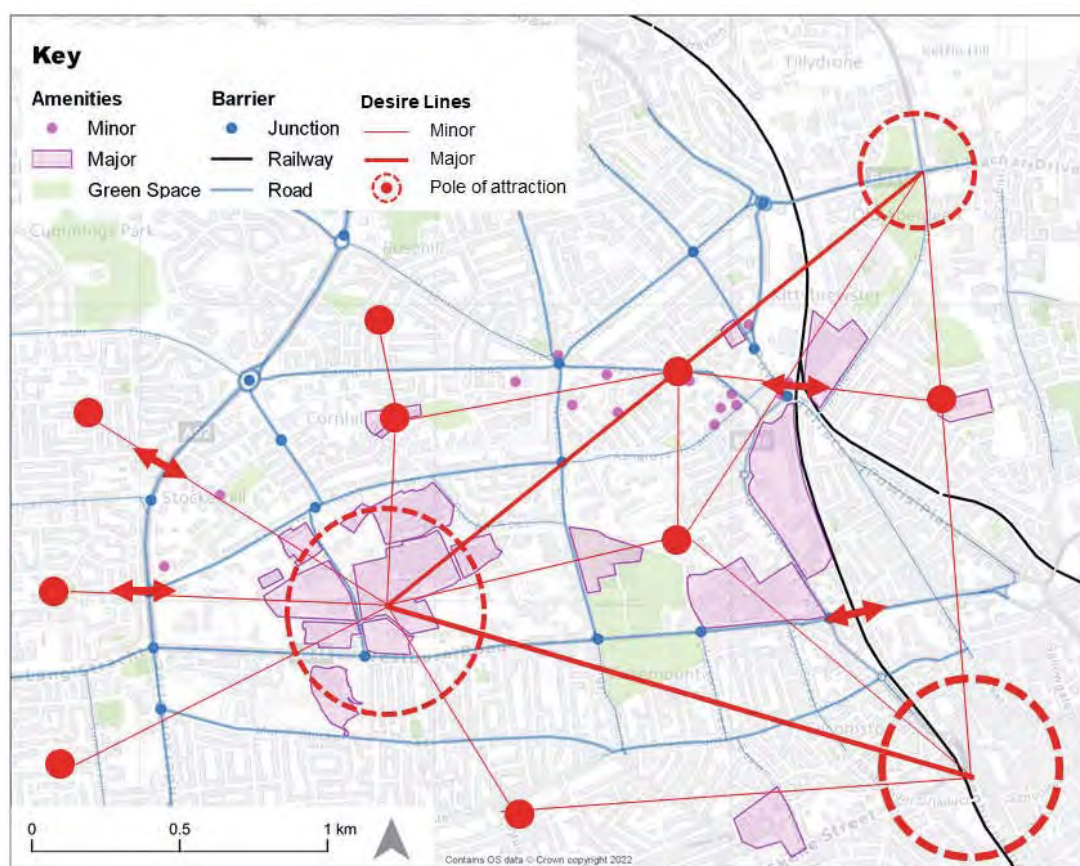


Table 3.3: Key desire lines:

Type	Description
The City Centre	The city centre is approximately 2.5km from the edge of the assessment area and access is likely to occur via the Westburn Road, Berryden Road or further south via the quiet streets north of Union Street.
Education	Access to and from the University of Aberdeen (Old Aberdeen) and Foresterhill Campus to areas of student housing will likely be a significant movement in the area. Travel to the schools within the 1km buffer will likely generate many journeys in all directions across the study area but particularly across some key main roads.
Employment	The Royal Infirmary and Berryden & Kittybrewster Retail Parks will be a significant source of journeys.

There is significant scope to develop an active travel demand data set¹⁶ and complement the desire line mapping through data gathering and stakeholder validation. Creating such a resource at a city level would help inform and guide future network development and provide a more robust evidence, engagement and data driven scheme selection process.

¹⁴ [Local cycling and walking infrastructure plans technical guidance \(publishing.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544242/Local_cycling_and_walking_infrastructure_plans_technical_guidance.pdf)

¹⁵ [Active Travel Act guidance \(gov.wales\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544242/Active_Travel_Act_guidance.pdf)

¹⁶ <https://content.tfl.gov.uk/strategic-cycling-analysis.pdf>

4. Existing conditions

4.1. Network

Walking

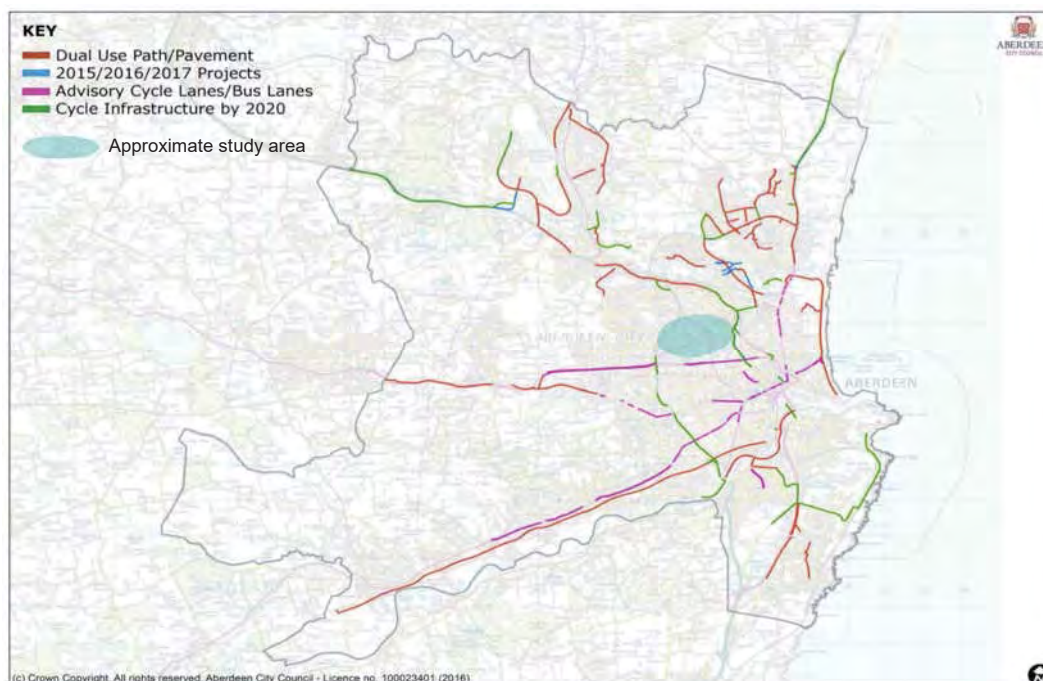
Footway widths across the assessment area are generally of reasonable width (on average 2+ metres) although conditions vary widely with uneven surfaces present in some places. Along the main streets most of the existing crossings away from the major junctions are uncontrolled with limited or no provision at most of the side roads limiting movement along the main routes. There is some street tree planting although seating is limited and there is good potential to improve the place function of both Ashgrove Connects and the surrounding streets.

Cycling

The existing and proposed cycle network in this part of the city is very limited in coverage and quality as shown in figure 4.1. Existing infrastructure does not reflect the current Level of Service recommended by Cycling by Design Scotland to meet the needs of most people, meaning this part of Aberdeen represents a significant gap in the network despite making up a large proportion of the residential population of the city. Although the National Cycle Network (NCN) routes 1 & 195 join Aberdeen to the wider network although the two routes broadly skirt the south and eastern edges of the city limiting access and utility. For route 1 access is further limited by the barrier effect of the railway but it does provide an important north/south link between the city centre and the University main campus. Approximately 70% of this network is on-road with sections that are unlikely to be all ability in terms of volume (likely in excess of 2000 vehicles per day) and speed. Access through the Mounthooly Roundabout is a good example of older lower standard provision consisting of narrow shared use facilities and poor transitions that link to on-road provision that would no longer meet minimum requirements set out in Cycling by Design.

There is some local network consisting of a mix of cycle lanes and shared use provision although this has significant issues in terms of safety, cohesion and comfort and would therefore not provide for all types of user. A good example of this is Westburn Road that has sub-standard width cycle lanes (less than 2m and 1.1m in parts) that drop in and out along the link and are not suitable given the volume of traffic (10,000+ vehicles per day).

Figure 4.1: Current and Proposed Cycle Network, Aberdeen City¹⁷



¹⁷ Aberdeen Active Travel Action Plan 2017-2021 Aberdeen City

4.2. Traffic Flow

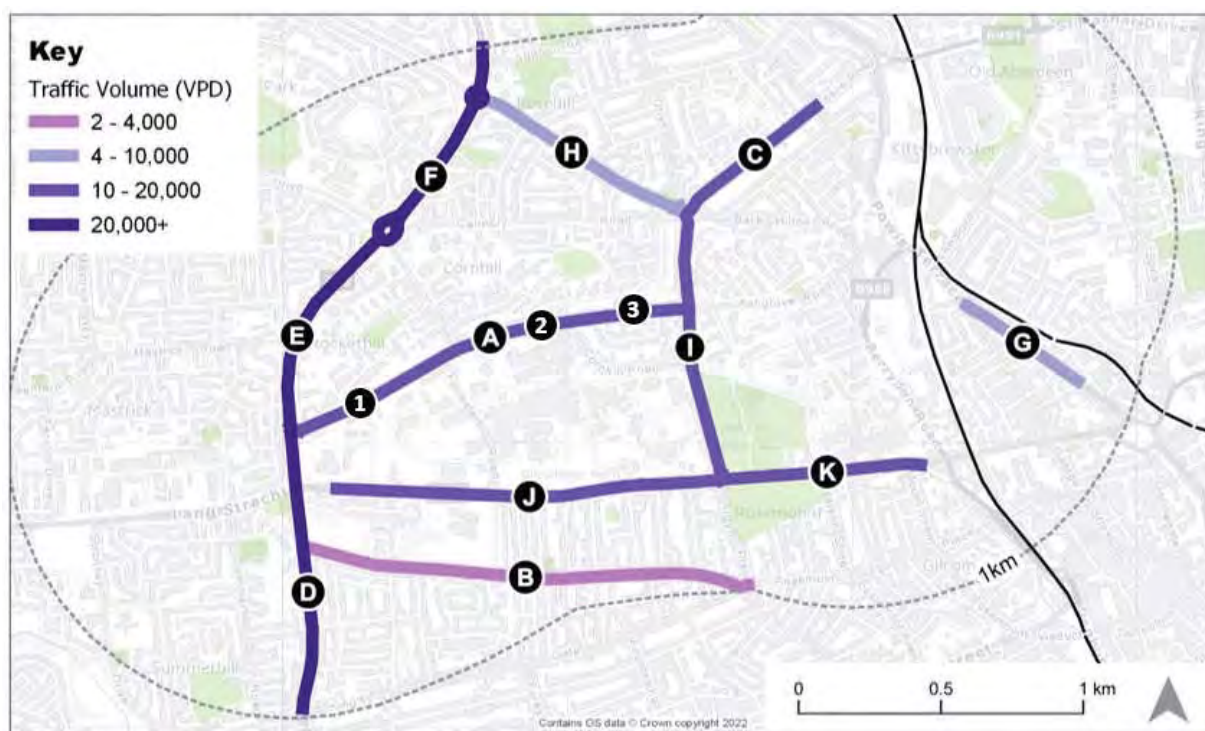
Motor traffic speed and volume is a key barrier to cycling as well one of the primary measures of level of service. For the broad range of users being considered within this study daily traffic volumes less than 2000 vehicles per day (VPD) at 20mph is considered the upper limit for on-road cycling. Streets with higher volumes will either require protected facilities or significant traffic management to reduce flows and speeds. As shown in table and figure 4.1 many of the main routes through the area have volumes well above this threshold with the following common issues:

- Heavily trafficked routes with high volumes, high speeds and a high percentage of HGVs creating unappealing routes for walking and cycling both moving along and across these main roads.
- Traffic volumes over 10,000 vehicles a day and HGV percentages greater than 5% that create difficult conditions for active travel users and would be flagged as critical issues against common assessment tools such as the cycle level of service (LTN1/20) and Healthy Streets indicators.
- The main road network consists of wide roads, wide corner radii and long straight sections that all help create a motor vehicle dominated environment that facilitates higher speeds by design.

Links worth highlighting include:

- **North Anderson Drive:** High volume and percentage HGVs with a 40mph speed limit with many uncontrolled crossings on pedestrian desire lines a few safe all ability crossing points.
- **Ashgrove Road West:** High volume with a lack of safe crossing points away from the three signal-controlled junctions.
- **Westburn Drive:** High volume, 30mph speed limit with large numbers of turning vehicles at key junctions and a very wide carriageway profile of 9m which encourages high speeds inappropriate for a street of this type.

Figure 4.1: Traffic Data (VPD)



Transport Scotland Traffic Data 2019 ¹⁸

ID	Road	Total	% HGV
A	Ashgrove Road West	12,563	1
B	Mid Stocket Road	3,773	-
C	Hilton Street	12,609	2
D	North Anderson Drive	26,677	4
E	North Anderson Drive	27,908	4
F	North Anderson Drive	28,719	3
G	Powis Place	6,613	5
H	Rosehill Drive	9,434	2
I	Westburn Drive	15,441	2
J	Westburn Road	10,781	3
K	Westburn Road	15,451	1

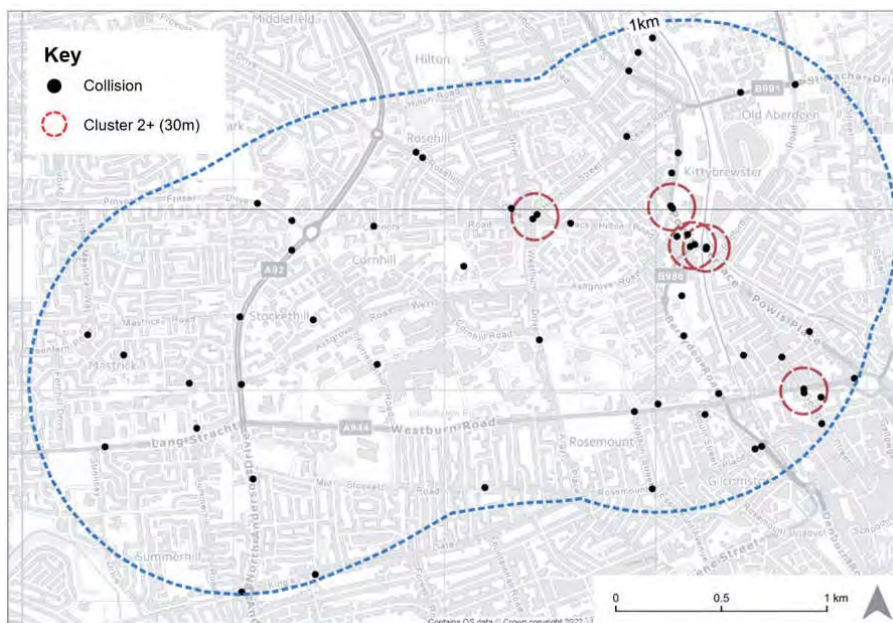
ATC Data (March 2022)

ID	Road	Total	% HGV
1	Ashgrove Road West	6,919	8.7
2	Ashgrove Road West	10,636	8.3
3	Ashgrove Road	6,196	5.8

¹⁸ [Map Road traffic statistics - Road traffic statistics \(dft.gov.uk\)](https://www.dft.gov.uk/road-traffic-statistics)

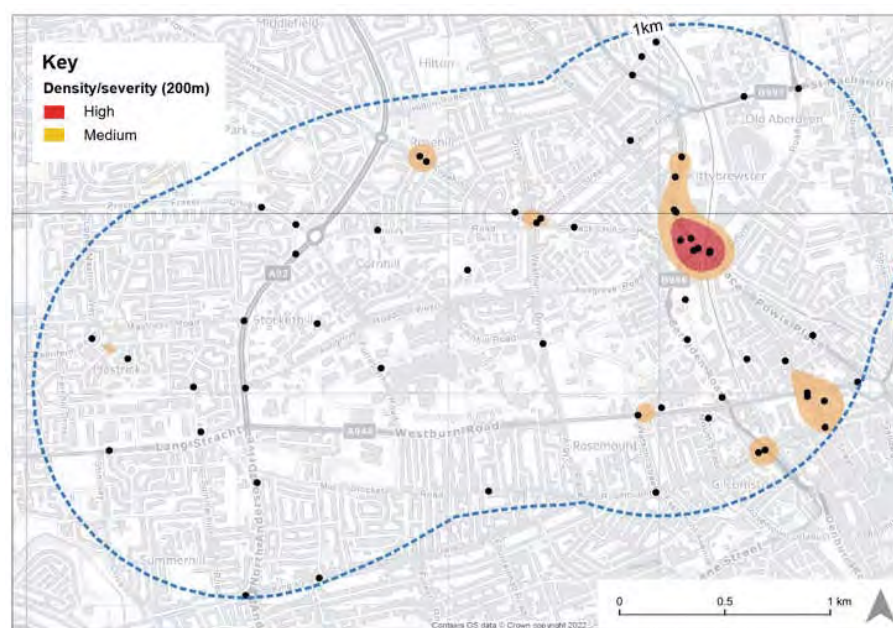
4.3. Safety

Table 4.3: Walking and Cycling Collision Data 5 years (2016-20)



Clusters (30m)

There are five collision clusters within the study area involving two or more active travel collisions, the majority occur at busy intersections such as the Powis Terrace junction with Berryden Road or the Six Roads roundabout.



Severity weighted hotspots (200m)

When factoring in severity this highlights some additional locations such as the junction of Rowan Road and Hilton Avenue as well as further highlighting the safety issues along Powis terrace

5. Barriers

There are various common issues across the street environment surrounding Ashgrove Connects scheme that limit access and therefore the number of journeys made on foot and by bike. Details of barriers to walking and cycling are summarised below and listed in more detail in **appendix A** sections A5 and A6.

5.1. Barriers to Walking

Crossings

For walking the limited crossing points of main roads creates a significant amount of severance. This is most relevant for Ashgrove Road, North Anderson Drive and Western Road where this deficiency causes significant north/south and east/west severance limiting safe all ability walked access to key destinations. In addition, the lack of safe crossing points makes it harder to access bus stops further reducing the potential for sustainable multi-mode journeys.

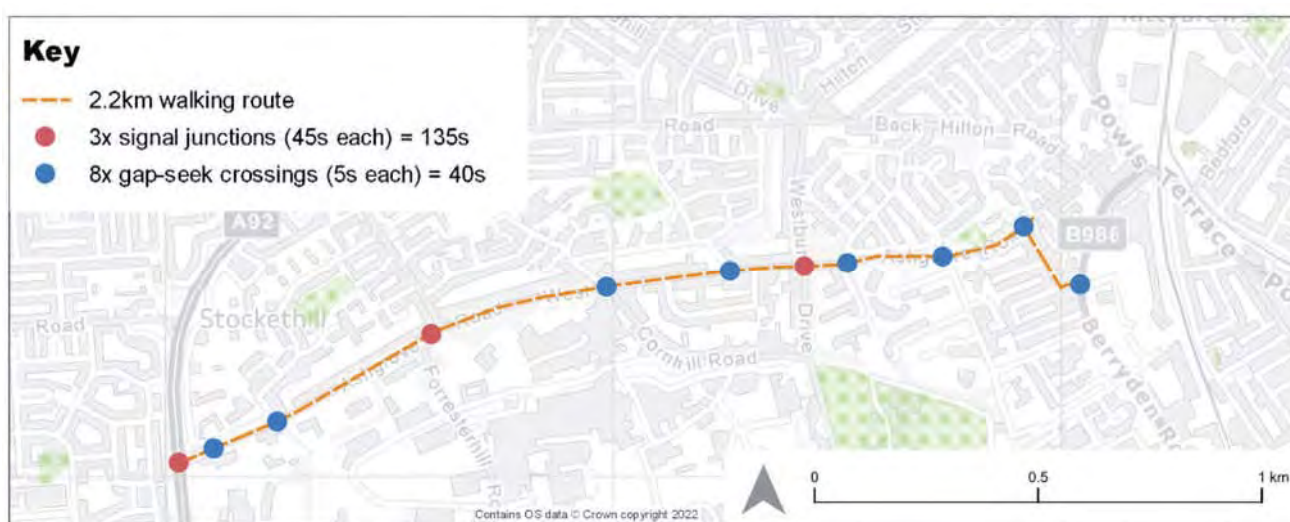
Junctions, side roads & vehicle crossovers

The 34 major side roads and 14 large junctions that exist within 500m of the scheme pose a significant barrier to movement on foot. Features such as multi-stage crossings, small traffic islands and long crossing distances at controlled crossings return a poor level of service. Equally at side roads a lack of clear priority, lack of tactile paving and large crossing distances are a barrier. It is also worth noting that many vehicle cross overs fail to give priority to pedestrians, are often treated like side roads and commonly cause the footway to dropped to carriageway level reducing comfort and access.

Walked journey time and link conditions

Walked time along main routes is often impacted by delay caused by stopping for side roads and signal junctions. For example, figure 5.1 shows a typical walking route to the shops from the west end of Ashgrove Road. This journey measures 2.2km and is shown to take 25 minutes however once you factor in the delay journey time increases to 28 minutes therefore reducing the walked catchment of the scheme. In addition, this is a long, exposed streets with no benches or other places for older people to stop and rest.

Figure 5.1: Walked journey time



5.2. Barriers to Cycling

Crossings

Orbital east/west movements for cyclists are limited by a lack of safe crossing points of both the Aberdeen/Inverness railway line (limited to the A96 and A978 crossings) and moving west by few safe crossings of the A92. This limits access to the University of Aberdeen, the seafront and the National Cycle Network moving east as well as access to the residential areas of Northfield, Mastrick and Summerhill moving west.

Junctions & side roads

For cycle traffic the junctions and side roads pose the most significant safety risk in the area as well as causing issues in terms of accessibility both along the Ashgrove Road route and in close proximity to the scheme. Features including multiple-lane approaches, wide crossing distances, a wide geometry and a lack of provision for right turners creates challenging conditions. Primary examples include the three-lane northern approach at the junction of Westburn Drive / Argyll Place and Westburn Road that exposes users to merging and diverging movements by motor traffic and lacks clear access to the advanced stop line (ASL). The two consecutive roundabouts on Foresterhill Road and North Anderson Drive both have a wide geometry encouraging vehicles to negotiate the layouts at speed causing issues for cyclists.

Links

Existing on-road conditions are particularly challenging with Westburn Drive, Ashgrove Road, Hilton Street and Westburn Road being particularly problematic. Traffic volumes and likely high speeds will mean that protected cycle tracks are likely to be the only option to provide safe all ability provision noting that 20.9% of respondents in the national travel survey listed concerns about 'cycling in traffic' as a key barrier. It is also worth noting the 40.4% of respondents mentioned distance as a key issue which supports the need for direct routes across the city.

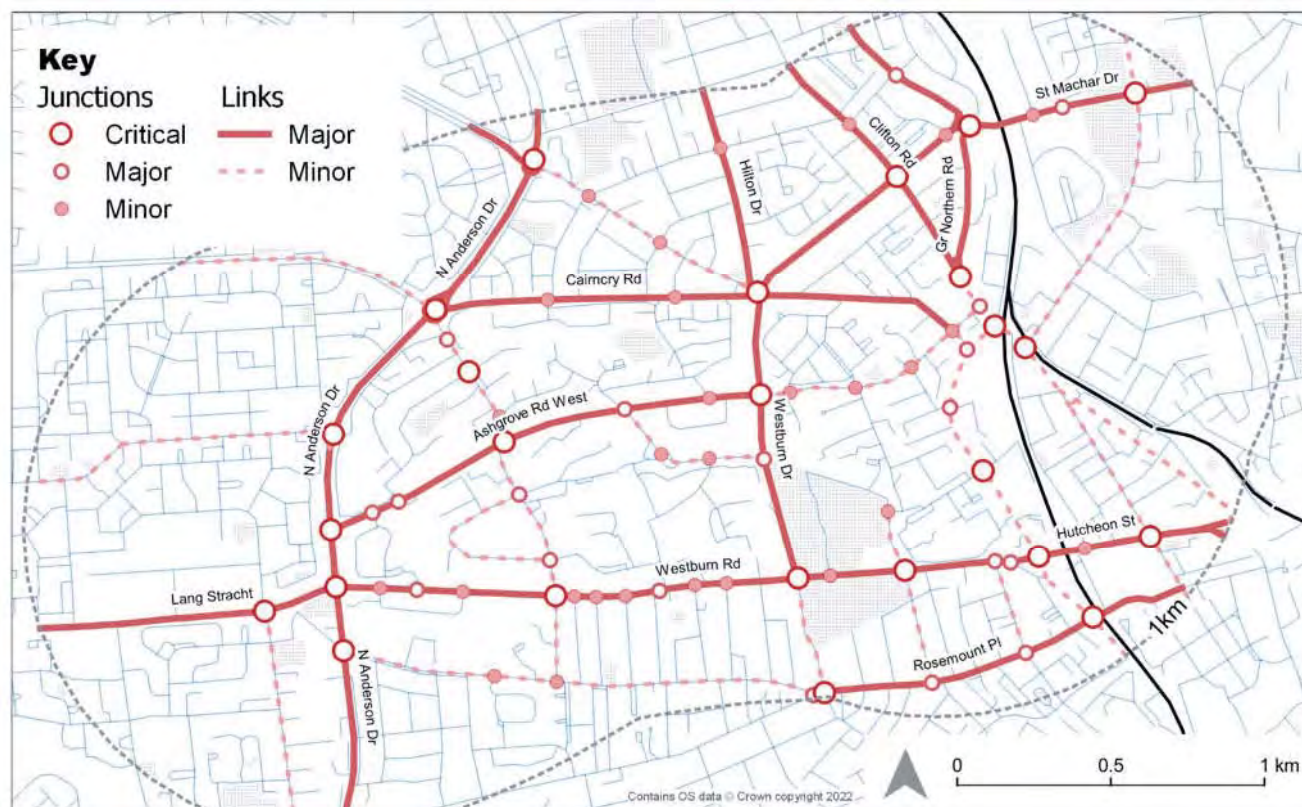
5.3. Barrier Assessment

A barrier assessment for cycling was carried out using the classification shown in Table 5.3 drawing on the critical thresholds and critical features outlined in LTN1/20 and the Healthy Streets design check. Figure 5.3 shows the most significant barriers within 1km of Ashgrove Road, this includes 25 junctions and 29 links where conditions are considered challenging even for experienced cyclists.

Table 5.3: Barrier classification

Barrier	Type	Description
Junction	Critical	Complex layout with significant safety issues such as multiple lanes, high speed geometry, large volumes of traffic and wide crossings
	Major	Less complex junction layout but with high volumes of traffic
	Minor	Side road or crossroad with significant amounts of turning traffic and geometric issues
Link	Major	High volume (10,000+), high speed and/or high % of HGVs (5%)
	Minor	Moderate traffic volumes that would be a challenge for less experienced cyclists

Figure 5.3: Barrier assessment (cycling)



5.4. Level of Service Assessment

The level of service assessment is based on section 2.4 of Cycling by Design. The key indicators that influence the score for most links across the assessment area are shown below (these are taken from table 2.3 & 3.2 in the guidance):

Table 5.4a: Level of service classification

Level of Service	Description
High	Suitable for most cyclists, including new and less confident users.
Medium	May not be suitable for some cyclists, particularly novice users.
Low	Will not be suitable for a range of cyclists including novice and intermediate users

Table 5.4b: Key indicators influencing classification

Indicator	High	Medium	Low
Volume/(20mph)	<2000	2 - 4000	4000+
Volume/(30mph)	<1000	1 - 2000	2000+
Side Road geometry	Treated	Standard	Wide

Figure 5.4: Cycle Level of Service



As shown the residential area north of Ashgrove Road returns good level of service scores for most streets due to existing filtering and traffic calming with a few exceptions for through routes. South of Ashgrove Road the streets connecting employment and retail locations have large car parks that reduce scores due to peak hour traffic volumes being above acceptable thresholds. Further south the residential streets either side of Mid Stocket Road have reasonable conditions although cut through traffic is an issue especially on some streets. Mid Stocket Road itself scores poorly due to the 30mph limit, geometry issues at side roads combined with a daily traffic volume of 3,773 vehicles a day returning a low level of service score for existing conditions.

5.5. Network Permeability Test

This is a method to “measure how easy it is for cyclists to enter, pass through and leave an area – usually via a safe all ability crossing at a junction or along a link.”¹⁹ The methodology is as follows:

1. Create areas bounded by primary roads
2. Identify comfortable ‘amber’ and ‘green’ access points (gateways)
3. Colour the bounded areas based on the number of safe points of access

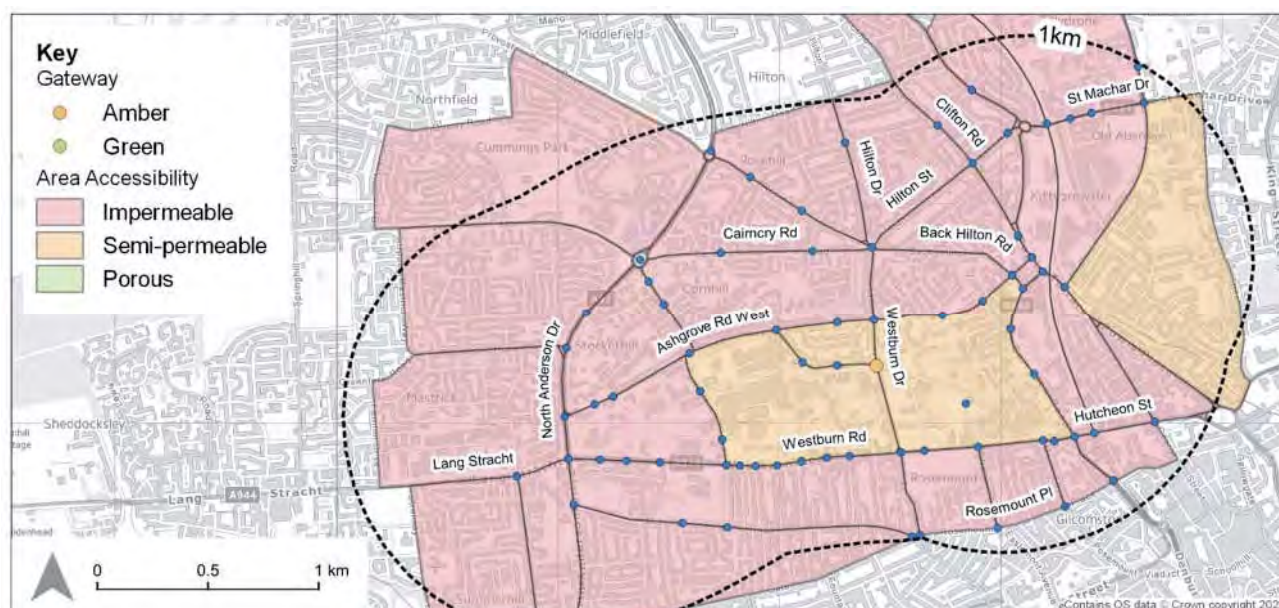
Table 5.5A: Gateway classification

Rating	Description
Amber	A junction or crossing that opens an area to less confident cyclists ²⁰
Green	A junction or crossing that provides protected direct movements separate from pedestrians ²¹

Table 5.5B: Permeability classification

Rating	Description
Impermeable	An area bounded by busy roads with no safe crossing points
Semi-permeable	An area with one or two safe crossing points
Porous	An area with multiple (3 or more) safe access points

Figure 5.5: Existing Network Permeability



¹⁹ London Cycle Design Standards, Chapter 2, section 2.3.5

²⁰ [Manchester Interim Active Travel Design Guide, Appendix B](#)

²¹ [LTN1/20, Junction Assessment Tool, Appendix B](#)

5.6. Assessment conclusions

As shown in figures 5.3, 5.4 and 5.5 the assessment area is divided up into small blocks of local streets surrounded by busy roads with limited safe crossings that limit active movement. This results in significant severance across the area and means door to door journeys are not attractive for most trips beyond people's immediate residential neighbourhood. While much of the residential network is traffic calmed or modal filtered, getting from one neighbourhood to the next or to local destinations is not viable because of the network of barriers shown in figure 5.3. This is well illustrated by the permeability test which shows the isolating impact the lack of crossings has on safe movement between areas. In terms of actual safety risk analysis strongly supports addressing issues along the 350m section of the A96 between Clifton Road and Bedford Road.

Note: The assessment elements in this section are based on a desktop review and limited openly available data therefore accuracy should be viewed as high level with the potential for further refinement based on site observations, community engagement and further data collection.

6. Opportunities

A set of recommendations and opportunities have been included for consideration with section 6.1 outlining measures that complement the Ashgrove Connects scheme focused on:

1. Overcoming barriers outlined in this report
2. Building on safe walking and cycling options unlocked by the Ashgrove Connects scheme
3. Ordered in terms of improved access to the Ashgrove Road link and/or improved ability to use this as part of a broader range of local journeys by foot and by bike

In addition, section 6.2 provides an illustrative comprehensive cycle network covering the 1km assessment area that would meet mesh density requirements set out in Cycling by Design.

Note: Where provided, suggestions for improvement are not necessarily prescriptive design solutions but serve as ideas to be discussed in the wider context of the scheme.

6.1. Packages of Measures

Recommendations to complement Ashgrove Connects have been grouped into point (crossing/junction), link and area-based interventions that broadly increase on a sliding scale in terms of level of effort and complexity of delivery as you move from point to area-based solution. Three packages of measures have been proposed that could be carried forward. It should be noted that most of the crossing and junction interventions could be delivered stand alone and some links could be delivered separately although most of the links will require crossing points to be delivered in tandem to unlock these routes. For a more detailed description of these interventions see **appendix A** section A7.

Figure 6.1: Proposed Package of Complementary Measures within the assessment area

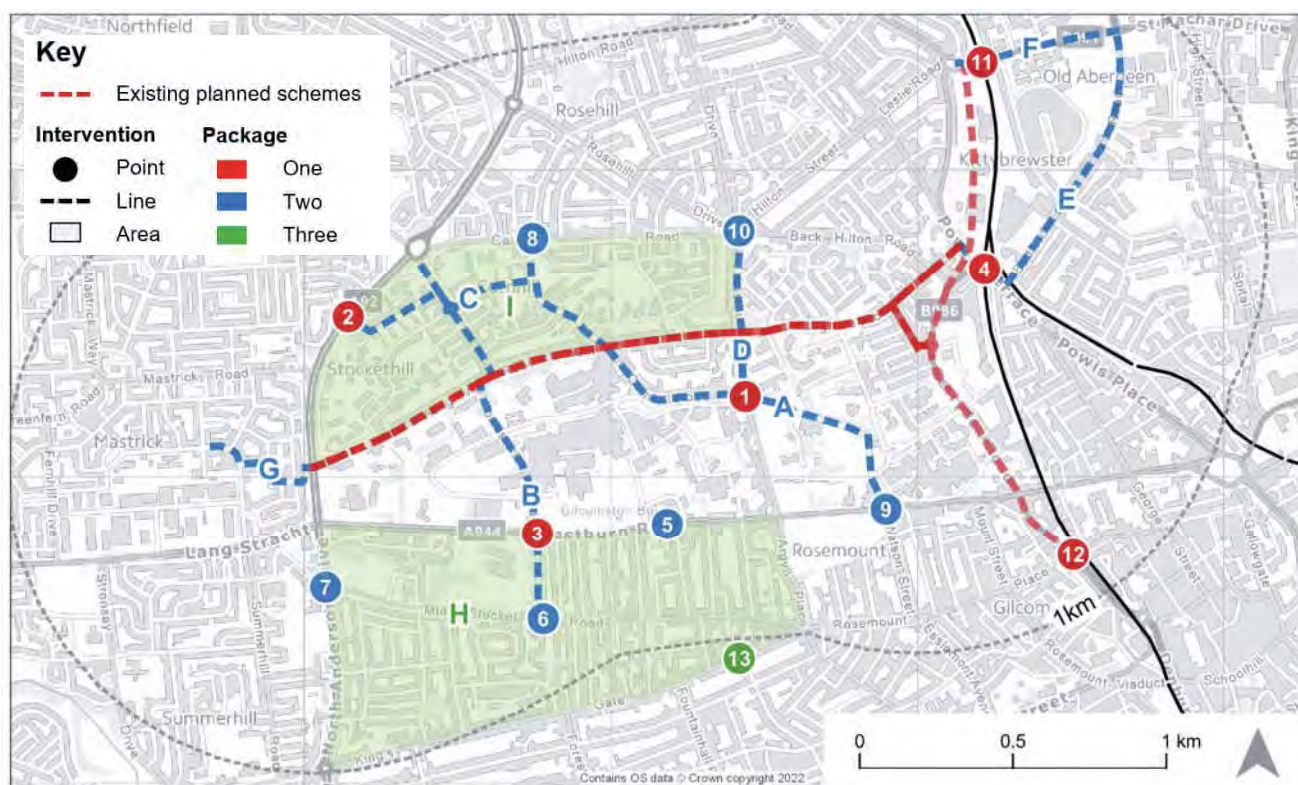


Table 6.1: Description of Complementary Measures Packages within the assessment area

Package	Description	Benefits
One: Point Crossing/ junction improvement	Upgrade/install crossings 1, 2 & 3 with modern parallel pedestrian and cycle facilities allowing safe direct crossing movements. Upgrade railway line crossings and junctions at 4, 11 & 12	Unlocks Ashgrove Road route and reduces barriers to local schools and improves access to the city centre and the University of Aberdeen
Two: Link Additional access routes	In addition to package 1 add crossings at 5,6,7,8, 9 & 10 combined with improved provision along links A, B, C, D, E, F & G	Provides safe all ability access to schools and Westburn Park as well as joining up Mastrick, Cornhill, the Aberdeen Royal Infirmary and the University of Aberdeen
Three: Area Liveable Neighbourhood	In addition to crossing and link packages complementary area wide measures across H & I that reassigns through traffic from Mid Stocket Road and Foresterhill Road	Significant reduction in traffic across the two areas creating many quieter residential streets and significantly improving the environment for walking and cycling

6.2. Permeability Test

When considering different interventions, the before and after situation is a useful means to assess what impact different packages will have. In this case figure 6.2A illustrates the impact Ashgrove Connects and the BCI planned schemes have and how they create a good degree of access both along and across Ashgrove Road compared to the baseline situation shown in figure 5.5.

Figure 6.2A: Proposed Planned links (Ashgrove Connects & BCI)

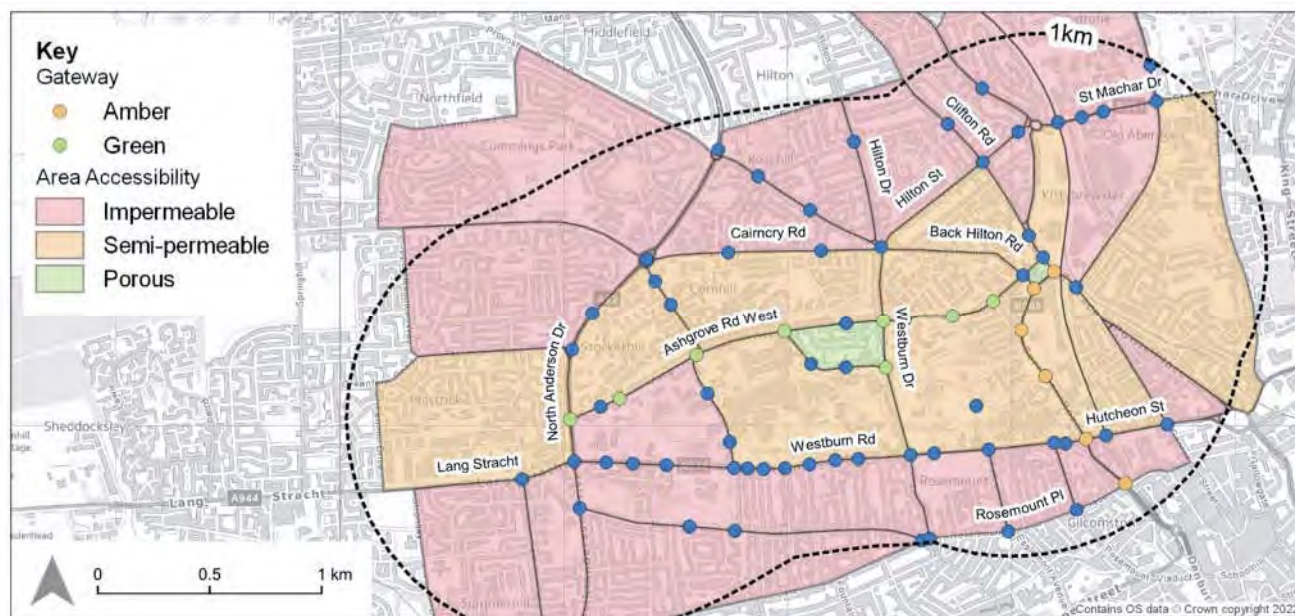


Figure 6.2B illustrates the added permeability and access achieved if packages 1 and 2 were delivered. Benefits include linking of residential areas either side of Ashgrove Road but also improved access across North Anderson Drive and towards the city centre. Such improved active travel accessibility would likely be transformative for this part of Aberdeen, supporting a wide variety of journeys. This would likely trigger a significant increase in walking and cycling and a reduction in car ownership as has been seen elsewhere.²²

²² [Impacts of an active travel intervention with a cycling focus in a suburban context: One-year findings from an evaluation of London's in-progress mini-Hollands programme - ScienceDirect](#)

Figure 6.2B: Proposed Planned links as well as Packages 1 & 2 (complimentary measures)*



*NOTE: The 'proposed' permeability analysis plan shown does not include the impact of routes F,D,G and crossing 10. These are likely to show further permeability improvement.

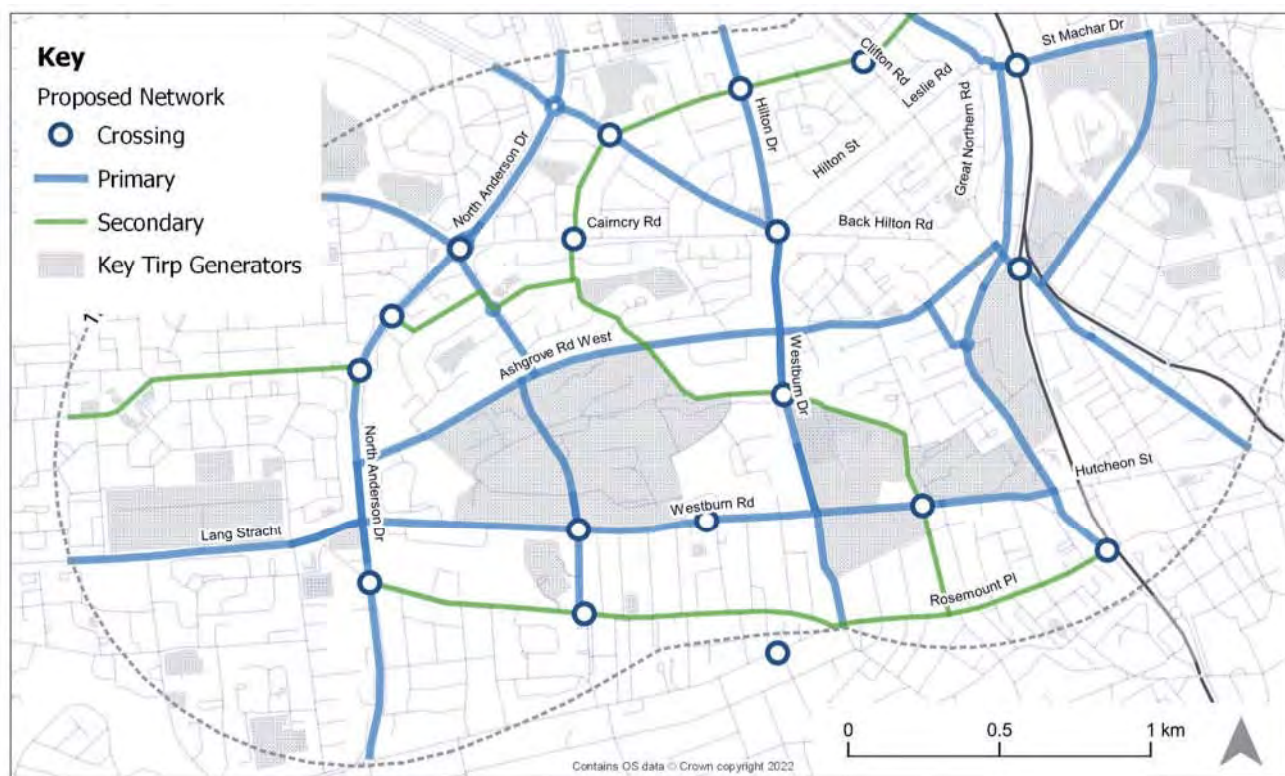
6.3. Proposed Network

Longer term, to maximise walking and cycling levels a continuous joined up network across the assessment area is required in line with Cycling by Design section 2.6. This will involve delivery of several strategic primary and secondary routes. A suggested layout for this has been shown in figure 6.3 which aims to provide for the desire lines and high potential demand areas outlined in section 3. This basic structure provides a mesh density between 300 and 600m and would support both local journeys and onward connections to the city centre.

Table 6.3: Cycle Network Components

Type	Description
Primary	Links to key trip attractors, able to carry high volumes of cycle users on the most direct routes between key destinations, maintaining an average speed of 15 kph. Typical mesh density of 400 to 800 metre
Secondary	Connections to all residential and local centres. Typical mesh density of 200 to 400 metres.
Local Access	Local access routes – all other streets

Figure 6.3: Proposed Network of Primary and Secondary Routes



Type	Description	Benefits
Primary	Protected cycle provision combined with high quality treatment of junctions & side roads to provide safe crossing movements in all directions	Provides for the major East/West and North/South movements as well as returning a mesh density average of 400m between high quality routes
Secondary	Traffic restricted streets (local access only) linking to improved crossings of main roads	Links up key local trip destinations and provides for movements away from the primary route network

7. Strategic Connections

Widening the focus and looking at trip attractors and demand across a 2.5km area highlights wider strategic connections linking education, services and residential centres that could be considered.

Figure 7.1: Trip Generators 2.5km



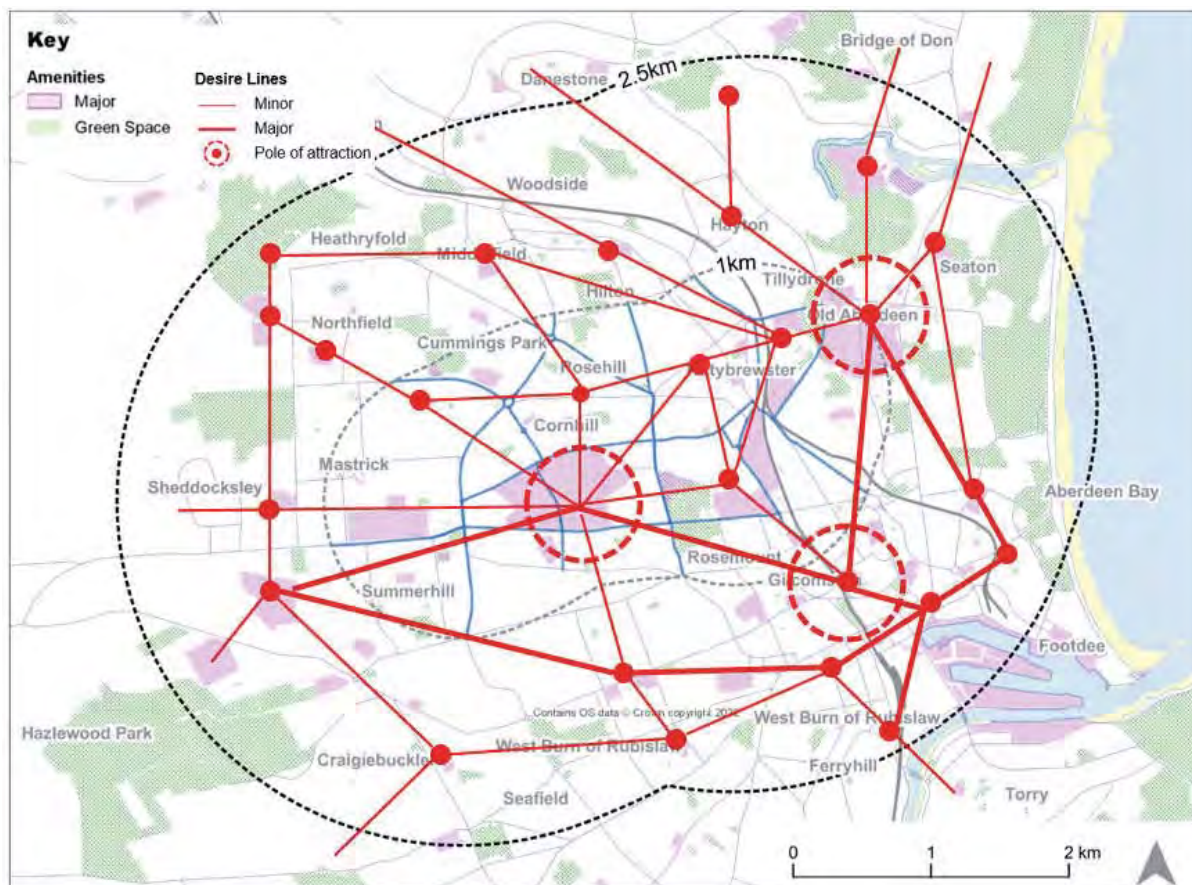
Figure 7.2: Census 2011 output areas scored for walking and cycling potential 2.5km



Figure 7.3 identifies desire lines between the trip attractors and potential demand shown in figures 7.1 and 7.2. In the wider 2.5km area routes to the following destinations should be prioritised for further development based on the current level of cycle flows to and from these destinations.

1. University of Aberdeen
2. Aberdeen Rail Station
3. George Street
4. Hilton ward
5. Woodend Hospital

Figure 7.3: Desire line Mapping 2.5km



8. Recommendations and next steps

The following next steps are recommended within the Ashgrove Connects project:

1. In future stages of the project, this assessment is revisited based on further data collection, auditing and engagement;
2. The opportunities detailed in section 6 are developed further based on improved inputs supporting the creation of a more refined package of interventions to complement the Ashgrove Connects scheme
3. A walking and cycling review of proposals occurs based on level of service and user need at each development stage, potentially by a third party, to ensure quality is maintained through to delivery.

Further to these project next steps, there are opportunities identified below that would help support wider network development within Aberdeen. It is suggested that these are considered for inclusion in the Council's emerging Active Travel Action Plan and Local Transport Strategy.

8.1. Strategic Network Study

This assessment has illustrated all the key components of network planning including:

- **Data and background information** stitched together to build a picture of movement patterns
- **Origins and destinations** mapped out that will generate demand for walking and cycling
- **Assessment of barriers** and the exploration of active travel issues faced by users
- **Network improvements** formulated to meet desire lines, potential demand and tackle the barriers
- **Testing** of proposals against network and level of service assessment tools

It should be noted however that with more time and resource there are significant improvements that can be made to expand each step. Many of these cover improvements to methodology and data however these should be considered secondary to public input and engagement. Engagement built into the process from the outset has been one of the big developments in recent years both as a starting point and to help steer and enrich plans as they develop. A good example of this is the Bee network in Greater Manchester.²³

In addition, it is recommended that a comprehensive strategic network study is undertaken city wide to produce a network development plan to guide future route development. For example, there are currently other corridor improvements happening in proximity to the Ashgrove Connects scheme such as the A944/A9119²⁴, A96 and A92 which, if guided by an overarching strategy would help align proposals as they developed. Such a holistic approach will ensure the development of a cohesive network throughout the city and reduce the risk of routes being developed in isolation. Such development can lead to a fragmented network with indirect and incoherent infrastructure which can discourage active travel uptake and suppress demand. The routes proposed within the network development plan should be prioritised based on the potential for modal shift and follow the hierarchy set out in the updated Highway Code that prioritises walking and cycling over other transport modes.

²³ [The Bee Network | TfGM Bee Active](#)

²⁴ [A944/A9119 Multi-Modal Transport Study \(arcgis.com\)](#)

Appendix A. Detailed Information

A.1. School Travel

Figure A1: Mode Share and % Active Travel ([Sustrans School Survey 2020](#))

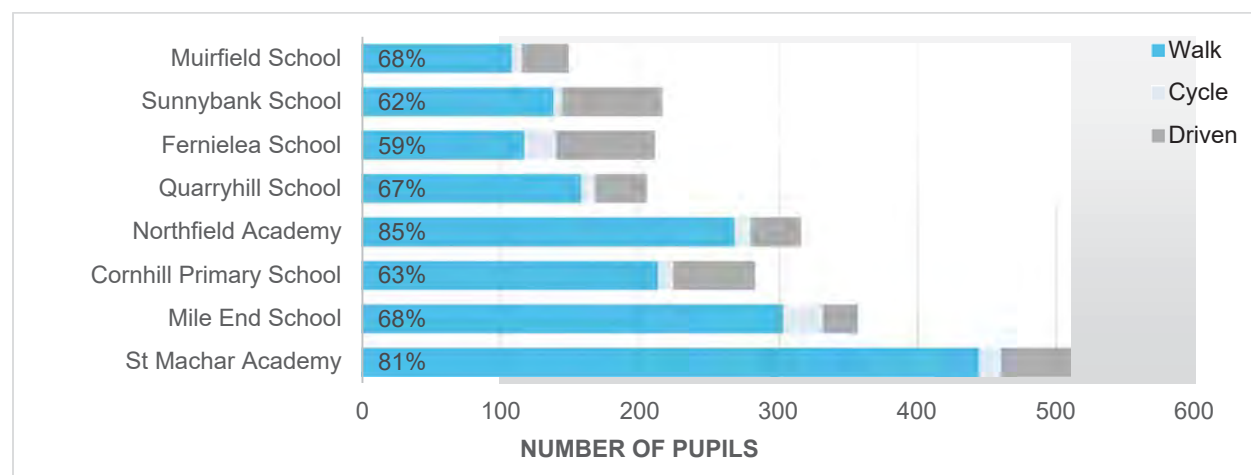


Table A1: School Travel Data

School Name	Walk	Cycle	Scoot / Skate	Park & Stride	Driven	Bus	Taxi	Other	Pupils
Northfield Academy	81.2%	3.6%		2.1%	10.9%		0.0%		330
St Machar Academy	78.4%	2.8%		3.0%	8.8%	6.0%			566
Cornhill Primary School	60.0%	3.1%	3.7%	15.8%	16.6%		0.0%		355
Fernielea School	49.2%	9.7%		10.5%	29.8%	0.0%	0.0%		238
Mile End School	61.8%	5.9%	5.9%	9.8%	5.1%	0.0%	11.4%	0.0%	490
Muirfield School	64.3%	4.2%	3.0%	8.3%	20.2%	0.0%	0.0%	0.0%	168
Quarryhill School	62.7%	4.0%	6.7%	9.1%	14.7%		0.0%		252
Sunnybank School	59.0%	2.6%		6.0%	30.8%		0.0%	0.0%	234

A.2. Demand Mapping

Table A2: Data for top scoring areas

ID	Census Area	Score	Total Population	Density (per ha)	% Homes with no car	Total Commuters	% Walk	% Cycle	% Bus
A	George Street - 07	9	635	58	62	380	19	1	12
B	George Street - 05	8	961	210	46	671	33	2	6
C	George Street - 06	8	859	104	52	579	25	2	8
D	Ashgrove - 04	8	967	67	42	650	35	3	6
E	Woodside - 03	8	872	94	46	507	13	3	8
F	Ashgrove - 02	8	914	64	47	508	20	2	8
G	Stockethill - 07	8	830	52	39	449	16	1	9
H	Stockethill - 04	8	926	82	42	495	17	1	7
I	Stockethill - 03	8	849	71	51	436	15	1	9
J	Mastrick - 05	8	739	58	42	373	9	2	10
K	Cummings Park - 04	8	975	55	38	515	12	1	7

A.3. Traffic Flow Data

Table A3: Transport Scotland AADF 2019

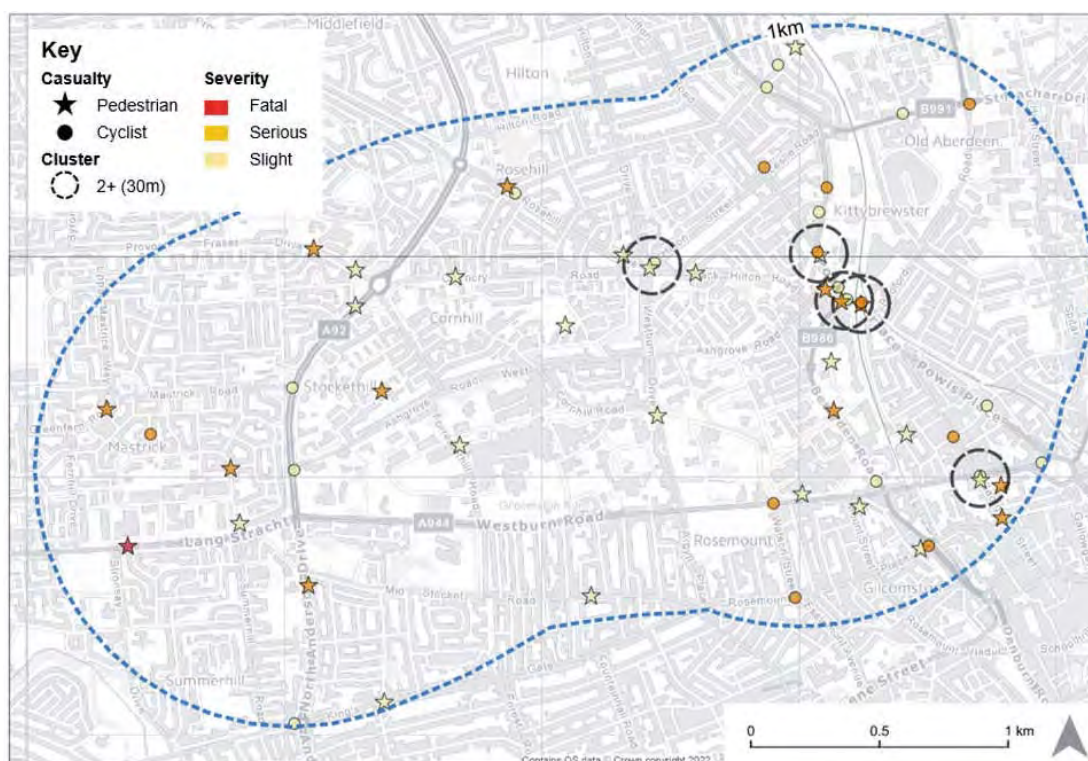
ID	Road	Cycle	M Bike	Car	bus	HGVs	Total	% HGV	% Cycles
A	Ashgrove Road West	76	29	10905	506	132	12,563	1	1
B	Mid Stocket Road	109	14	3203	156	10	3,773	-	3
C	Hilton Street	65	64	10255	166	234	12,609	2	1
D	North Anderson Drive	5	147	21368	75	1107	26,677	4	0
E	North Anderson Drive	16	131	22991	79	1175	27,908	4	0
F	North Anderson Drive	10	118	23421	120	992	28,719	3	0
G	Powis Place	54	72	5008	215	347	6,613	5	1
H	Rosehill Drive	17	57	7931	13	184	9,434	2	0
I	Westburn Drive	61	149	12694	77	303	15,441	2	0
J	Westburn Road	59	53	8918	280	275	10,781	3	1
K	Westburn Road	134	71	12988	311	199	15,451	1	1

A.4. Safety Data

Table A4: Walking and Cycling Collision Data (5 years, 2016-20) within 1km Study Area

Severity	Pedestrian	Cyclist	Total
Fatal		1	1
Serious	10	12	22
Slight	16	21	37
Total	26	34	60

Figure A4: Walking and Cycling Collision Data 5 years (2016-20) showing type, severity & clusters (30m)



A.5. Barriers to walking²⁵



Location: **Powis Terrace & Belmont Road**

Barrier: Substandard footway widths below the inclusive 2m of effective width reduce inclusive access in some locations



Location: **Junction of Westburn Road and Argyll Place and Westburn Drive**

Barrier: Wide multi-stage pedestrian crossings, wide crossing distances and a small traffic island means the east/west crossing through this junction would return a low pedestrian comfort level at peak times.



Location: **Cornhill Terrace**

Barrier: Large side road crossing widths & geometry that allows vehicles to turn at speed such as this example near Cornhill Primary school reduce the quality of the walked environment and limit access by unaccompanied minors.



Location: **North Anderson Drive**

Barrier: Desire lines across this busy main road lack all ability crossing provision with pedestrians required to look for gaps in traffic. High volumes mean this is a significant source of severance to the residential areas either side of this road.



Location: **Eastern Foresterhill Medical Campus**

Barrier: Example shows a difficult to access bus stop requiring users to cross two wide roads.



Location: **Foresterhill**

Barrier: Lack of a main road crossing point limits access to bus services and Cornhill

²⁵ [Image source: Map data ©2022 Google](#)

A.6. Barriers to Cycling²⁶



Location: **Junction of Ashgrove Road & Foresterhill Road**

Barrier: Many junctions across this part of the network have features highlighted that increase collision risk and limit access for less experienced cyclists.



Location: **Ashgrove Road**

Safety: The road layout along many of the major routes creates safety issues for cyclists such as the general traffic lanes being within the critical width range (3.2-3.9m) that increases the risk of side on collisions.



Location: **Back Hilton Road**

Barrier/safety: Existing provision such as the cycle lane shown are both substandard and often intermittent dropping in and out along a street. In some instances, nearside positioning of cycle lanes increases collision risk at the point of narrowing as shown above.



Location: **Westburn Road**

Barrier/safety: At many side roads the existing road layout allows vehicles to turn in and out at speed facilitated by features such as wide corner radii, wide junction mouths and wide general traffic lanes.



Location: **A92 junction with Mid Stocket Road**

Constraint: Lack of quality crossings of main roads such as this example from the A92 limits access to the quieter residential streets either side and represents a key source of severance.

²⁶ [Image source: Map data ©2022 Google](#)

A.7. Opportunities Long List

Point based intervention

Ref	Description	Priority
1	Improve existing crossing. Options could include (re-alignment and upgrade)	High
2	Consider new crossing of the A92 to connect Mastrick to Cornhill and Ashgrove Road to facilitate orbital and radial movements	High
3	Improve junction to provide safer cycle access over Westburn Road. Options could include reduction of north arm to single lane approach and cycle tracks on approach and separate cycle stage or early release	High
5/9	Improved crossing of Westburn Road for better access south towards the city centre	Medium
6/7/10/ 13	Improved crossing of Mid Stocket Road for access to Mile End School as well as improved access to Summerhill and the West End	Medium
8	Upgrade and re-align existing controlled crossing for improved access to Rosehill	Low
4/11/12	Improved access to and from the University of Aberdeen Old Aberdeen Campus, this is key for east/west movement as the Aberdeen to Inverness railway line limits access therefore providing good quality all ability access will significantly improve the connectivity of the Ashgrove Road scheme	High

Route based intervention

Ref	Description	Priority
A	Improved connection for movement between Cornhill, Aberdeen Royal Infirmary and the city centre	High
B	Improved all ability access between Cornhill, Aberdeen Royal Infirmary and Mile End School. Options for improvement on Foresterhill Road could include switching priority at junctions and further limiting through traffic (substantial peak hour vehicle access to the car park needs careful consideration). School Streets on Raeden Park Road coupled with improved crossing of Mid Stocket Road for movements south.	Medium
C,D&G	Improvement of safe all ability access between Mastrick, Cornhill, Ashgrove Road and Ashgrove Road West	Medium
E&F	Provision of safe all ability access between the University of Aberdeen and Ashgrove Connects and Berryden	Medium

Area based interventions (Ref H & I)

The table below shows what an area-based treatment might look like for the residential streets around Mid Stocket Road. A similar set of interventions could be applied to any of the other areas within this part of the city. The key interventions to be considered include the following based on table 2.4 in Cycling by Design:

Type	Description
Reduction of through traffic	<p>Options include modal filter, turning restrictions, bus gate and other filtering options that reduce through traffic and reassign it to the main surrounding roads.</p> <p>For Mid Stocket Road this could include a bus gate east of Raeden Park Road, a school street treatment on Raeden Park Road and access restrictions at the side roads along Westburn Road.</p>
Boundary treatments	<p>Options include continuous side roads, traffic management and improved side road designs to slow turning vehicles, provide priority by design for active travel along the main road and mark the boundary of the residential area.</p> <p>For the Mid Stocket area this could include reduction of side road geometry along the road itself and continuous side road treatments along Westburn Road coupled with access restrictions.</p>
Main road crossings	<p>Options include controlled parallel crossings and improved junction options that allow safe all ability movement across the main roads for people on foot and by bike.</p>

Constituent Report CR-K

Baseline Assessment

Ashgrove Connects

Baseline Assessment Report

Aberdeen City Council

August 2022



Baseline Assessment

Notice

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Introduction

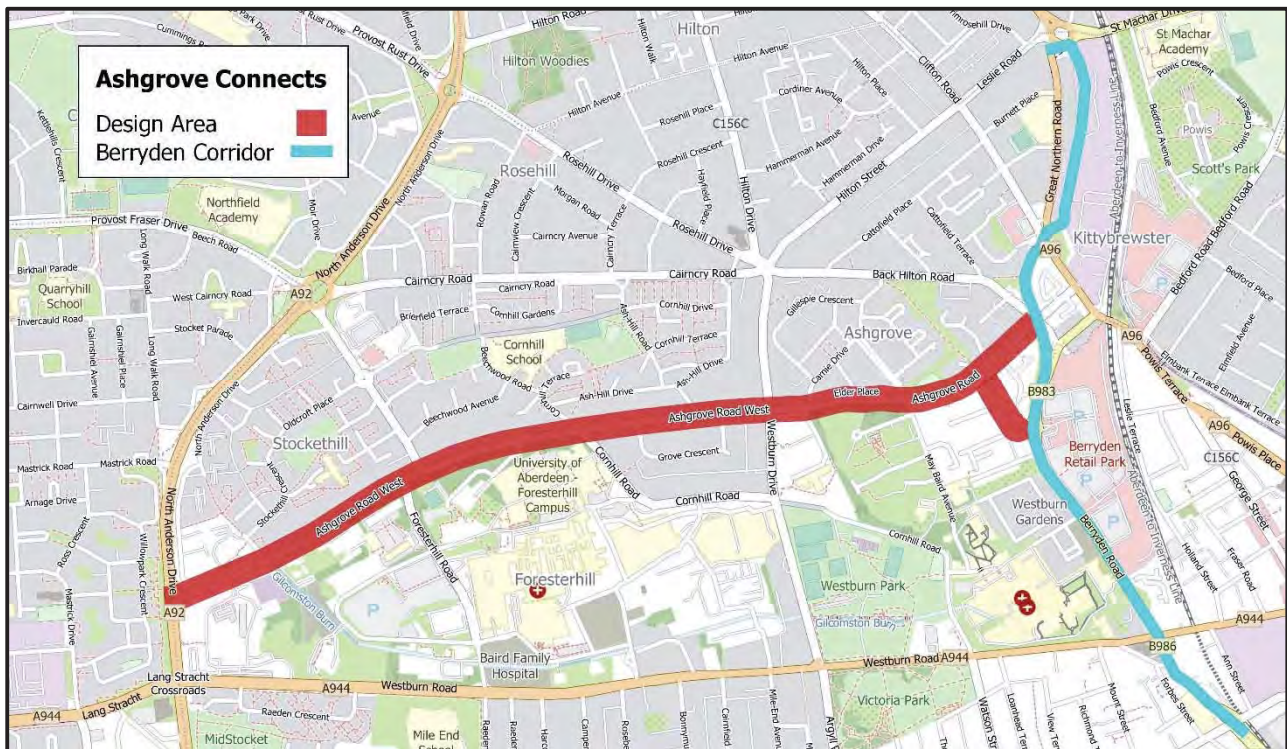
Executive Summary

Introduction

Atkins has been commissioned by Aberdeen City Council (ACC) to develop the case for improvements to Ashgrove Road and Ashgrove Road West (hereafter referred to jointly as 'the street') in Aberdeen that are in line with ACC policy and community priorities. The intended outcome is to develop a concept infrastructure design and associated interventions that has demonstrable community support, with a view to seek Committee approval to apply for downstream funding for future design stages to take place from 2023 onwards.

The purpose of this Baseline Assessment Report is to summarise the fact-finding exercise and context within which scheme objectives will be developed.

Ashgrove Connects Design Area



Policy Context

The adopted policy framework in Aberdeen, through approved ACC commitments such as its Climate Change Plan, the North-East Scotland Roads Hierarchy Study, the Local Outcome Improvement Plan, Aberdeen City Central Locality Plan and the Regional Transport Strategy, set a clear direction towards:

- More active travel, public transportation, and improved multi-modal accessibility;
- Locking in the benefits of strategic network changes by reducing traffic volumes and speed; and
- Greater prioritisation of space for people and community activities.

Specifically, the adopted Roads Hierarchy downgraded Ashgrove West to a tertiary or local route, that "No longer functions as a priority route. Does not provide connection with the strategic road network. Much of its place function is residential". A tertiary route is further defined as one where traffic speed should generally be 20mph and formal bus or cycle priority infrastructure is only necessary should the volume and composition of traffic require it.



Community and Stakeholder priorities

A key element of this phase of the work was to understand community and stakeholder priorities. Extensive public engagement resulted in 958 online visitors to the project website, with 677 contributions. There were a further 61 direct engagements via walking audits and meetings, and 90 viewings of the online webinar.

A Stakeholder Working group was established of Council officers, local businesses, community groups, and statutory stakeholders. The purpose of this group is to provide stakeholder and community representation to help the project remain in line with community priorities as it develops.

- This work established a broad support, with the top three topics for improvements being: traffic and parking, moving around on foot, by bike and wheelchair, and feeling safe. Residents' perception of street safety focus on traffic speeds, volumes, and vehicle size
- Key reported issue was difficulty in crossing the road, poor environment for walking and cycling, and unpleasant environment
- Suggested improvements included more crossings, slowing vehicle speeds, and improvements to the look and feel of the street.
- People are advocating for a slower, quieter street environment that feels safer to move through and spend time in.
- People are advocating for more crossing provision, particularly where crossing demands are high.
- People are advocating for improved place quality and greenspace.
- People feel the streets could be improved for walking, particularly for those with disabilities.
- People recognise the street environment is not suitable for most people to cycle on but, if this was improved the potential is there for demand to increase.
- People feel the rules around the Controlled Parking Zone can be confusing and parts of the street are constrained by parking, and the parked vehicles can also impeding visibility.
- Overall high level of engagement from community, but lower from businesses
- Engagement period has been extended primarily at request of community; full analysis to follow
- Engagement extension will allow for improved efforts to contact businesses and Shopmobility / Disability Equity Partnership
- Findings from the Phase 1 consultation to be made available on the project website ahead of Phase 2 engagement.

Demographic and Travel Behaviour Context

The review of population and transport network information identified the following elements of note:

- There is a range of ages and ethnicities in the nearby area; with the western section of the design area hosting in general an older population than the eastern section, and the area to the north experiencing greater ethnic and economic diversity;
- Traffic speed and volume are high for a tertiary street, incompatible in many cases with on-street cycling, residential place quality and direct crossing movements;
- Walking levels in the area represent a high proportion of local trips however many destinations desire lines are unmet;



- Levels of cycling are low – potentially suppressed by a poor perception of safety;
- Bus use is low, despite presence of multiple high frequency routes, all of which connect to city centre. Direct cross-city bus connections are poor;
- A high proportion of car trips are for short distance travel that could be undertaken more sustainably; and
- Despite low on-street residential parking demand, capacity is extensive.

Infrastructure Context

A review was conducted of the heritage, streetscape, and landscape values of the design area and of the transport infrastructure to highlight opportunities. Key findings were:







- There is a clear difference in built environment context between Ashgrove Road West and the east end of study area (Ashgrove Road and Laurelwood Avenue);
- Greater permeability between the street and the surrounding areas would create a greater sense of place;
- There are numerous underused or underutilised greenspace areas in the vicinity of the street;
- Cycling provision for all ages and abilities is poor or non-existent, backing up the poor community perception of safety of this mode;
- The geometries of the main corridor and side streets are not consistent with modern guidance and encourage motor vehicle priority over people walking, cycling and wheeling;
- Crossing desire lines are often not met, for example it is over 800m between formal crossing opportunities at Foresterhill and Westburn Drive despite the close proximity of schools, hospitals, parks and bus stops;
- Footways are in poor condition in many places, primarily due to tree routes;
- The primary local design constraints include street trees, street furniture and private driveways; and
- ACC's Net Zero Vision identifies opportunities that could be incorporated within the scheme, such as mobility hubs, EV infrastructure in partnership with large businesses, and the tactical use of greenspace to deal with water management and urban heating.



Design Objectives

In response to the policy and technical analysis of opportunities and constraints, and the themes emerging from the engagement process, A set of Design Objectives were validated in discussion with the ACC project team and the Stakeholder Working Group.

The purpose of these Design Objectives is to ensure that the developed proposals remain in line with the stated priorities and are illustrated below.

 <p>Traffic</p> <p>The street is a slower, quieter, and calmer environment where traffic access is retained but people feel safer, and traffic is less of a barrier to community activity for people of all ages and abilities.</p>	 <p>Crossings and Junctions</p> <p>Using junctions and crossings is an easier and more comfortable experience, which is accessible for people of all ages and abilities by all means of travel.</p>	 <p>Place Quality and Greenspace</p> <p>The street feels more attractive and safer for people to spend time in, with improved access to and through local greenspaces, the distinctive feel of local spaces enhanced, and an overall net gain of 'green'.</p>
 <p>Walking</p> <p>People of all ages and abilities can more easily walk to access facilities safely, comfortably, and independently.</p>	 <p>Cycling</p> <p>People of all ages and abilities are able to move around by bicycle safely, comfortably and independently.</p>	 <p>Parking and loading</p> <p>Provide parking and loading within a reasonable distance of homes and businesses ensuring equitable access for all.</p>



1. Introduction

1.1. Background to this scheme assessment

- 1.1.1. Aberdeen City Council (ACC) is seeking to improve the opportunities for all people (regardless of age or ability) living and working adjacent to Ashgrove Road / Ashgrove Road West to travel by active and sustainable modes and to engage in community activities, by developing proposals for the built environment.
- 1.1.2. ACC recognises the importance of ensuring that the needs of stakeholders, businesses, residents, and other users of the spaces are at the heart of scheme assessment and that any proposals are both broadly understood and supported.
- 1.1.3. Atkins was commissioned to conduct an initial Baseline Assessment based on community priorities and technical analysis. The intended outcome of the commission is to maximise progress towards the development of a concept design with a view to applying for design funding later in 2022.

1.2. This Report

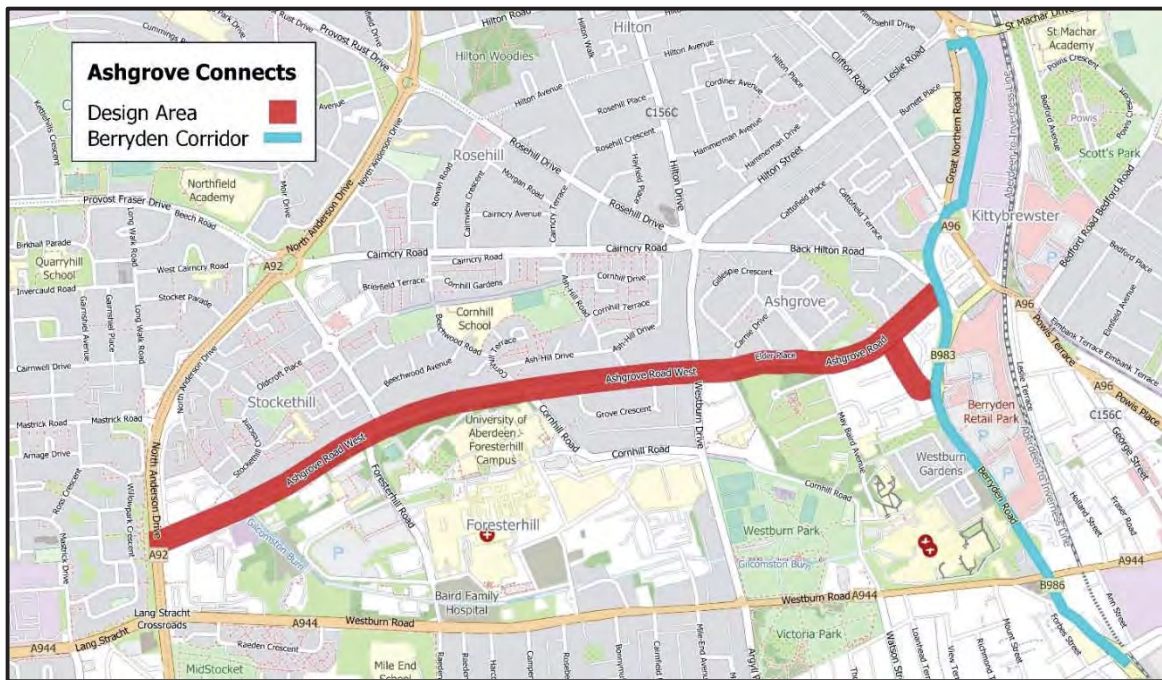
- 1.2.1. This Baseline Assessment summarises the Aberdeen Ashgrove Road/ Ashgrove Road West project, branded as Ashgrove Connects.
- 1.2.2. The Baseline Assessment provides the context within which the improvements will be developed through data-gathering and fact-finding. It will identify the potential constraints and opportunities for the provision of improved pedestrian and cycling connections.
- 1.2.3. This report is structured in line with DMRB TD 37/93 Stage 1 Scheme Assessment Reporting.
- 1.2.4. The study area of this project is defined below in two forms:
- Design Area; and
 - Engagement Area.

1.3. Design Area

- 1.3.1. The Design Area for Ashgrove Connects is presented in Figure 1.1. It covers the full length of Ashgrove Road West and Ashgrove Road (jointly referred to in this report as 'the street'), between North Anderson Drive to the west and the Berryden Corridor scheme to the east, and also includes Laurelwood Avenue and part of Elm Place.



Figure 1.1 – Ashgrove Connects Design Area



1.4. Adjacent Schemes

1.4.1. Along with the Berryden Corridor there are two other major schemes in the area with implications concerning improvements to active travel connections within Aberdeen. A brief description of each scheme, as well as the Berryden Corridor Improvement Project, is provided below:

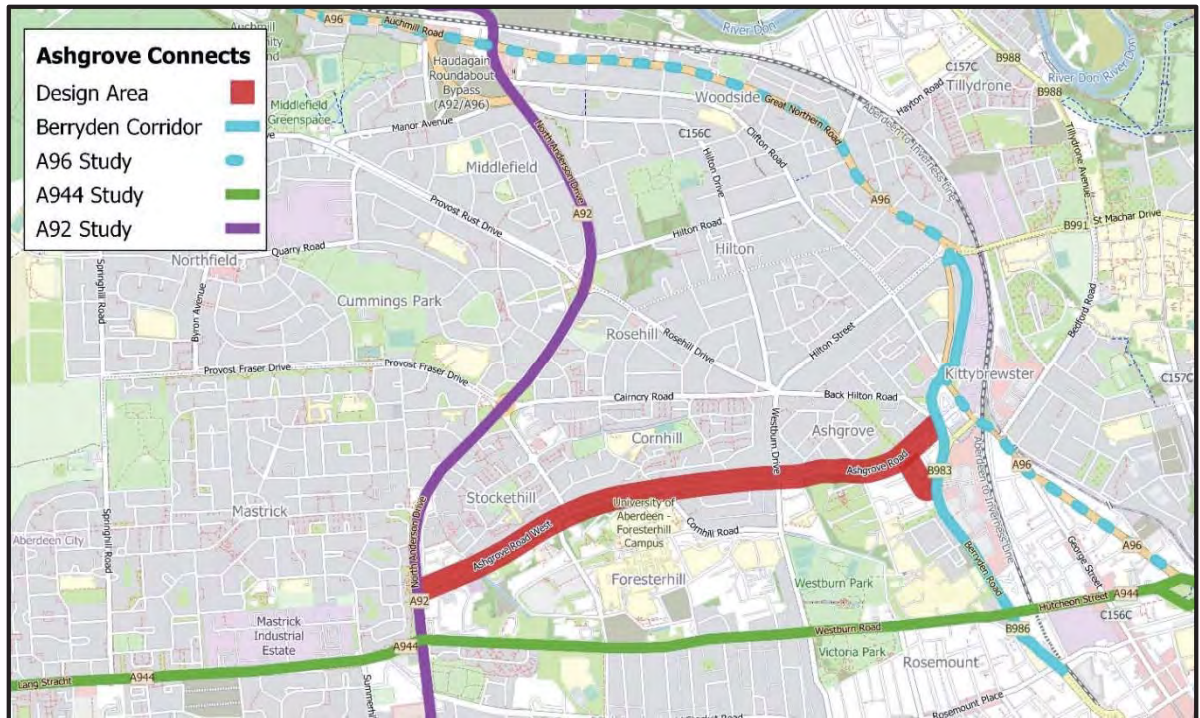
- Berryden Corridor: The existing corridor formed by Great Northern Road and Berryden Road is identified as operating beyond its capacity, which has led to significant congestion and delays, both for public transport and general traffic. The project aims to improve the efficiency of the public network by relieving congestion to improve journey time reliability, as well as improving infrastructure for cycling and walking.
- A92 Corridor: Jacobs have been commissioned by ACC to undertake a transport study of the A92 corridor between Bridge of Don and Bridge of Dee. The study places a focus on improving bus connections and conditions for people walking, wheeling, and cycling. Its main aim is to ‘lock in’ the local benefits arising from the opening of the Aberdeen Western Peripheral Route by seeking to encourage more people to travel sustainably.
- A944 Corridor: Stantec have been commissioned by ACC to undertake a STAG-based appraisal of the A944 (and A9119) corridors between Westhill and Aberdeen city centre. The study builds on previous work and aims to further develop identified options to improve transport connections along the corridor, with a focus on active travel and public transport.
- A96 Multi-Modal Study: Stantec have been commissioned by ACC to undertake a STAG-based appraisal of the A96 corridor between Aberdeen City Centre and Inverurie. It shares a similar



aim to the A944 Study; to improve transport connections along the corridor, particularly active travel and public transport connections.

1.4.2. The locations of the three schemes in relation to the Ashgrove Connects Design Area is presented in Figure 1.2.

Figure 1.2 – Adjacent Schemes



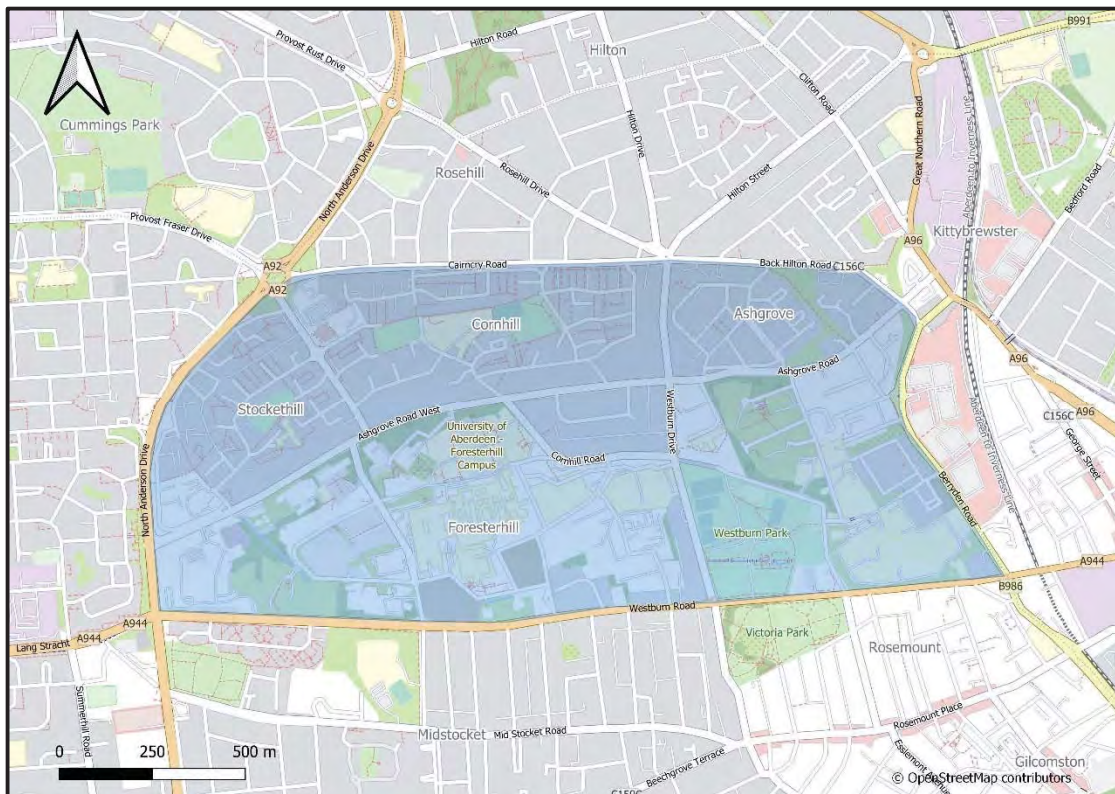
1.5. Engagement Area

1.5.1. The Engagement Area sets out the area within which key stakeholders of relevance to the project are located. It is bounded to the south by Westburn Road, to the north by Cairncry Road and Back Hilton Road, to the west by North Anderson Drive, and to the east by Berryden Road.

1.5.2. The area encompasses a range of development uses. To the north of the Ashgrove Connects Design Area it is primarily residential, and includes educational sites such as Cornhill Primary School, as well as community facilities like Cornhill Library, parks, and a range of retail offerings. The retail sites range from smaller local convenience stores to the Aldi foodstore located on the east side of Foresterhill Road. The area to the south is largely non-residential, with large areas occupied by the University of Aberdeen and the Royal Infirmary.

1.5.3. The Engagement Area is presented in Figure 1.3 overleaf.



Figure 1.3 – Ashgrove Connects Engagement Area


1.6. Baseline Assessment Scope

1.6.1. An outline of the scope for the Baseline Assessment is provided below:

- Baseline data analysis
 - Scoping and collation of existing data
 - Commission and management of data collection sub-contractors
 - Analysis and preparation of data outputs
- Engagement
 - stakeholder relationship development, including the setting up of a forum
 - community audits and on the ground engagement
 - Online platform, communication, and promotion
- Technical appraisal
 - Strategic policy, community, and infrastructure context
 - Network and street operations – how well the population is served by all modes
 - Engineering assessment – identification of physical opportunities and constraints
 - Heritage, Conservation and Net zero – identification of opportunities
- Objective Setting: the preparation of objectives based on all of the above



2. Policy Review

2.1. Introduction

- 2.1.1. This Chapter provides a summary of the desk-based review outlining relevant planning policy and strategy documents in relation to Aberdeen. The policy documents provide context in relation to transportation and local requirements, and where possible links these back to the Ashgrove area.
- 2.1.2. The purpose of this review is to identify any frameworks or policy objectives that will guide the proposals for Ashgrove Connects, with particular consideration given to the time of development that would be in line with established policy, as well as traffic and travel, and environmental objectives.
- 2.1.3. The full policy review is presented in document CR-L.

2.2. Policy Documentation

- 2.2.1. The following documents have been reviewed at the request of ACC:
- Aberdeen City Council - Local Transport Strategy 2021-26
 - Aberdeen City Council - Climate Change Plan 2021-25
 - Community Planning Aberdeen Local Improvement Plan 2016-26
 - Community Planning Aberdeen - Aberdeen City – Central Locality Plan 2021-26
 - Community Planning Aberdeen - Partnership Development Plan
 - Nestrans - Regional Transport Strategy 2040
 - Nestrans / ACC / Aberdeenshire Council - North East Scotland Roads Hierarchy Study 2019
 - Nestrans / ACC / Aberdeenshire Council - A944 / A9119 Transport Corridor Study – STAG-Based Appraisal 2020
 - Civitas Portis - Aberdeen Sustainable Urban Mobility Plan 2019
 - Transport Scotland - National Transport Strategy 2
 - Transport Scotland - Strategic Transport Projects Review

2.3. Policy Review Summary

- 2.3.1. The adopted North East Scotland Roads Hierarchy downgrades the street to one primarily for local access, albeit it will remain the primary access route for the hospital and other local destinations.
- 2.3.2. Adopted policies point towards a future direction for Aberdeen of more walking, cycling, bus travel and improved accessibility as well as local priorities for places where people activities have greater prominence.
- 2.3.3. Proposals for the Berryden Road corridor improvements, at an advanced stage of delivery planning, will provide improved cycling and walking facilities for people to access the city centre.



- 2.3.4. Combined, this presents an opportunity for the street. The opportunity is to reduce the speed and volume of vehicular traffic using the route and to increase the space given over to people accessing destinations for walking, cycling, wheeling and local residential and local economic and community activities.
- 2.3.5. Table 2.1 summarises the relevant aims of each of the reviewed local and regional policy documents and highlights how they support the strategic aims of Ashgrove Connects.

Table 2.1 – Policy Document Summary

Document	Summary of policy	Synergy with Ashgrove Connects
Local Outcome Improvement Plan 2016 to 2026 (2017, refreshed 2021)	The LOIP is a document which sets out how Community Planning Aberdeen will improve outcomes for and with local people and communities. The vision set out in the LOIP is that Aberdeen will be ‘a place where all people can prosper’ by 2026.	Links reduced car usage with various issues such as net zero, connectivity, and employment Sets percentage targets for increasing walking and cycling as main mode of travel by 2026
Climate Change Plan (2021)	The purpose of the Council climate change plan is to set out the Council’s approach, pathway, and actions towards net zero and climate resilient Council assets and operations, by 2045. The plan sets out the scope of the City Council’s ambitions with net zero and interim targets for a reduction in carbon emissions.	Sets out scope of ACC’s net zero ambitions, with interim targets Note that Council General Fund Revenue Budget and Capital Programme has funding commitment for initiatives that will support development of net zero
Nestrans Regional Transport Strategy for the North East of Scotland (2021).	The RTS for the NESTRANS area is a statutory document covering Aberdeen City and Aberdeenshire Council areas. The RTS focusses less on the provision of new infrastructure and more on optimising infrastructure to influencing behaviours.	Aims include enhancing travel opportunities, reducing number and severity and casualties, increasing use of active travel, reducing proportion of journeys by car
NE Scotland Roads Hierarchy Study (2019)	The purpose of this document was to develop options for the updated roads hierarchy and to identify possible levels of intervention that could be implemented to support the delivery of the updated hierarchy.	Led to the reclassifying Ashgrove Road West as a C-class road / tertiary route
Local Transport Strategy (2016-2024) (2016)	The vision for the Local Transport Strategy (LTS) is to develop “a sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment”	Increase no. people walking / cycling / using public transport Improve public realm by prioritising pedestrians, cyclists, public transport
Aberdeen City Central Locality Plan 2021-26 (2021)	The plan links to the re-refresh of the City’s Local Outcome Improvement Plan (LOIP) which highlights the breadth of work taking	Identifies Ashgrove and Stockethill as priority neighbourhoods. Aims include creating employment opportunities, improving access to services, create



	place and aims to utilise our assets to their full potential by working together.	opportunities for people to connect and increase physical activity
Aberdeen Active Travel Action Plan 2017-2021 (2017)	This Action Plan identifies the policies and design principles that Aberdeen City Council will abide by and a series of actions and interventions that will be pursued in order to increase the proportion of journeys undertaken in our City by active travel.	Delivers on the Council's commitment to "identify and implement projects that prioritise sustainable transport movements in the City" and "ensure that new cycling infrastructure adheres to best practice guidelines"
Aberdeen Sustainable Urban Mobility Plan (2019)	Aberdeen City Council has developed a Sustainable Urban Mobility Plan (SUMP) for the city centre. A SUMP is a transport strategy for a specific area which identifies projects that could be delivered by the Council and partners to enable and encourage users of that area to travel on foot, bike, public transport, or other low-emission forms of transport more often.	Key principle is to lock in benefits of AWPR to prioritise movement of active and sustainable travel through the reallocation of carriageway space and other prioritisation and traffic management measures



3. Engagement Area Context

3.1. Introduction

- 3.1.1. This chapter sets out the context for the Engagement Area, including socio-economic factors, travel to work and car ownership data, as well as the key destinations and trip attractors in the area.
- 3.1.2. Data has been gathered from the 2011 Scotland Census for each of the postcodes within the Engagement Area on various key indicators, such as home ownership levels and travel to work data. This allows for the identification of potential opportunities to encourage residents to cycle or walk to work or local amenities, and to identify where existing residents travelling by these modes would benefit from improved connections in the area.
- 3.1.3. It is noted that a large proportion of the area to the south of the street, particularly west of Westburn Drive, is non-residential, with large areas occupied by the hospital and university. It is therefore likely that these areas will have very low numbers of residents relative to those north of the street. This can potentially result in percentage values derived from statistical data being skewed very high or very low by virtue of the low number of residents.

3.2. Home & Car Ownership within Engagement Area

- 3.2.1. Home ownership levels within each postcode area are an indicator of residents' economic status and general wealth of an area, while car ownership can provide an insight into the level of access to viable alternative modes of transport. The home ownership levels are presented in Figure 3.1, and car ownership levels are presented in Figure 3.2.
- 3.2.2. Both car and home ownership levels are at their highest in the centre of the Engagement Area.
- 3.2.3. Home ownership is notable along the frontage of Ashgrove Road West on the north side of the carriageway extending to the west, and on the south side in the centre of the Engagement Area. High levels are also recorded in the centre to the north in Cornhill. Levels of home ownership drop to the east and west, in particular to the west at Stockethill, and the northeast near Back Hilton Road.
- 3.2.4. The percentages for car ownership in each postcode area indicate the percentage of households owning at least one car or van. Car ownership is generally higher than home ownership across the Engagement Area, although follows a broadly similar pattern. The highest levels of ownership were recorded in the centre, to the north, and along the Ashgrove Road West frontage, with the lowest levels recorded to the west in Stockethill.



Figure 3.1 – Home Ownership

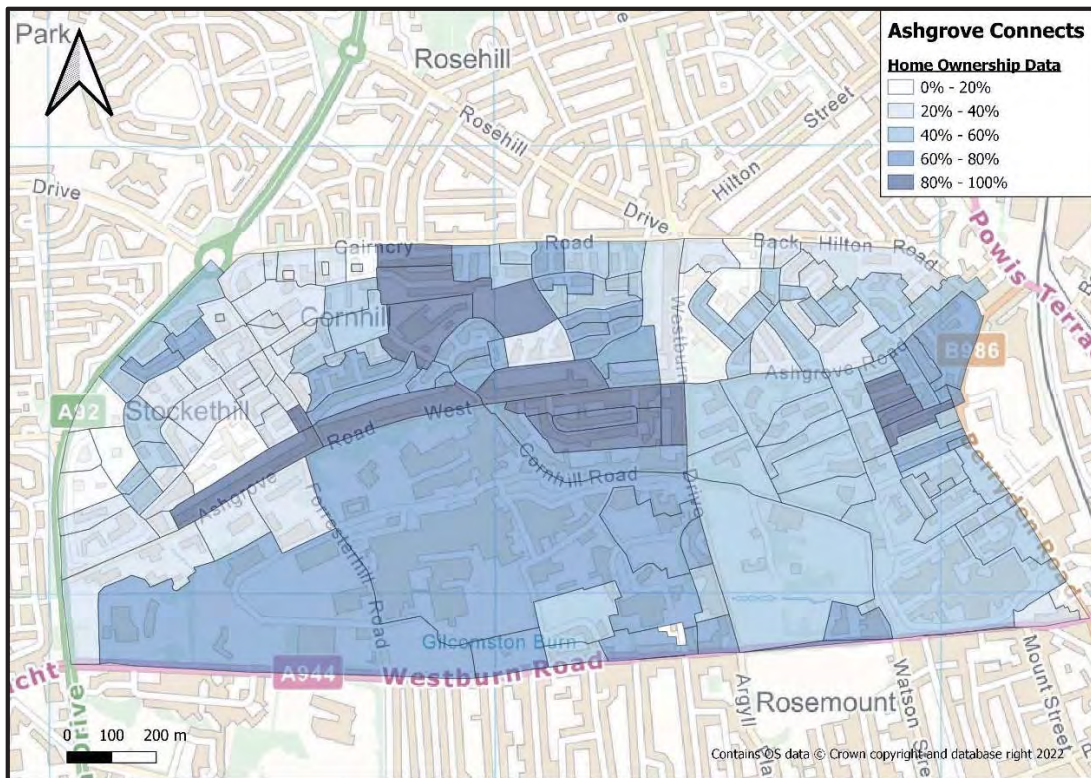
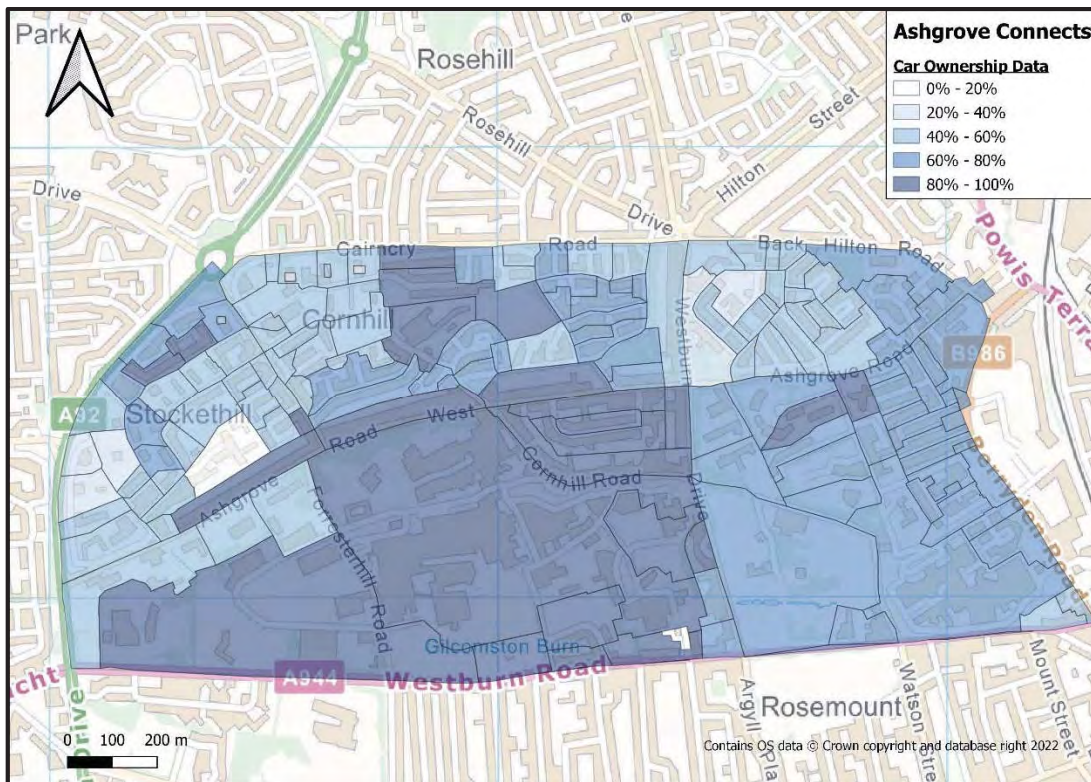


Figure 3.2 – Car Ownership



3.3. Travel to Work Data

- 3.3.1. Travel to work mode share and distances travelled data has been gathered for each of the postcodes within the Engagement Area. This data allows for the identification of travel habits within the area, and for the identification of potential opportunities for behavioural shifts. For example, if a high number of trips to work are by car and are also within a relatively short distance of residents' homes, then there is the potential to encourage a shift to active travel instead due to the distances involved.
- 3.3.2. It should be noted that while travel to work data provides an indication of travel behaviours, it does not account for not-work trips, e.g. leisure activities, therefore can only provide a partial picture of residents' travel habits. It is possible that a high percentage of local trips, such as to school, local shops, parks etc. are made on foot. As many leisure trips will be into the city centre or to well-connected retail centres like Kittybrewster Retail Park these will be made by public transport.
- 3.3.3. It should also be noted that the Census provides some datasets for 'travel to work' and others for 'travel to work or study'. The latter of these typically has a lower share of car drivers, as this includes trips to education establishments which are often shorter-distance trips than those to work.
- 3.3.4. A comparison of the average travel to work or study mode shares for Aberdeen City and the Engagement Area is presented in Table 3.1.
- 3.3.5. These values indicate that, broadly, there are more people within the Engagement Area walk to work than across the city, while there are fewer people driving to work in the Engagement Area than across the city.

Table 3.1 – Mode Share Comparison (Travel to Work or Study)

Mode	Aberdeen City	Engagement Area	Difference
Public Transport	16%	15%	2%
Car Driver	41%	37%	5%
Car Passenger	8%	7%	1%
Bicycle	2%	2%	0%
Pedestrian	29%	36%	-7%
Other	3%	3%	0%

- 3.3.6. Table 3.2 presents the distance travelled to work by travel modes – note that the Census data source only splits this into public transport, driving, and 'other', which includes active travel modes and car passengers. This table has been colour-coded to easily identify the highest values.



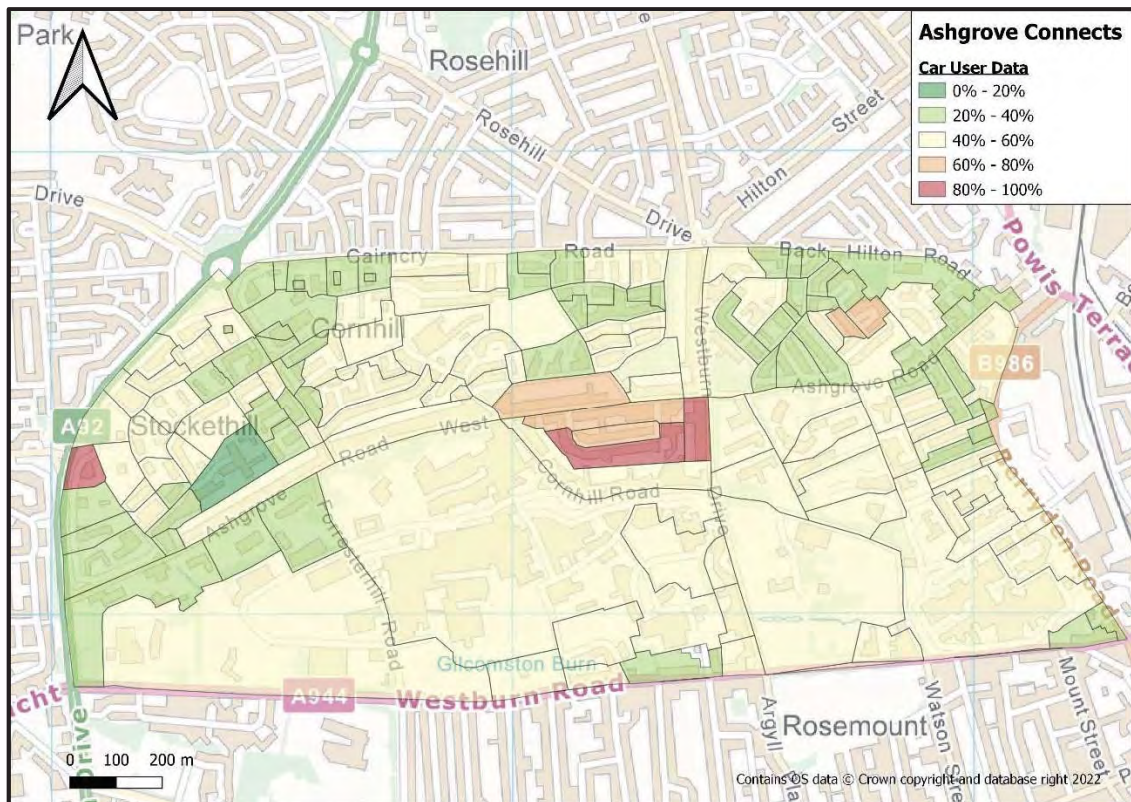
3.3.7. It shows that over a quarter (27%) of those driving to work travel less than 5km, and that only very low numbers travel further than 5km by either public transport or any other mode of travel. This suggests that there is an opportunity to encourage a shift away from driving for short-distance trips, and to potentially increase the use of public transport for medium-distance trips.

Table 3.2 – Engagement Area Distance Travelled to Work by Mode

Distance Travelled	Total People	Public Transport	Driving	Other
Less than 5km	66%	11%	27%	28%
5km to less than 10km	17%	2%	13%	2%
10km to less than 30km	4%	1%	3%	0%
30km and over	1%	0%	1%	0%
Total People	100%	15%	50%	35%

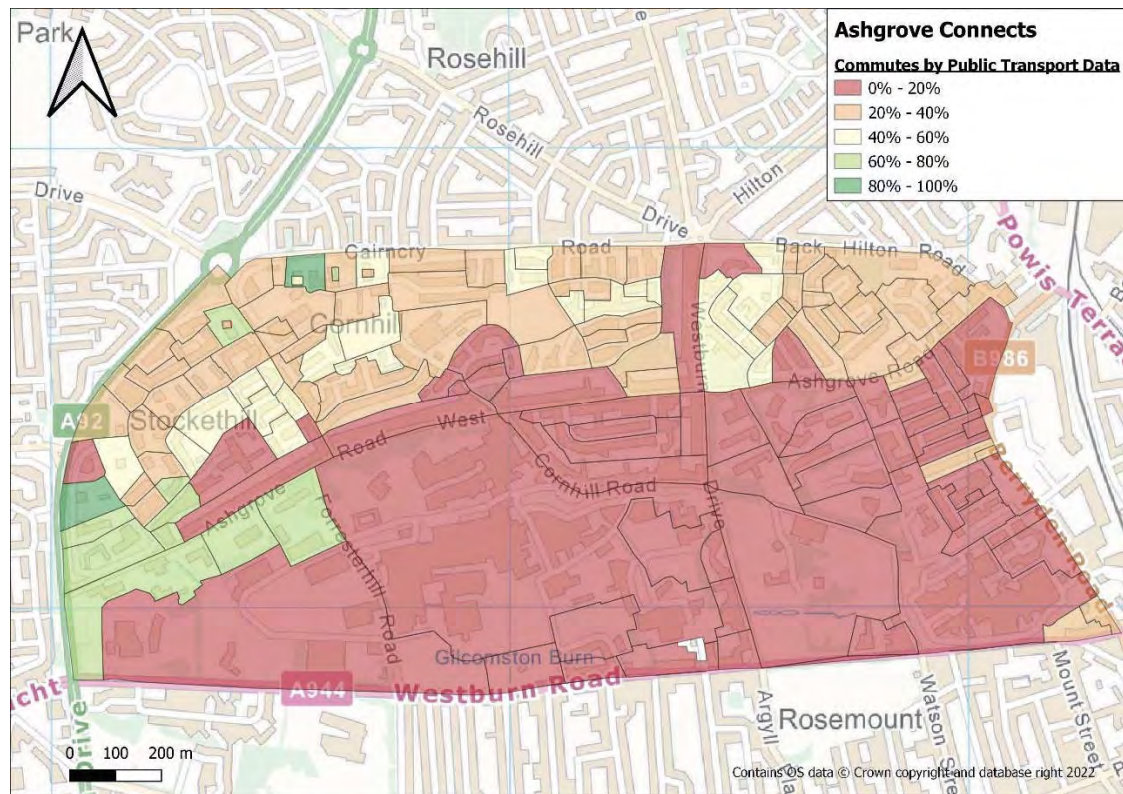
3.3.8. The travel to work data for each postcode within the Engagement Area, highlighting the percentage of residents whose primary mode of travel to work is by car, public transport, and walking and cycling is presented in Figure 3.3, Figure 3.4, and Figure 3.5 respectively.

Figure 3.3 – Travel to Work Data – Commutes by Driving



- 3.3.9. Travelling to work by car is broadly viewed as having a detrimental impact on the environment, therefore the colour grading reflects this by highlighting areas with high levels of car commuting in red, and lower levels in green. Conversely, the reverse is usually the case with regards to public transport and active travel, therefore the colour grading highlights areas with high levels of these travel modes in green, and lower levels in red.
- 3.3.10. The percentage ranges for each postcode area indicate the percentage of residents that reported in the 2011 Scotland Census that they primarily travel to work by driving car.
- 3.3.11. The data shows that the areas with the highest concentration of car travel are concentrated in the centre of the Engagement Area, and at their lowest levels to the west and northeast. While this is generally reflective of car ownership levels it is notable that some areas with high car ownership levels, such as the northern frontage of Ashgrove Road West, are in the middle 40-60% bracket despite having the highest levels of both car and home ownership.

Figure 3.4 – Travel to Work Data – Commutes by Public Transport

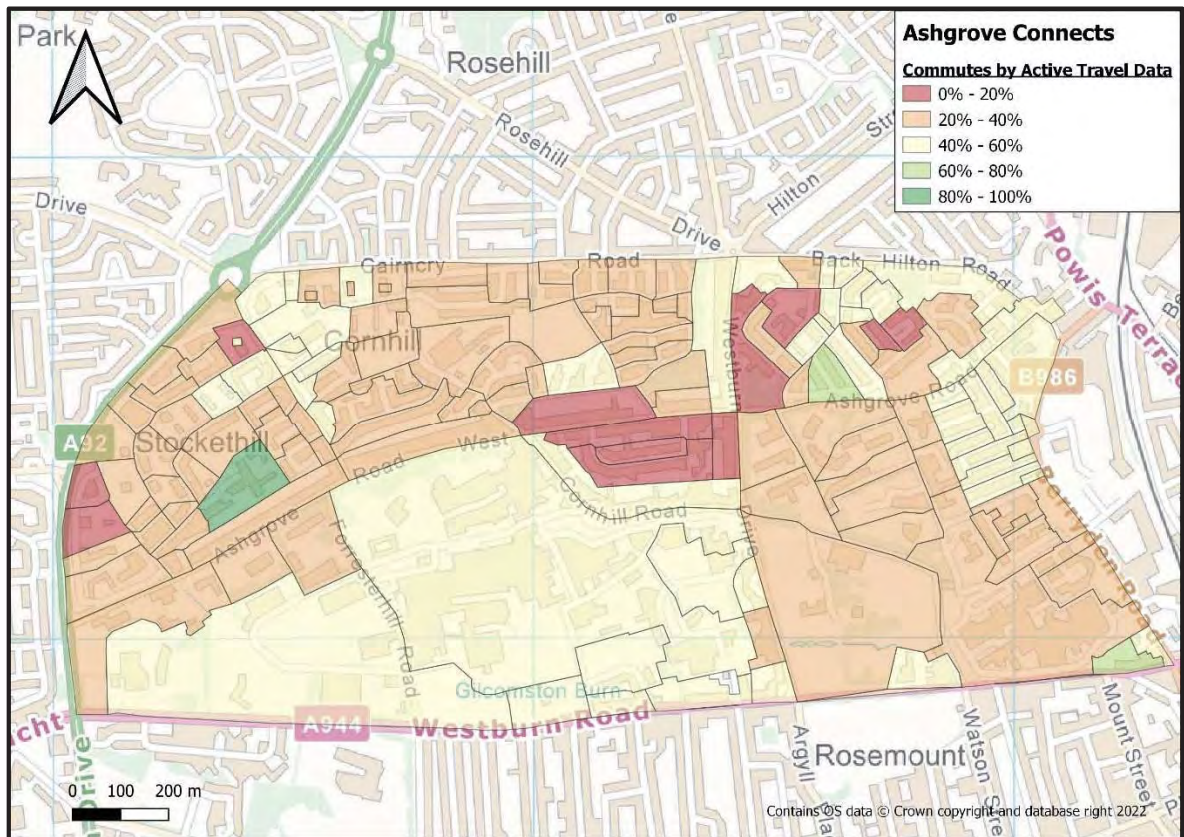


- 3.3.12. The percentage ranges for each postcode area indicate the percentage of residents that reported in the 2011 Scotland Census that they primarily travel to work by public transport. While this includes bus, train, and light rail, it is assumed that given this mainly refers to bus travel for this area of Aberdeen.



3.3.13. The data shows that public transport usage across the area is generally low, with the majority of the postcode areas below 40%. A small number of locations in the west of the Engagement Area, and two isolated locations in the northwest, recorded usage greater than 60%, and only two areas were in the highest range of 80-100%. It should however be noted that these are in largely non-residential areas, therefore while proportionally high the actual numbers of people are likely to be low.

Figure 3.5 – Travel to Work Data – Commutes by Walking / Cycling



3.3.14. The percentage ranges for each postcode area indicate the percentage of residents that reported in the 2011 Scotland Census that they primarily travel to work by either walking or cycling.

3.3.15. Walking and cycling to work across the Engagement Area is mixed. It is generally at its lowest in the centre, which coincides with high levels of car ownership and car usage, although the majority of the Engagement Area falls within the 20-40% and 40-60% ranges.

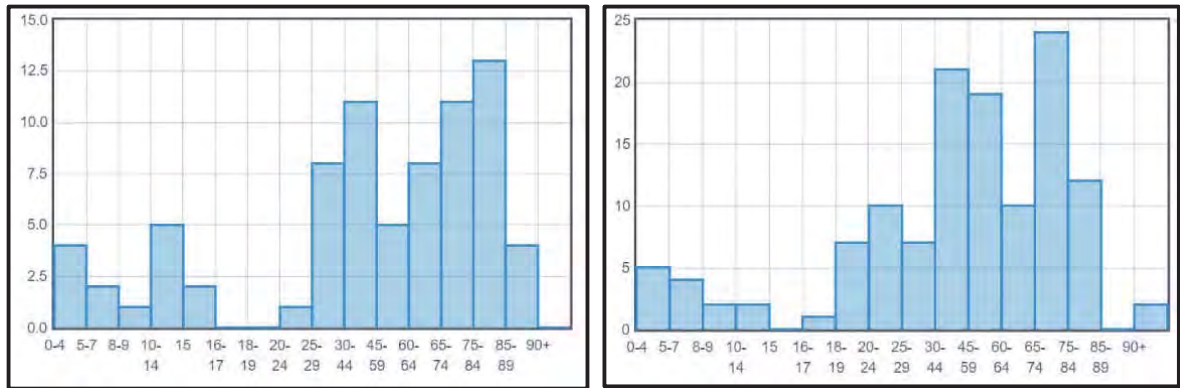
3.4. Demographics

3.4.1. The demographics within each postcode area are an indicator of mobility and should be considered when continuing to plan and deliver the engagement process.



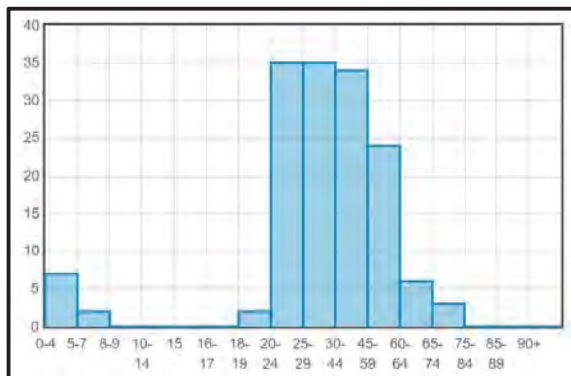
- 3.4.2. There is a slight contrast in terms of demographics along the street, as shown in Figure 3.6 and Figure 3.7
- 3.4.3. On Ashgrove Road West, there is a slightly older population and ethnicity is mainly White with some Black African and Indian. Information based on postcodes: AB16 5EH and AB16 5DZ.

Figure 3.6 – Age profile of AB16 5EH and AB16 5DZ



- 3.4.4. On Ashgrove Road, there is a slightly younger population and although ethnicity is mainly White, there is a mixture of Indian, Pakistani, Chinese and Other Asian. Information based on postcode: AB25 3BB.

Figure 3.7 – Age profile of AB25 3BB



- 3.4.5. Special attention to the accessibility and mobility requirements of these demographics should be considered when developing proposals in addition to tailoring the engagement process to ensure this is inclusive and representative of the local population.

3.5. Scottish Index of Multiple Deprivation

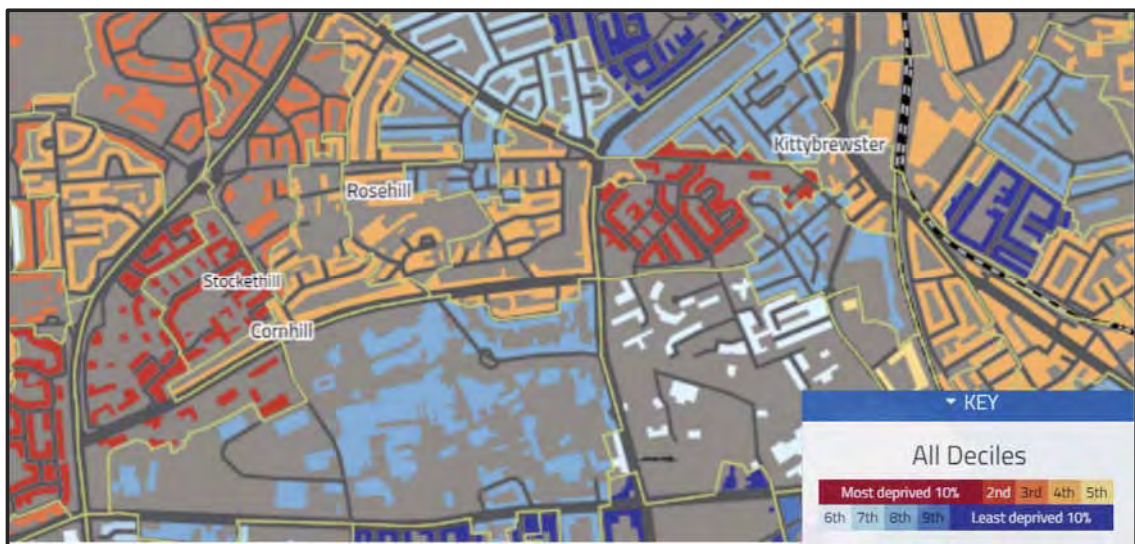
- 3.5.1. The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across small areas. SIMD looks at the extent to which an area is deprived across seven domains: income, employment, education, health, access to services, crime and housing. The level of deprivation can



be an indicator of income, but it can also indicate level of resources or opportunities available to the people who live there.

- 3.5.2. Within the Engagement Area, there is a wide range in the data results derived from the SIMD, with some areas falling within the overall 20% most deprived in Scotland while other areas fall within the 20% least deprived.
- 3.5.3. An overview of the SIMD classifications within the Engagement Area, as recorded by the SIMD in 2020, is presented in Figure 3.8.
- 3.5.4. Special attention to the level of deprivation should be considered when tailoring the engagement process to ensure this is inclusive and provides local people with an opportunity to shape the decision-making process.

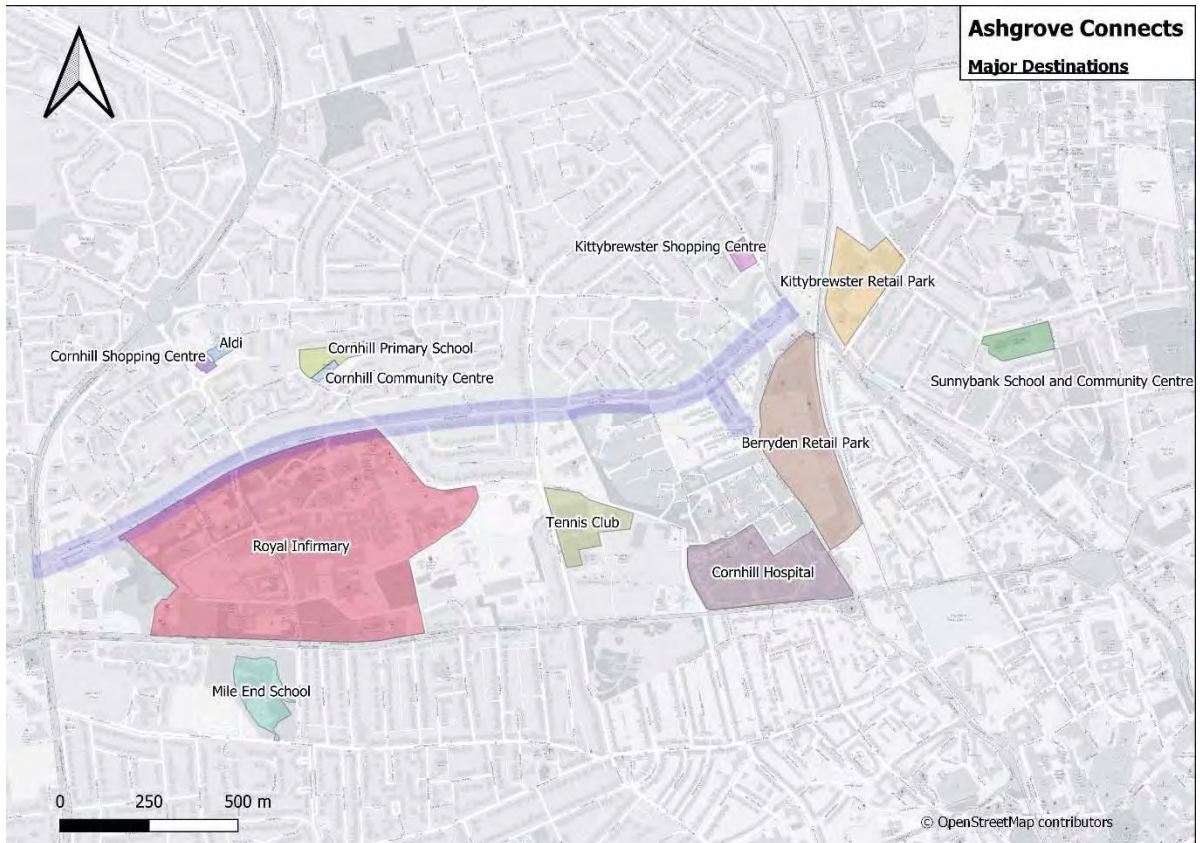
Figure 3.8 – Scottish Index of Multiple Deprivation Overview



3.6. Key Trip Attractors & Destinations

3.6.1. The major and local destinations, along the designated green spaces in and around the Engagement Area are presented in Figure 3.9, Figure 3.10, and Figure 3.11.

Figure 3.9 – Key Attractors – Major Destinations



- 3.6.2. Most of the major destinations are located to the south of the street, while the smaller local destinations are located to the north, and are largely concentrated in the east end of the Engagement Area.
- 3.6.3. It is assumed that the larger destinations, such as the Royal Infirmary, Cornhill Hospital, and the two retail parks, will attract trips from a wider catchment than the more locally focused destinations highlighted in Figure 3.10. This may present an opportunity to encourage the use of alternative routes to these larger destinations when considering measures to reduce traffic speeds and volumes along the street, particularly for trips generated by the retail parks.



Figure 3.10 – Key Attractors – Local Destinations

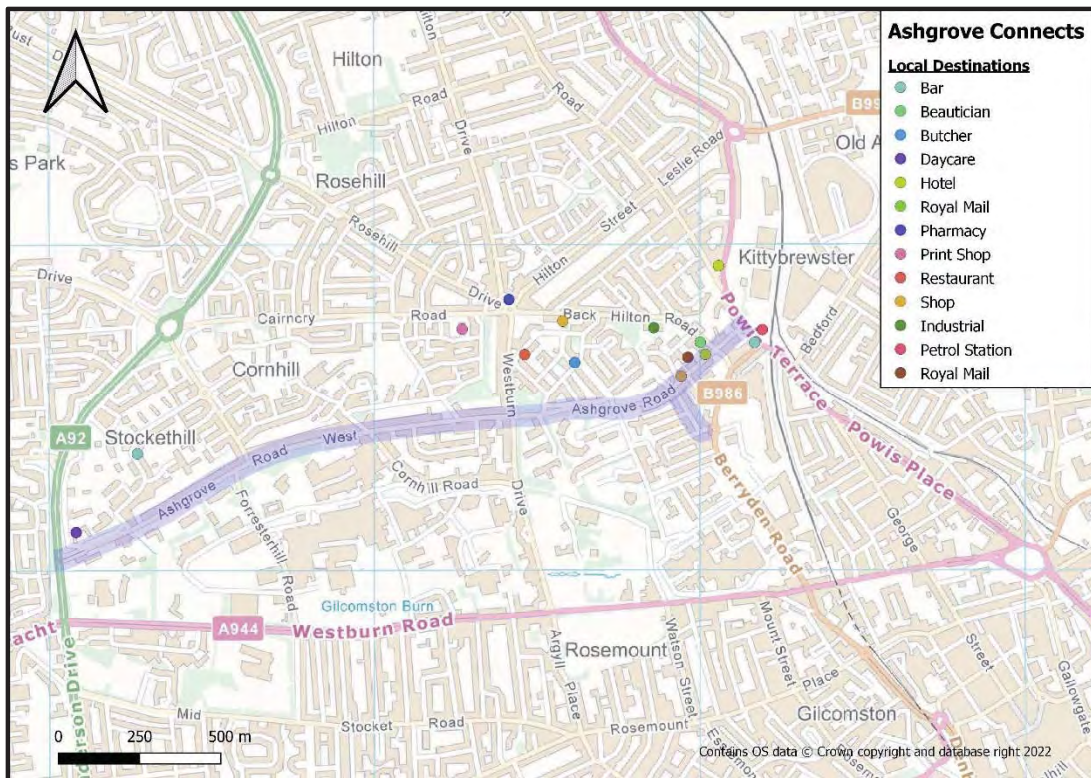


Figure 3.11 – Key Attractors – Green Space



3.7. Summary

- 3.7.1. The socio-economic and demographic data identified within the Engagement Area indicates that the area is relatively diverse, with a range of ages and ethnicities. Car and home ownership levels vary significantly, and the car ownership and travel to work data in particular suggests that there is an opportunity to improve employment opportunities for some residents by enhancing lower cost travel links to employment destinations.
- 3.7.2. The car / home ownership and travel to work data suggests that while there is a link between car ownership and car usage, this is only a partial link, indicating that car drivers could be encouraged to travel by other modes for certain trips, given more favourable street conditions. It is also noted that walking and cycling was generally recorded at significantly higher levels than public transport, indicating that this may be a more desirable alternative to car travel than public transport.
- 3.7.3. One issue that will require consideration is access for disabled people; it is recommended that an Integrated Impact Assessment is undertaken for the scheme, and that following its implementation the use of the scheme by different groups is monitored.
- 3.7.4. The relative ethnic diversity of this area is both an opportunity and a challenge. Some ethnic groups historically have a lower propensity to engage in project consultations and in travelling by certain modes. The Behaviour Change Plan and Engagement approach should consider this through all project development stages.

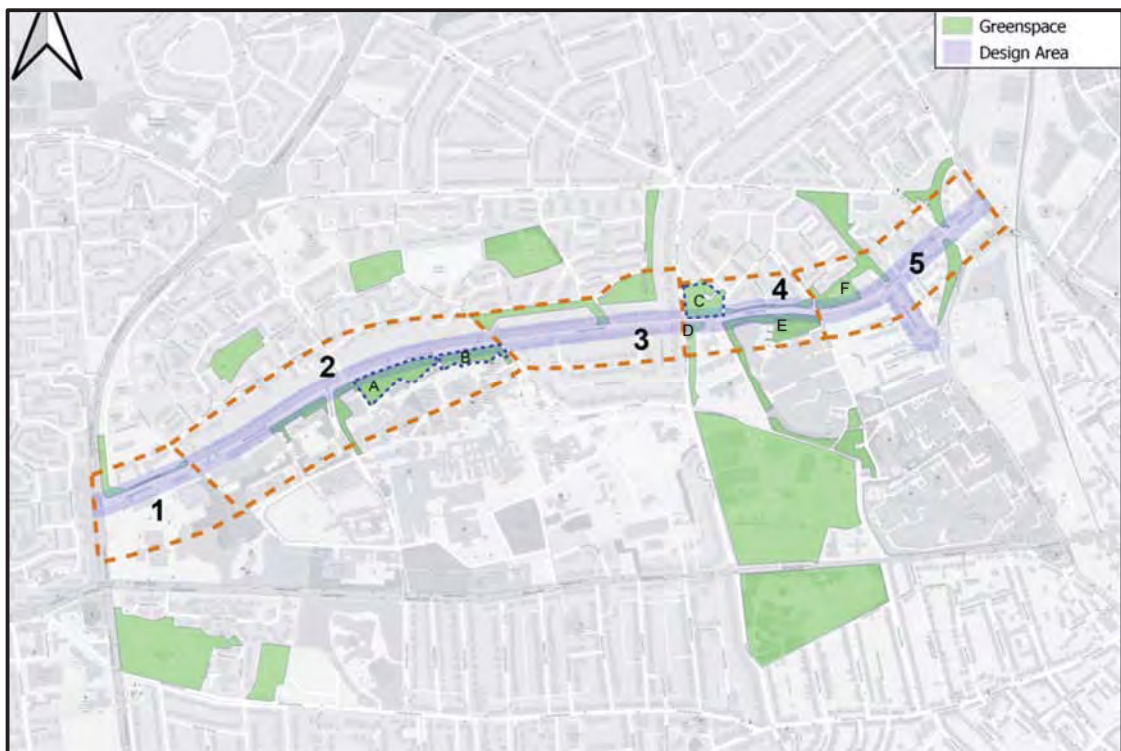


4. Heritage & Conservation

4.1. Introduction

- 4.1.1. This chapter describes the streetscape and landscape values of the Design Area, including notable characteristics of sub-areas along the street, building typologies and trees/planting and highlights opportunities to enhance or improve the place quality along the street which may help to make it an attractive route to travel through and stay in.

Figure 4.1 – Sub-areas



4.2. Sub-area 1 (North Anderson Drive)

Streetscape

- 4.2.1. The street contains mostly industrial units to the northwest corner and the south side of Ashgrove Road West. The buildings to the north are set back from the street and are separated from the main movement corridor by a slip road which in practice means that Ashgrove Road West is 5-6 vehicle lanes wide at this point.
- 4.2.2. Walled boundary to the south with no active frontages and no entrances onto the street creates a low-quality streetscape.
- 4.2.3. No seating areas or opportunities to rest in the area and no opportunity to cross the road.



Landscape

- 4.2.4. There is a long stretch of grass separating the North Anderson Drive carriageway from a parallel carriageway on the north-east side of the junction, and there is a row of trees running along the verge. Part of the greenspace has been damaged by vehicles driving onto the grass to enter a building.
- 4.2.5. The greenspace in front of the buildings north of Ashgrove Road West have a small, planted area and otherwise consist mainly of grass and mature trees without any infrastructure that invite people to use the space.

4.3. Sub-area 2 (Aberdeen Royal Infirmary)

Streetscape

- 4.3.1. All residential detached houses to the north set back slightly and positioned higher than street level, all with driveways and small front gardens. This building typology is typical for residential streets; however Ashgrove Road is wider than an average residential street and has higher volumes of traffic and higher speeds than would be expected.
- 4.3.2. Fencing and walled boundary to the south with few gaps and no entrances to the street.
- 4.3.3. Relatively wide road with advisory cycle lane and no parking on north side (by residences) and line of parking and a bus stop on south side towards the hospital and Aberdeen University campus.
- 4.3.4. No seating areas or opportunities to rest in the area and limited opportunity to cross the road apart from the signalised crossing at Foresterhill Road.

Landscape

- 4.3.5. There are street trees along the stretch, most of them mature and valuable. The trees are in very constrained locations and in many situations the tree roots have damaged the pavement and kerb.
- 4.3.6. Area A – Extensive greenspace, heavily wooded, with large number of damaged trees and dead wood. The woodland belongs to the university grounds and is located behind a metal fence, thus not accessible to the public. The woodland and its understory do not seem to be accessed by the university users, with no footpaths or activity present.
- 4.3.7. Area B – Greenspace that belongs to the campus and is walled off from Ashgrove Road West. The area, however, presents user activity, with large number of mature trees, mown amenity grass and a seating area. There is a bus stop in front of the greenspace which is separated by the stone wall. The bus stop serves the university bus and hosts up to 30 people at peak times. Following the walking audit with the Aberdeen University, it has been highlighted that the university would be



interested in removing or moving the wall to the back, widening the pavement, and opening the space up at this area.

4.4. Sub-area 3 (West of Westburn Drive)

Streetscape

- 4.4.1. All residential two storey detached houses on both sides of the Ashgrove Rd with advisory cycle lane and no parking. This building typology is typical for residential streets; however, Ashgrove Road is wider than an average residential street and has higher volumes of traffic and higher speeds than would be expected. Traffic volumes and speeds are discussed in more detail in Section 6.
- 4.4.2. No seating areas or opportunities to rest in the area and limited opportunity to cross the road apart from the signalised crossing at Westburn Drive.

Landscape

- 4.4.3. There are street trees along the stretch, most of them mature and valuable. The trees are in very constrained locations and in many situations the tree roots have damaged the pavement and kerb.
- 4.4.4. A small greenspace at Braefoot Road has a large number of trees and the track of a desire line through the grass in the southeast corner indicates that it is used as a cut-through, most likely connecting to the primary school. This does not currently have high recreational value but has high potential.

4.5. Sub-area 4 (East of Westburn Drive)

Streetscape

- 4.5.1. Ashgrove Road narrows considerably compared to Ashgrove Road West and the character changes because there are no frontages to the street. Instead, tall stone walls constrain the street on both sides and block all view of the buildings along this stretch of street. At the walking audit with University of Aberdeen a participant noted that the area feels quite isolated because of the walls. Proposes opening up the street to make it more inviting.
- 4.5.2. North of Ashgrove Road a residential area with flatted dwellings in housing blocks set in open parkland. Buildings set back far from the road and separated from the main road, with a stone wall and greenspaces in between. No frontages or entrances to the street.
- 4.5.3. South of Ashgrove Road a low bungalow-style set of building houses care home and NHS hospice facilities and taller buildings with serviced apartments.

Landscape

- 4.5.4. There are empty tree pits along this section, showing that trees have been there at some point but have either been damaged or removed and have not been replanted. The lack of street trees in



conjunction with the walled corridors add to the change of character, making this section of Ashgrove Road seem “hard” and less hospitable than the residential sections. Tall trees are visible above the walls but people on the street side are completely cut off from the greenspace where the trees stand.

- 4.5.5. Area C is semiprivate open greenspace with mixed tree planting and is only accessible from Carnie Drive and Elder Place, and not directly from Ashgrove Road. Some buildings have private front gardens of higher quality planting, but these are not visible from Ashgrove Road.
- 4.5.6. Area D The landscape that surrounds the hospice buildings is a denser wooded area and this section is part of the Rosemount Conservation Area. The grounds appear well kept but are only visible and accessible from the entrance opposite Carnie Drive.
- 4.5.7. Area E high quality landscaped areas with large number of mature trees that in majority make up for semiprivate spaces to adjacent residential houses, inaccessible from Ashgrove Rd. The grounds appear well kept and include some amenities such as cycle parking, bin sheds, lower-level planting, etc. but are not visible or accessible from Ashgrove Road.

4.6. Sub-area 5 (Berryden Road)

Streetscape

- 4.6.1. The last section of Ashgrove Road consists mainly of residential building with mixed typology and commercial units near the Berryden Road junction. The street is narrow and has street trees (some of which have been removed) as well as parking on one side of the street.
- 4.6.2. On the north side a tall stone wall separates Ashgrove Road from Beattie Avenue Playpark and continues into a row of town houses leading to the Berryden Road junction and interrupted by the Royal Mail distribution facility. The town houses have small front gardens with low boundary walls and good connection to the street. At the Berryden Road junction a newer building hosts a SPAR and has a small car park in front.
- 4.6.3. To the south, Crosby House, a VSA care home facility, is set back from the street and separated by a stone wall, however the middle section of this wall has been lowered to less than a meter to create a visual connection to the street. It connects to a row of town houses and then transitions to newer, semi-detached single-family houses with front gardens and driveways for parking before meeting the greenspace at Berryden Road.
- 4.6.4. No seating areas or opportunities to rest on Ashgrove Road (however, the walled-off playpark offers seating and play). Connection across the street is reasonable on this part of Ashgrove Road as the road is narrower, vehicle speeds are lower, and the junctions have small corner radii and smaller crossing distances.



Landscape

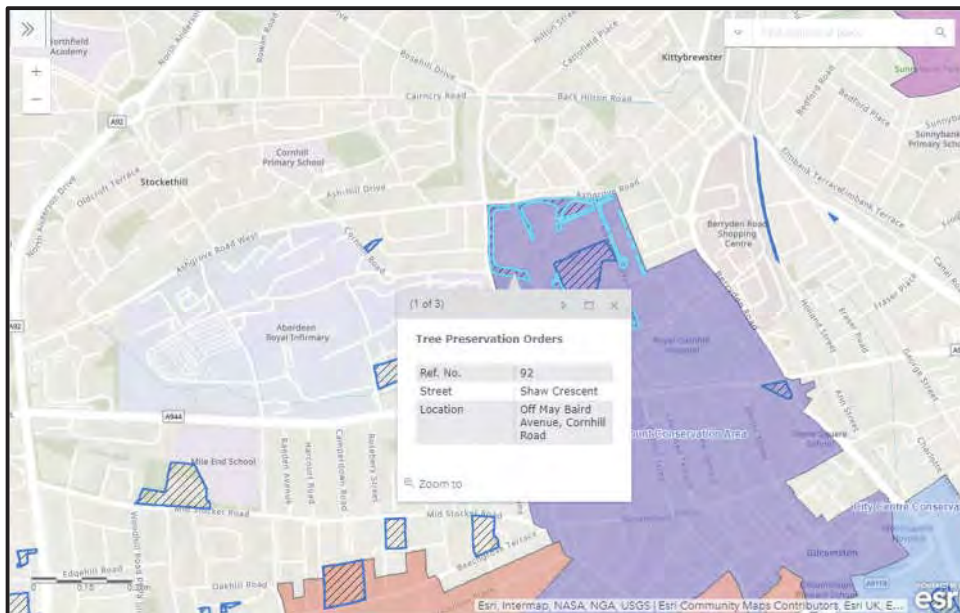
- 4.6.5. There are street trees along the stretch, many of them mature and valuable. The trees are in very constrained locations and in many situations the tree roots have damaged the pavement and kerb. In some locations trees look to be recently re-planted probably due to older trees having been damaged.
- 4.6.6. Area F is a public recreational greenspace with mature trees and good quality play facilities which is visible from Ashgrove Road at the junction with Beattie Avenue but is separated from the street by a tall stone wall.

4.7. Conservation areas

- 4.7.1. There are few heritage restraints within the study area. The Rosemount and Westburn Conservation Area borders on a small stretch of Ashgrove Road east of Westburn Drive and is the only recorded heritage interests within the study area. It is worth noting that the buildings with notable historical significance within the conservation area are in the Rosemount area while the reason for including Westburn in the Conservation order is to retain the parklands of Westburn and Victoria Parks for future generations. The boundary walls bordering the Design Area are not mentioned in the conservation order.

4.8. Tree Preservation Orders

Figure 4.2 – Tree Preservation Orders



- 4.8.1. While all trees set within a Conservation area are automatically protected, an explicit tree preservation order is placed on the edge planting surrounding Elmwood and Roxburghe House, two NHS hospital facilities, running along Westburn Drive and Ashgrove Road.



- 4.8.2. Several large trees have been cut down on Ashgrove Road within the last couple of years, most likely due to damage from storms, and it is worth doing more detailed surveys of the mature trees remaining in the Design Area to assess how best to ensure they stay healthy and safe and are able to contribute to the quality of the street in the future.

4.9. Summary

- 4.9.1. The Design Area is disjointed and does not have one single identity. There is a clear difference between Ashgrove Road West, which is a wide A-road designed to accommodate high volumes and high speeds of motor traffic, and the eastern section of Ashgrove Road which is narrower and has road dimensions more akin to residential areas. However, even within each area the look and feel changes a lot and there is no single typology of housing or frontage to tie the area together.
- 4.9.2. The area east of Westburn Road is the least attractive place to linger, being framed by a long stretch of tall stone walls with few gaps and no frontages to the street. People walking, cycling and wheeling in the area will experience little diversity of space and have no breaks or long views at eye-level to break the monotony. The area also could be considered as least safe as there is no passive surveillance of the street and no entrances with people coming and going.
- 4.9.3. The walls (in the whole Design Area) are an element that could be changed to improve the quality of urban space. Options are both to move back the walls (as proposed by Aberdeen University at the Rowett Institute), to lower them to allow for better visual connection (as VSA have done at the care home), to add “doors and windows” to the wall to increase permeability or even to remove the barrier completely to give a sense of openness to the space. This would allow for activation of the greenspaces too.
- 4.9.4. Placemaking opportunities exist in several locations. Some unused or underused greenspaces around Ashgrove Road West could be improved to offer opportunities for rest or play or could be used as small activity hubs around for example bus stops. Adding seating or informal opportunities to rest would also provide places to rest for people who want to walk but may not be physically able to do long routes without rest.
- 4.9.5. The shop located at the far east of the Design Area presents both an active frontage and a contribution to street life during the day which is another placemaking opportunity. Further dialogue is planned with the business to understand whether they would benefit from, and be interested in collaborating to provide, seating, informal play areas, cycle parking, or the like.



5. Transport Network Context

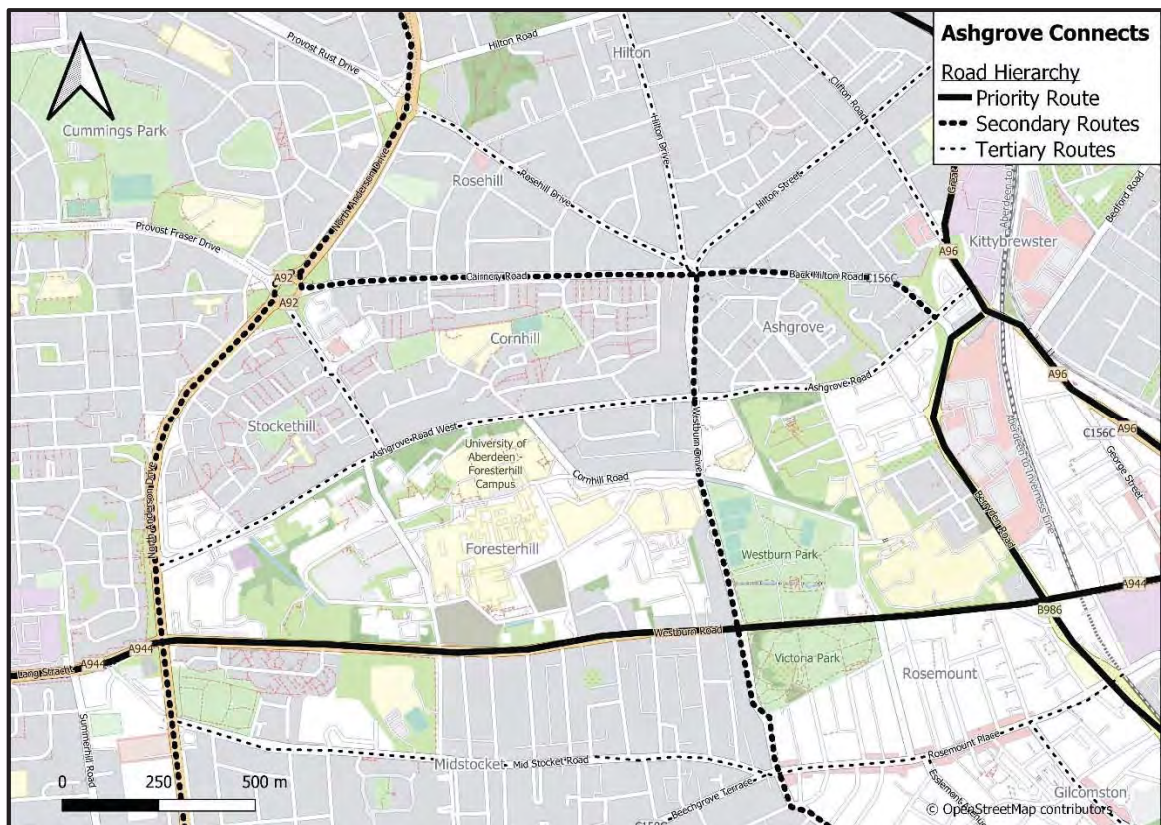
5.1. Introduction

5.1.1. This Chapter sets out the existing transport situation for the area, including the proposed road hierarchy, public transport and active travel provision, parking provision and restrictions, and a review of supplied collision data. This information provides the basis for the identification of potential opportunities linked to improvements within the Design Area, for example potential safety improvements at junctions, existing active travel connections that could be linked with Ashgrove, and the future of the local road network.

5.2. Road Hierarchy

5.2.1. The current hierarchy is reproduced in Figure 5.1. It illustrates the proposed new roads hierarchy as identified in the North East Scotland Roads Hierarchy Study 2019, and forms the basis for each of the identified options.

Figure 5.1 – Proposed Road Hierarchy – City Hierarchy Package



- 5.2.2. The City Hierarchy Package proposes the following roads hierarchy within the Engagement Area:
- Priority Routes: Westburn Road, Berryden Road (new section from junction with Ashgrove Road to Kittybrewster roundabout), A96 Powis Terrace / Great Northern Road
 - Secondary Routes: A92 North Anderson Drive, Cairncry Road, Westburn Drive, Berryden Road (existing section)
 - Tertiary Routes: Ashgrove Road, Ashgrove Road West, Foresterhill Road

5.3. Existing Parking Provision & Restrictions

5.3.1. The existing parking bays and Traffic Regulation Orders (TROs) in the area are presented in Figure 5.2. Further details of the parking provision, along with the results of the car parking surveys, are provided in Chapter 6.

Figure 5.2 – Parking Provision & Restrictions Plan



5.3.2. Parking outwith the designated bays on Ashgrove Road West is restricted by either double yellow lines or single yellow lines, the latter of which is provided along the north side of the carriageway to generally coincide with cycle lane provision. All of the designated parking on Ashgrove Road West is on the south side of the carriageway.

5.3.3. Designated bays are not provided on Ashgrove Road, however there are breaks in the provision of double or single yellow lines to allow vehicle parking.



5.4. Public Transport Provision

5.4.1. The existing bus services in the area are summarised in Table 5.1.

Table 5.1 - Bus Service Summary

Provider	Route Number	Route	Typical Frequency
First Aberdeen	8	Dubford - ARI	Mon - Sat: 60 mins
	8a	Dubford - ARI	Daily: One morning service
	11	Woodend - Northfield	Mon - Sun: 20 – 30 mins
	12	Torry - Heathryfold	Mon - Sun: 20 - 30 mins
	17/a	Faulds Gate - Dyce (Northern Lights) Via Duthie Park-City Centre-Newhills	Mon - Sun: 30 mins
	18	Charleston/Redmoss - Dyce (Northern Lights) Via Kincorth-City Centre-Mugiemoss	Mon - Sat: 30 mins Sun: No service
	23	Heathryfold - Sheddocksley (Sunshine)	Mon - Sat: 12 minutes Sun: 30 minutes
	172	Faulds Gate - Dyce (Northern Lights)	Mon - Sun: 15-30 mins (evening only)
Stagecoach	35	Elgin - Aberdeen	Mon - Sat: 30 mins Sun: 60 mins
	37	Aberdeen - Inverurie	Mon - Sun: 30-60 mins
	59	Northfield Teminus - Balnagask	Mon – Fri: 15 mins Sat: 10-15 mins Sun: 20 mins
	727	Aberdeen Airport Terminal - Aberdeen union Square	Mon - Sun: 15 - 20 mins
Bains Coaches	305	Oldmeldrum - Aberdeen	Mon - Fri: Three services per day Sat - Sun: No service

5.4.2. There are three sets of bus stops along Ashgrove Road West, and no stops on Ashgrove Road. A range of frequent services stop on Ashgrove Road West, with a wider range of services available further afield within the Engagement Area. The majority of the stops are simple flagpole stops with



on-road bus cage markings, with the exception of the eastbound stop at Site 3 (the easternmost set of stops, adjacent to Cornhill Road).

5.4.3. A route plan illustrating the routes of each of the services summarised in Table 5.1 is presented in Figure 5.3, and a summary of the level of service to each area of the city is presented in Table 5.2.

Figure 5.3 – Bus Service Routes

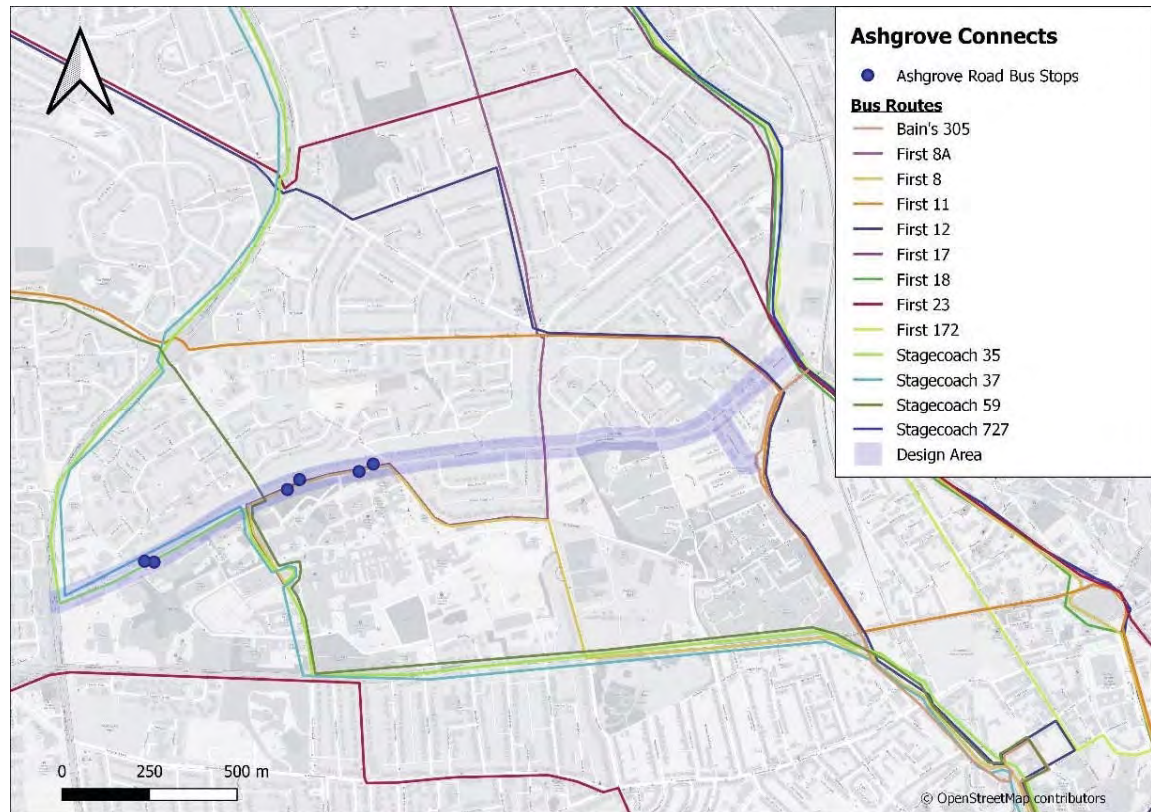


Table 5.2 - Bus Services – Summary of City Areas Served

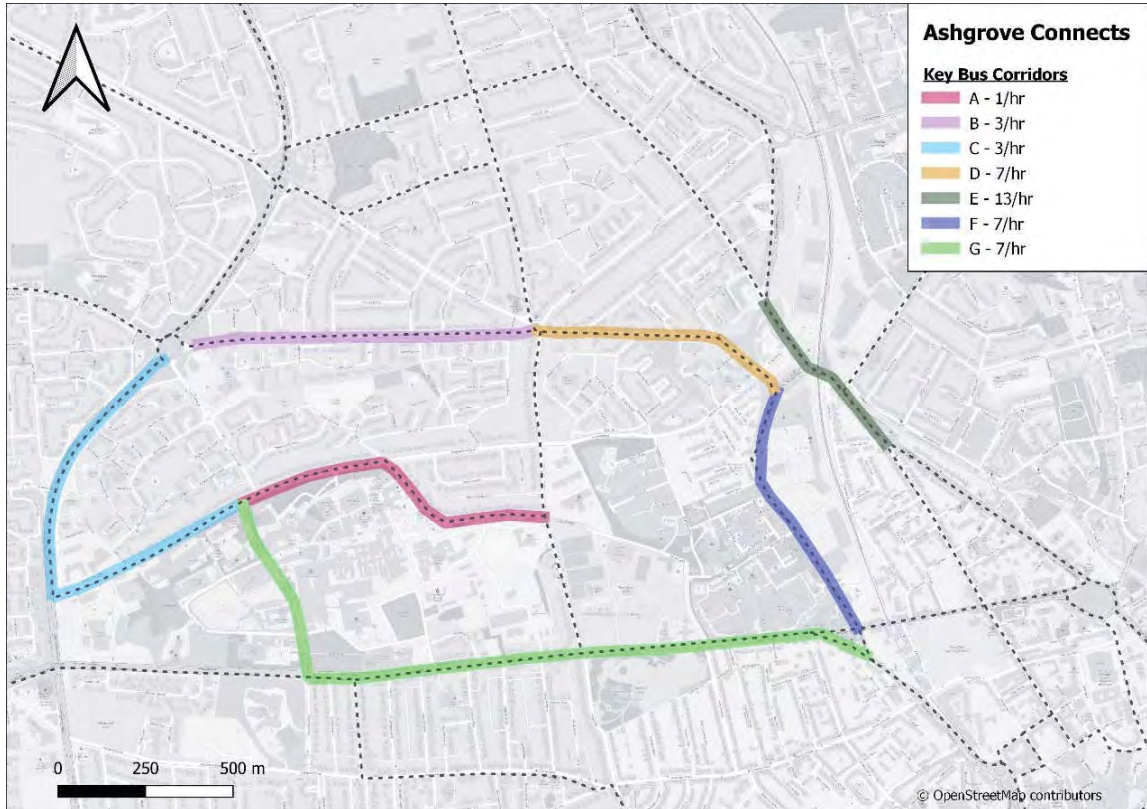
Location Served	Bus Services
North	8, 8A, 11, 12, 17, 17A, 18, 18A, 23, 35, 37, 172, 727, 305
South	17, 17A, 18, 18A, 59, 172
West	11, 23
Centre	All services
Ashgrove Bus Stops	8, 8A, 35, 37

5.4.4. All of the services around the Engagement Area provide connections to the city centre, and the majority connect to the north. Two of the services provide connections to the west.



5.4.5. A plan highlighting the overall service frequency (bus per hour) along key corridors in and around the Engagement Area is presented in Figure 5.4

Figure 5.4 – Bus Services – Frequencies on Key Corridors



5.5. Active Travel Provision

5.5.1. This section of the report provides details of the existing active travel provision in the area. While particular focus is paid to the Design Area, the provision of formal features in the wider area, such as National Cycle Network and Core Path provision. This will allow for the identification of established connections and barrier between the Design Area and the wider network, and for the identification of potential opportunities to provide new and enhance existing connections.

Walking Facilities

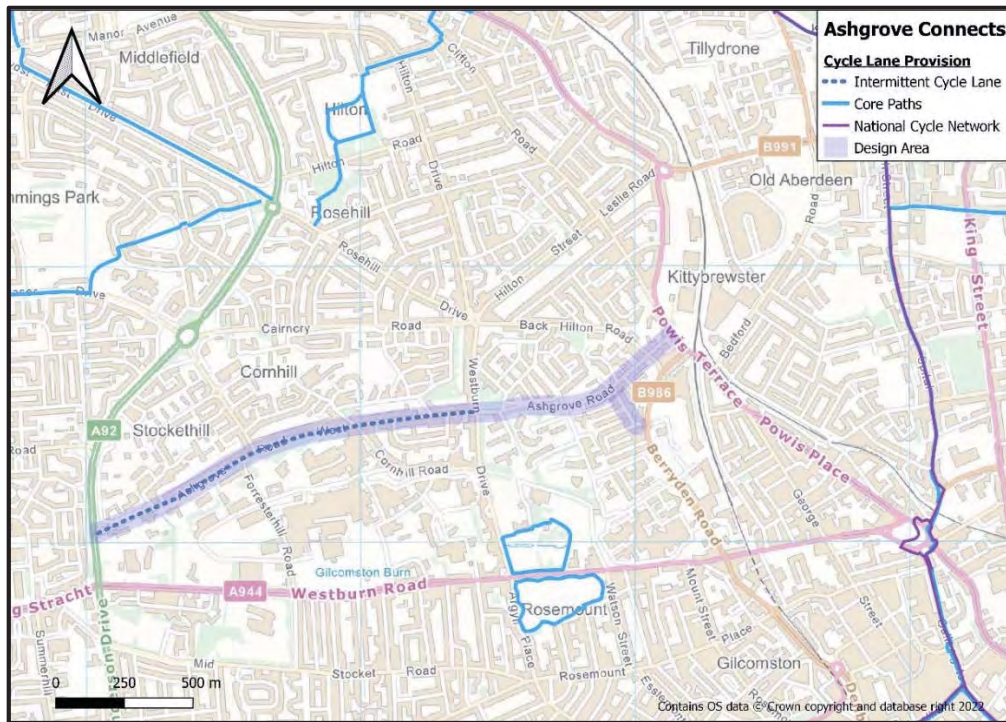
5.5.2. Footways within the Design Area are generally provided to a good standard, with good quality surfacing and lighting, and a minimum width unobstructed width of approximately 2m along the majority of the street. While the footways on Ashgrove Road West are generally at least 3m wide, the effective unobstructed width is narrowed due to the presence of trees and lighting columns.

5.5.3. Crossings over the side roads vary in quality, with inconsistent provision of tactile paving at uncontrolled crossings, although the majority are provided with dropped kerbs. Signal controlled crossings are provided over all approaches of the signal-controlled junctions.



- 5.5.4. Crossing opportunities over the street itself are generally limited to the signal-controlled crossings. A lack of clearly designated crossing points, combined with the carriageway width which varies between 11m-13m, create a barrier to pedestrian movements.
- 5.5.5. The existing active travel provision in the area, including core paths and the National Cycle Network, is presented in Figure 5.5.

Figure 5.5 – Active Travel Provision



- 5.5.6. . It is noted that, as it stands, the Design Area appears isolated from existing core paths and the National Cycle Network and from door-to-door provision for residents.

Cycling Facilities

- 5.5.7. Currently Ashgrove Road West is provided with advisory cycle lanes on both the eastbound and westbound sides of the carriageway, however this provision is intermittent. The cycle lanes are frequently interrupted by on-road parking bays, and as such the Ashgrove Road West carriageway broadly alternates between the provision of cycle lanes and on-road parking.
- 5.5.8. The provision of advanced cycle stop lines at each of the signal-controlled junctions formed with Ashgrove Road West is limited, as is the provision of cycle lanes on the junction approaches. A summary of this provision is summarised below:
 - North Anderson Drive – no cycle lanes or advanced stop lines on any approach



- Foresterhill Road – no cycles lanes on any approach, advanced stop lines provided on all external approaches but not on internal link between the north/south approaches. Cycle lane provided on eastbound exit.
- Westburn Drive – no cycle lanes or advanced stop lines on any approach. Cycle lane provided on westbound exit

5.5.9. Ashgrove Road, which is located to the east of the junction with Westburn Drive, currently has no cycling facilities.

Active Travel Network Assessment

5.5.10. A more detailed review of the wider active travel network will be provided in the Active Travel Network Assessment (ATNA). The methodology for the ATNA is based on some of the requirements and advice contained within DMRB GG 142 to provide a framework for the background data capture, and also draws on LTN1/20 Cycle Infrastructure Design, and Cycling by Design.

5.5.11. The two key themes observed were that of severance and barriers. Limited pedestrian crossing opportunities, coupled with long crossing distances and multi-stage crossings at controlled crossings, hinder the pedestrian accessibility of destinations such as bus stops, Cornhill Primary School, the hospital, and Victoria Park. Equally, limited cycling lane provision, a lack of provision for right-turners at junctions, and large junctions contribute to a street environment that poses a significant barrier to travel by bike.

5.5.12. Three potential packages of measures have been identified to address each of the identified issues in the area. A summary of these packages is provided below, and further details, including a plan highlighting the locations of the improvements, are presented in the full report.

- One – upgrade / install crossings at three key locations with modern parallel pedestrian and cycle facilities
- Two – add crossings at a further five locations, and improve the provision along three key links
- Three – provide complimentary area-wide measures that aim to reassign traffic from Mid Stocket Road and Foresterhill Road to the surrounding strategic routes.

Active Travel Summary

5.5.13. Active travel provision within the Design Area is limited. While footway provision is to a good standard, crossing opportunities over the street are generally limited to the signal-controlled junctions, and crossings over side roads vary in quality.

5.5.14. An advisory cycle lane is provided on Ashgrove Road West, but this is frequently interrupted by on-road parking bays, resulting in only intermittent provision, and advanced stop lines are only provided at the Foresterhill Road junction



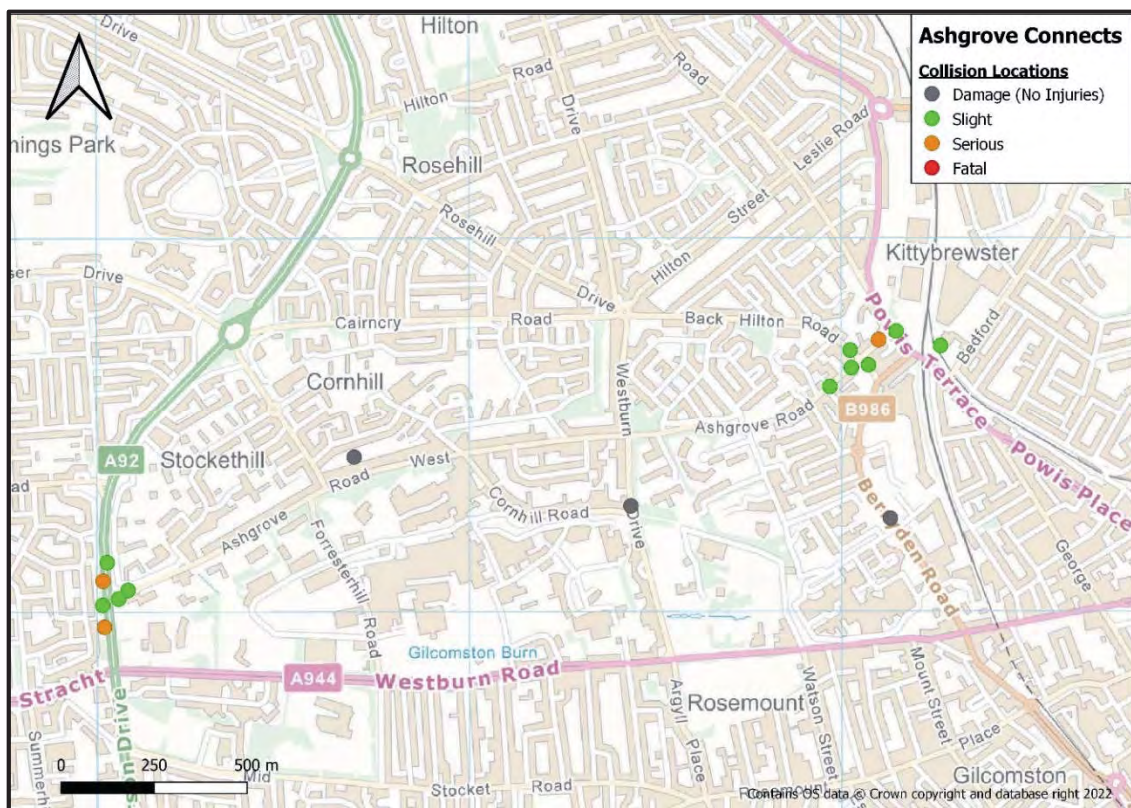
5.5.15. While there are facilities in the wider area across Aberdeen, such as the Core Path network and National Cycle Network, the Design Area is remote from these facilities.

5.6. Collision Data Review

5.6.1. A review of collision data for the Design Area has been undertaken using records supplied by ACC covering the five-year period between 2016-2020. This review allows for the identification of any underlying safety issues, with consideration given to the occurrences of collision clusters, collision severity, and the involvement of pedestrians and cyclists.

5.6.2. The locations of each of the collisions within the supplied records are presented in Figure 5.6.

Figure 5.6 – Design Area Collision Location Plan (2016-2020)



5.6.3. The majority of the Design Area has had very few collisions, particularly along the main stretches of Ashgrove Road West and Ashgrove Road. While a total of 17 collisions were recorded, none were recorded at any of the intermediate junctions within the Design Area, such as the Foresterhill Road staggered signal-controlled crossroads, the Cornhill Road priority crossroads, or at the Westburn Drive signal-controlled crossroads. Improvements to the street may encourage a significant increase in active travel users along the Design Area, including at the eastern and western junctions, therefore it is recommended those junctions are reviewed for potential safety improvements as part of this project.



- 5.6.4. It is also noteworthy that no fatal collisions and three ‘serious’ collisions were recorded over the five-year period, with the majority of the collisions recorded as ‘slight’ in severity. Three non-injury ‘damage-only’ collisions were also contained within the supplied data, although it should be noted all three were outwith the Design Area.
- 5.6.5. Two notable clusters have however been recorded at the eastern and western edges of the junction:
- At the eastern end, there is a cluster of three slight collisions at the Ashgrove Road / Back Hilton Road crossroads. A single ‘slight’ collision was recorded to the west of this cluster at the Belmont Gardens junction, and a ‘slight’ and ‘serious’ collisions were recorded to the east of the cluster at the Powis Terrace junction.
 - At the western edge of the Design Area at the North Anderson Drive signal-controlled junction a more notable cluster was recorded. Six collisions, three ‘slight’ and three ‘serious’, were recorded over the five-year period.
- 5.6.6. The severity of the collisions and involvement of pedestrians and cyclists charts in Figure 5.7 and Figure 5.8, and the full collision records supplied by ACC are presented in Table 5.3. These figures demonstrate that the majority of the collisions resulted in either no injury or slight injuries, and that pedestrians or cyclists were involved in a single collision.

Figure 5.7 – Collision Severity (2016-2020)

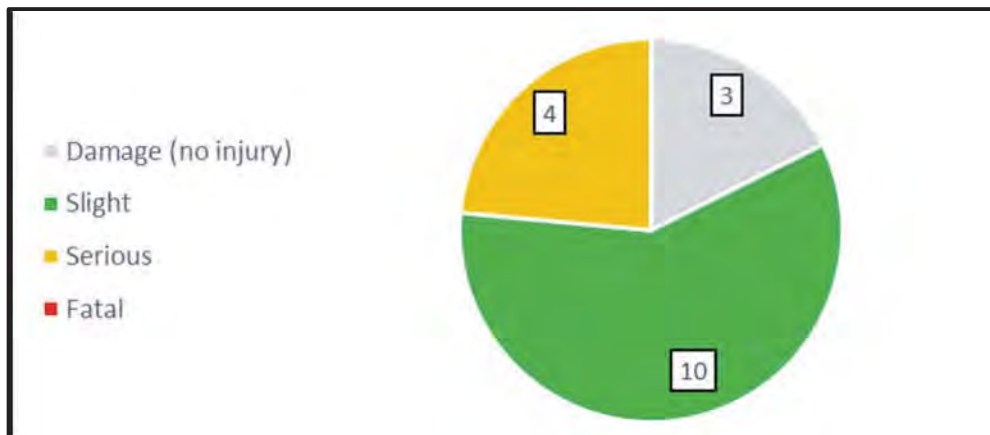


Figure 5.8 – Pedestrian & Cyclist Involvement (2016-2020)

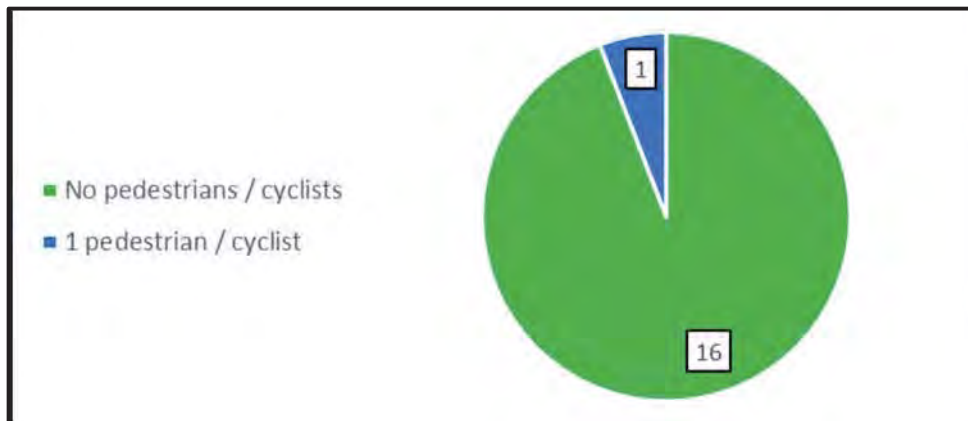


Table 5.3 – Full Collision Records 2016-2020

Date	Day	Time	Location	Severity	Vehicles	Pedestrians / Cyclists
24/03/2016	Thursday	18:00	Ashgrove Road / Back Hilton Road	Slight	2	0
28/06/2016	Tuesday	10:05	Ashgrove Road / A96	Slight	2	0
07/05/2017	Sunday	06:50	Westburn Drive / Cornhill Drive	Damage	2	0
18/06/2017	Sunday	09:40	Berryden Road	Damage	2	0
26/06/2017	Monday	12:45	Ashgrove Road West	Damage	2	0
24/09/2017	Sunday	17:40	Ashgrove Road / A96	Slight	2	0
22/12/2017	Friday	20:50	A90 / Ashgrove Road West	Slight	3	0
06/08/2018	Monday	13:05	Ashgrove Road / Back Hilton Road	Slight	2	0
20/09/2018	Thursday	08:30	Ashgrove Road / Back Hilton Road	Slight	3	0
19/10/2018	Friday	16:30	Ashgrove Road / A96	Serious	1	1
05/01/2019	Saturday	21:05	Ashgrove Road / A96	Serious	2	0
30/09/2019	Monday	16:06	Ashgrove Road / Back Hilton Road	Slight	1	0
16/12/2019	Monday	15:30	A90 / Ashgrove Road West	Slight	3	0
21/01/2020	Tuesday	13:00	A90 / Ashgrove Road West	Slight	2	0
18/02/2020	Tuesday	11:00	A90 / Ashgrove Road West	Serious	1	0
23/06/2020	Tuesday	18:30	A90 / Ashgrove Road West	Serious	2	0
22/07/2020	Wednesday	16:00	A90 / Ashgrove Road West	Slight	2	0

5.6.7. Most of the collisions involved multiple vehicles, and as shown in Figure 5.6 were largely clustered around junctions. Typically, collisions of this nature are recorded to be as a result of driver inattention, either moving off too early or failing to stop in time at a red light, leading to minor collisions between vehicles.



- 5.6.8. The collision involving a pedestrian was described in the police report as involving a vehicle making a right-turn at a junction and being momentarily distracted by “*the low bright sun coming in between the visors and interior mirror*” at the same time as pedestrian had stepped into the carriageway to cross. The vehicle was noted as moving slowly.

5.7. Summary

- 5.7.1. Current provision for active travel is piecemeal and does not provide the opportunity for door-to-door walking, cycling, and wheeling. For the street in this study area, it is recommended that project objectives should consider how to provide for all ages and abilities to unlock suppressed demand for these modes.
- 5.7.2. Bus use and frequency in the study area is low, however there are a number of routes running along and crossing the street. Bus stops are provided on Ashgrove Road West, with further stops available to the north and south of the design area on surrounding streets, including Westburn Drive, and to the east on Powis Terrace. The majority of the routes provide frequent connections between the city centre and the north of Aberdeen; six of these services also extend to the south of the city. Two services (First Bus 11 and 23) provide links to the west of Aberdeen, but do not stop within the design area.
- 5.7.3. A single collision involving a pedestrian, and no collisions involving cyclists were recorded in the period 2016-2020. No trends can be identified in the supplied collision reports for pedestrians and cyclists, therefore it is considered that there is insufficient recorded evidence of safety issues for pedestrians or cyclists to draw any conclusions. Multiple studies have however documented the problem of perceived safety for people cycling as well as walking and the significant under-reporting of minor injury or no injury collisions involving people walking and cycling. In the case of cycling, one notable study (Aldred, 2015¹) sought to quantify the frequency of near misses involving adults cycling. Its conclusions indicated that this had a particularly significant impact on the perception of cycling as an attractive option for females and people who cycled less frequently.
- 5.7.4. Similarly, resident perceptions of street safety are commonly focussed on the speed, volume and vehicle size. Further, the liveability of a street (defined by the number of community connections) is generally considered to be impacted negatively by the volume of traffic using it, partly due to the perception of safety as well as factors such as noise and air pollution (Appleyard (1981))². This collision analysis should therefore be considered in the context of the community engagement responses and baseline data analysis.

¹ Aldred (2015), The Near Miss Project [Nearmissreport-final-web.pdf \(rachelaldred.org\)](https://www.rachelaldred.org/nearmissreport-final-web.pdf)

² Appleyard (1981) Liveable Streets



- 5.7.5. 16 vehicle-on-vehicle collisions were primarily recorded in two clusters at either end of the street at junctions and resulted in primarily slight injuries. It is recommended that the design options consider this analysis in any changes that may be made at these locations.



6. Street Network Operation

6.1. Introduction

6.1.1. This section of the report will present the results of the traffic surveys, car parking surveys, and junction models for the existing junctions. The purpose of this analysis is to provide a baseline for existing demand.

6.2. Traffic Flow & Speed Data

6.2.1. This section provides summary data for the Automated Traffic Counter (ATC) surveys. These have been conducted over a seven-day period for 24 hours a day, and recorded classified vehicle speeds and traffic volumes. Surveys have been undertaken at three locations as indicated in Figure 6.1. The ATC counters were in place between 12/03/22 – 20/03/22.

Figure 6.1 – ATC Survey Locations



Traffic Volumes

6.2.2. The average weekday and Saturday traffic flows and proportion of HGV traffic observed at each of the ATC Sites are summarised in Table 6.1, and the daily total traffic flows are summarised in Table 6.1.

Table 6.1 – Average Weekday and Saturday Flows

Site	Average Weekday Flow	Average Saturday Flow	% HGVs
1	6,919	3,854	8.4%
2	10,636	5,600	7.7%
3	6,196	4,674	5.2%

Table 6.2 – Total Daily Flows

Day	Site 1	Site 2	Site 3
-----	--------	--------	--------



Monday	6,572	9,945	5,836
Tuesday	6,981	10,438	6,098
Wednesday	7,092	11,022	6,336
Thursday	7,123	10,925	6,387
Friday	6,826	10,848	6,325
Saturday	3,854	5,600	4,674
Sunday	3,173	4,750	3,850

- 6.2.3. Traffic flows observed at the weekend were significantly lower than those during the week, and the highest traffic flows were observed at ATC Site 2 throughout each weekday and the weekend. Across all three sites Wednesday and Thursday were observed to have the highest volume of traffic, while Monday was observed to be the weekday with the lowest flows.
- 6.2.4. HGV traffic, as a proportion of the overall traffic volumes, was observed to be highest at ATC Site 1 and lowest at ATC Site 3. These results are broadly in line with typical urban traffic flow patterns; busier activity during the week is reflective of commuter traffic, with weekday traffic forming a bell curve that peaks on Wednesday to reflect the increasing trend towards home / flexible working at the start and end of the working week. The higher proportion of HGV flows at the west of the street are assumed to be linked to the proximity of North Anderson Drive.
- 6.2.5. The 2019 Road Hierarchy Study notes that while there is no fixed number of vehicles that set the criteria for identifying a suitable class of road for any given route, the document does identify thresholds for considering which routes could be considered for priority and secondary routes.
- 6.2.6. These thresholds and the observed traffic volumes for each mode of travel are identified in Table 6.3.
- 6.2.7. The observed traffic volumes are the weekday averages; it should be noted that the cycle movements also include those for powered two-wheelers.
- 6.2.8. The bus movements were identified from bus timetables, as the ATC surveys cannot differentiate between buses and similarly sized two and three axle HGVs.



Table 6.3 – Road Hierarchy Thresholds and Traffic Volumes

Mode	Movements per Day				
	Priority	Secondary	Site 1	Site 2	Site 3
Cars	> 10,000	> 3,000	6,269	9,674	5,760
Freight (LGVs / HGVs)	1,500+	> 450	503	889	369
Buses	100	< 100	114	27	0
Cycles	100	< 100	33	45	67

6.2.9. The observed movements for cars for each of the three sites falls within the threshold for a secondary road, as do the freight movements at Sites 1 and 2. The bus movements would class Site 1 as a priority route, and Site 2 as a secondary, while no bus activity occurs at Site 3.

Peak Hours

6.2.10. The observed average weekday AM and PM, and Saturday, peak hours are identified in

Site	Typical Weekday Peak Hours		Saturday Peak Hour
	AM	PM	
1	07:45 - 08:45	16:30 - 17:30	12:15 - 13:15
2	07:45 - 08:45	16:15 - 17:15	12:15 - 13:15
3	08:00 - 09:00	16:30 - 17:30	12:00 - 13:00

6.2.11. The observed peak hours across each of the three sites are broadly similar, with a 15-minute variance observed for a single site in each of the three peak hours.

Traffic Flow Profiles – Two-way Daily Movements

6.2.12. The daily traffic flow profiles for each of the three sites are presented in Figure 6.2, Figure 6.3, and Figure 6.4. The flow profile charts provide a comparison of the two-way traffic flows throughout each surveyed 24-hour period across the full seven-day survey. This enables the identification of trends in traffic activity, such as typical peak periods and a comparison of activity between days.



Figure 6.2 – ATC Site 1 Daily Flow Profile

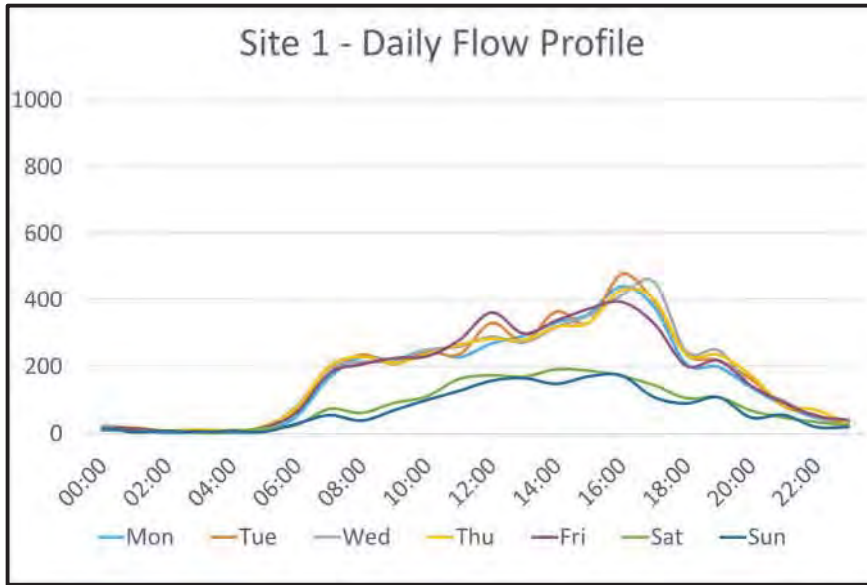


Figure 6.3 – ATC Site 2 Daily Flow Profile

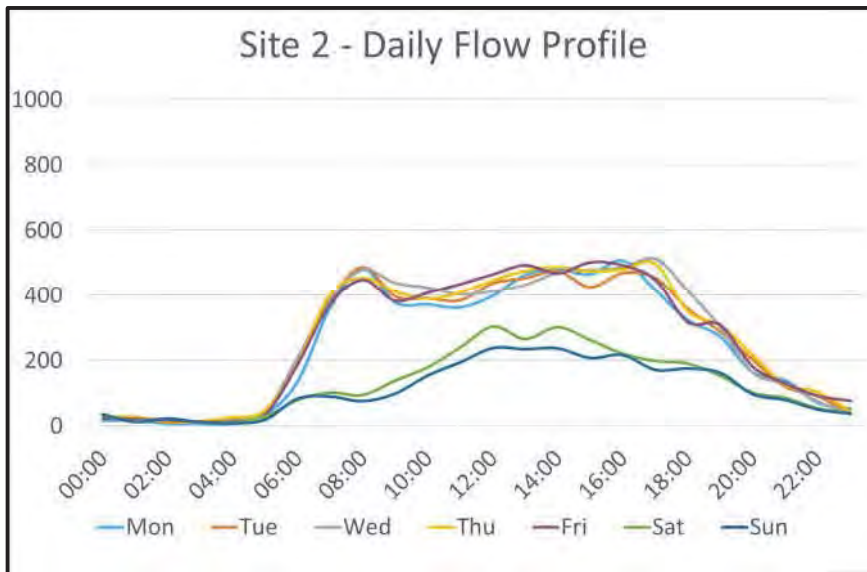
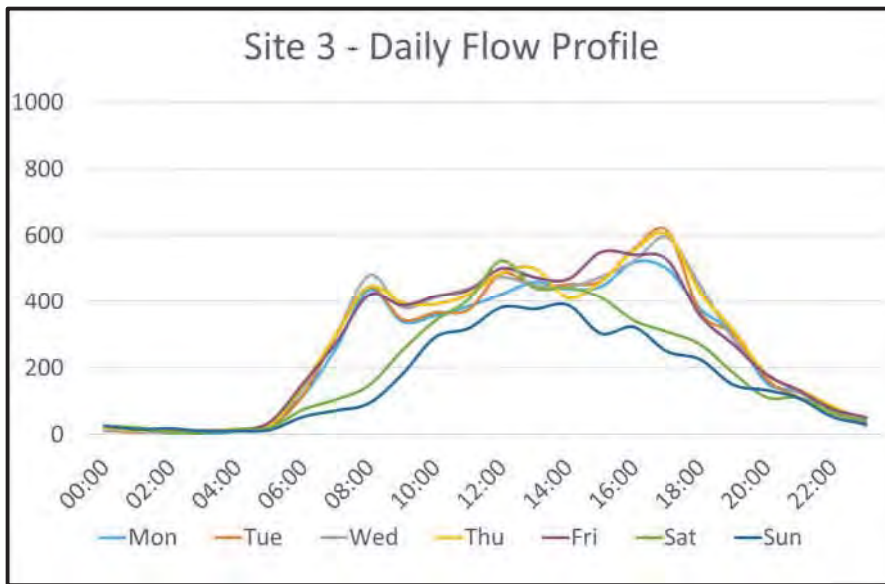


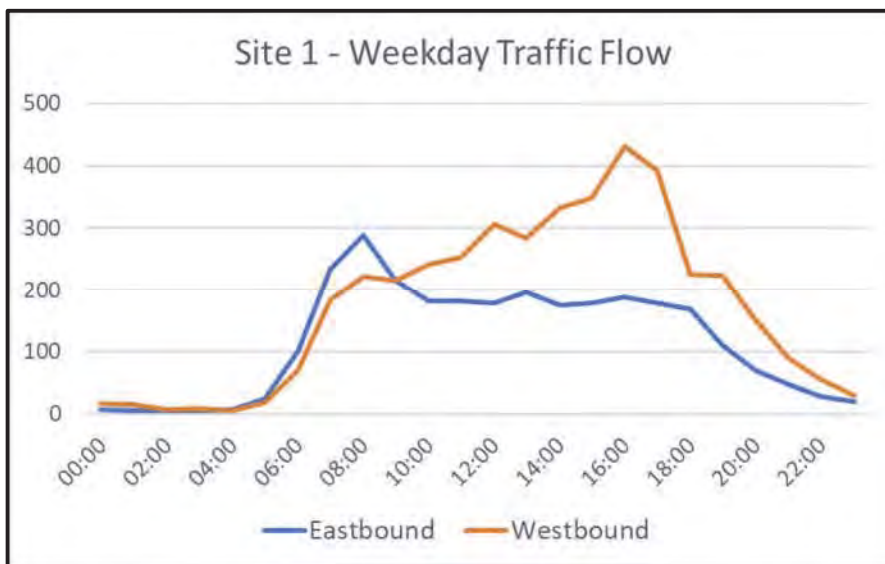
Figure 6.4 – ATC Site 3 Daily Flow Profile



Traffic Flow Profiles – Weekday Movements by Direction

6.2.13. The average weekday directional flow profiles for each ATC Site are presented in Figure 6.5 to 6.7. The Saturday flow profiles have been omitted as both the eastbound and westbound movements form a general bell curve around the peak hours at all three sites, with no discernible difference in directional movements throughout the observed Saturday.

Figure 6.5 – ATC Site 1 – Average Weekday Flow Profile by Direction

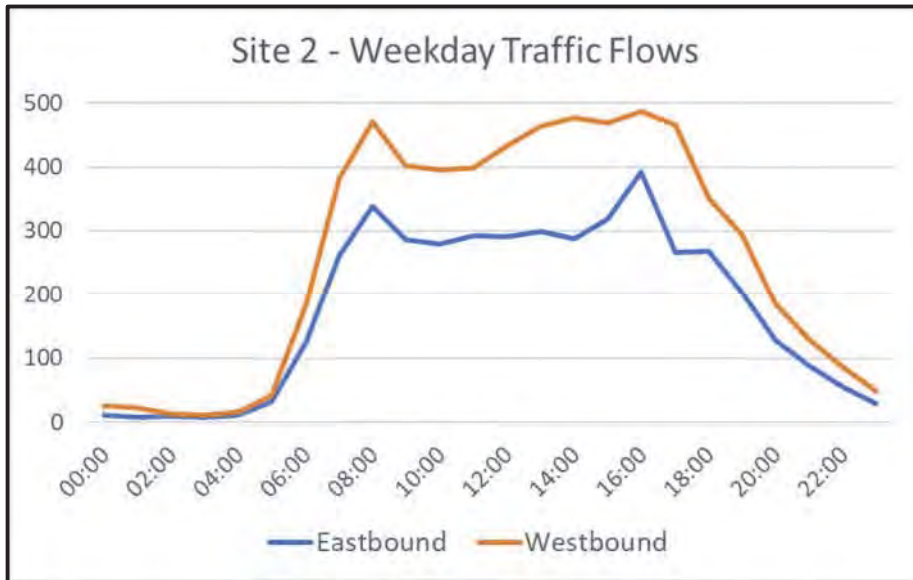


6.2.14. The directional traffic volumes observed at ATC Site 1 are tidal in nature, with higher eastbound flows in the morning and higher westbound flows in the evening. It is notable that the PM peak westbound traffic volumes are higher than the eastbound, indicating that some traffic may be



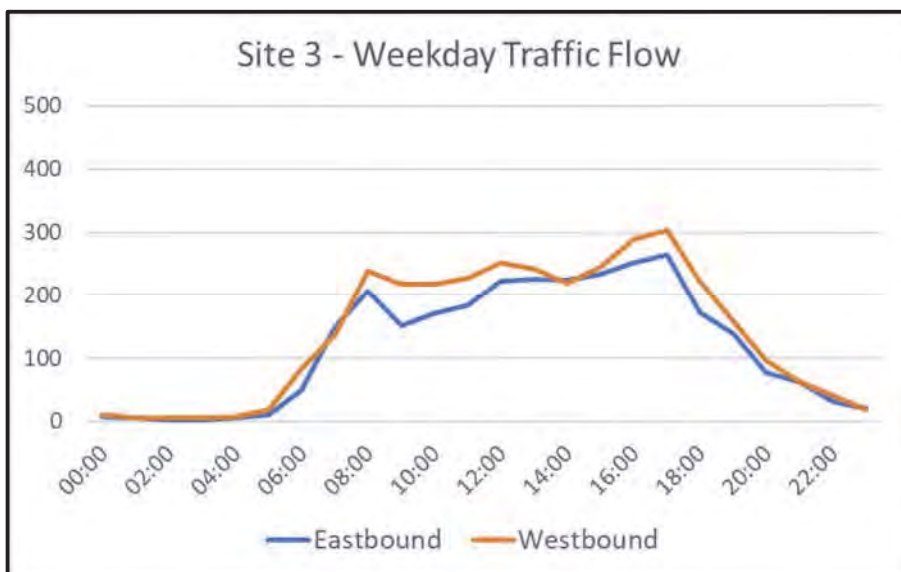
choosing an alternative route for the eastbound AM movements. Given the proximity of the hospital this routing may be a result of morning staff arrivals via routes to the south and evening staff departures routing west towards North Anderson Drive.

Figure 6.6 – ATC Site 2 – Average Weekday Flow Profile by Direction



6.2.15. The average weekday directional flow profile for ATC Site 2 does not provide a clear indication of tidal movements, as both the eastbound and westbound movements show relatively symmetrical profiles with AM and PM peak hours. While there are distinct peaks, the drop-off between the peak hours is relatively low, at less than 100 vehicles in either direction, resulting in fairly steady flows of around 300 eastbound movements per hour and at least 400 westbound movements per hour.

Figure 6.7 – ATC Site 3 – Average Weekday Flow Profile by Direction



- 6.2.16. The weekday peak hours for ATC Site 3 are less defined; traffic flows increase from nominal levels to around 200 movements per hour in both directions in the AM period and remain relatively steady throughout the day, before gradually falling after the PM peak hour. Movements are generally balanced evenly between the two directions, slightly edged by the westbound, and flows are marginally higher in the evening than in the morning.
- 6.2.17. This profile suggests that while the overall flows are lower than those of ATC Sites 1 and 2, there is a higher proportion of activity throughout the day, as opposed to being having distinct peak periods typically associated with weekday commuter travel habits.

Traffic Speeds

- 6.2.18. The average and 85th percentile traffic speeds observed at the three ATC Sites are presented in Table 6.4. This provides an indication as to whether the posted speed limit (30mph on Ashgrove Road West and Ashgrove Road) are being adhered to at each section of the street, and to allow for a comparison between speeds on each section, and by direction.
- 6.2.19. The average speeds in Table 6.4 are the mean of the speeds measured across all seven days of the surveys. The 85th percentile speeds are the seven-day average of the 85th percentile speeds recorded on each day of the survey. The 85th percentile speed is the maximum speed to which 85% of all observed traffic adheres; the remaining 15% exceed this speed.

Table 6.4 – 7-Day Speed Summary (mph)

Direction	Site 1		Site 2		Site 3	
	Average	85th %ile	Average	85th %ile	Average	85th %ile
Eastbound	31.3	35.3	28.0	33.6	29.4	33.3
Westbound	31.3	35.3	26.3	31.3	29.7	33.4
Two-way	31.3	35.3	27.0	32.4	29.6	33.4

- 6.2.20. The highest average 7-day speeds were observed at ATC Site 1, with both the eastbound and westbound average speeds exceeding 30mph by a little over 1mph. The observed 85th percentile speeds were higher, averaging over 35mph over the 7-day survey period. The same speeds were observed in both directions.
- 6.2.21. ATC Site 2, which had the highest traffic flows throughout the survey, was observed to have the lowest average speeds. Speeds in both directions were observed to be below the posted 30mph limit, and the eastbound flows were observed as the lowest speeds of all those surveyed at an average of 26mph. are lowest at site 2, with the Eastbound and Westbound 7-day averages below the speed limit. The figure for the 85th percentile 7-day average in the Westbound direction is the



lowest of the three sites. However, its 85th percentile 7-day average Eastbound is slightly higher than that of site 3.

- 6.2.22. Data for site 3 demonstrates that speed limits are mostly adhered to in this area, as 7-day average speeds are under 30mph in both directions. For the most part, average speeds at site 3 fall between those of sites 1 and 2, with the 85th percentile 7-day average speed Eastbound the only exception to this trend.
- 6.2.23. In summary, average speeds are highest and often exceed the speed limit at site 1, average speeds are the lowest and mostly within the speed limit at site 2 and average speeds are slightly higher but mostly within the speed limit at site 3.
- 6.2.24. The 2019 Road Hierarchy Study identifies speed limits of 30-40mph are suitable for priority and secondary routes, while 20mph is suitable for a tertiary route. It may therefore be necessary, in order to classify the street as a tertiary route, to lower the speed limit to 20mph and potentially introduce speed reduction measures.

6.3. Car Parking Surveys

- 6.3.1. Car parking surveys were undertaken on Tuesday 26th April and Saturday 30th April 2022. These surveys covered the length of the street, as well as the first 20m of each of the side roads that form junctions with the street. The survey area also extended north on Cornhill Terrace and Beechwood Road to observe pick-up / drop-off parking for Cornhill Primary School. The survey area is presented in Figure 6.8. Note that the survey on Cornhill Terrace did not extend beyond the junction with Beechwood Road.

Figure 6.8 – Parking Survey Area



- 6.3.2. These surveys were undertaken across a 16-hour period and recorded parking levels throughout the identified area in 15-minute intervals to build up a picture of parking demand. Parking outwith the identified bays was also be recorded, such as on footways or double yellow lines, and the presence of parking permits in vehicles will be observed.



Parking Provision and Restrictions

- 6.3.3. All of the marked bays within the survey area are signed as “*Mon – Fri, 10am – 4pm, voucher parking and residents permits only*”, and fall within Controlled Parking Zone (CPZ) Z.
- 6.3.4. The levels of parking provision on the street, the roads leading to Cornhill Primary School, and the remaining areas of the survey are summarised in Table 6.5. Individual bays are not marked, so these levels are identified on the assumption that a single bay is 5m long.

Table 6.5 – Parking Provision

Street	Residents / Permit	Unrestricted	Total
Ashgrove Road	0	23	23
Ashgrove Road West	112	0	112
Beechwood Road	14	1	15
Cornhill Terrace	3	0	3
Other	6	20	26

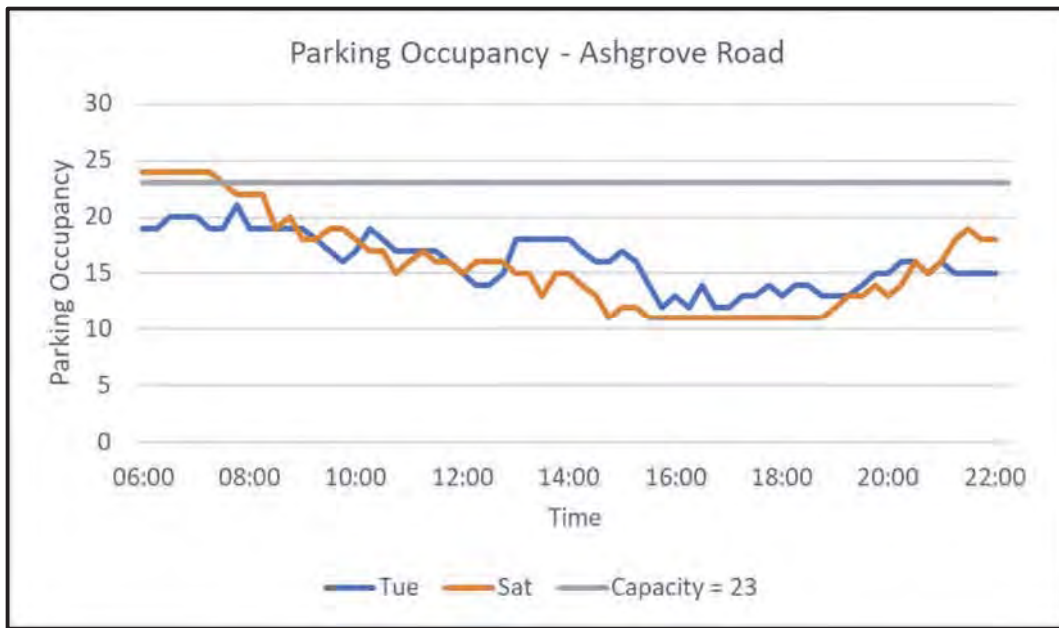
- 6.3.5. Parking provision on the main sections of the survey area is provided as follows:
- Ashgrove Road – no designated bays are provided, but there are multiple sections on the south side of the carriageway, east of May Baird Avenue, where there are breaks in the double and single yellow lines that allow unrestricted parking.
 - Ashgrove Road West – parking is provided in designated on-road parking bays, and restricted outwith those bays by either double or single yellow lines. All the bays are provided on the south of the carriageway.
 - Beechwood Road – marked bays are provided on the west side of the carriageway, and a short unrestricted section was observed that could accommodate a single vehicle. Keep Clear markings are provided along the school frontage, supported by signage stating “*no stopping, Mon – Fri, 8am – 5pm, on school entrance markings*”.
 - Cornhill Terrace – there is one short section of marked bays on the west side of the carriageway, located between Ashgrove Road West and the Beechwood Road junction. Outwith the bays both sides of the carriageway are marked by double yellow lines.

Overall Demand & Occupancy

- 6.3.6. The parking occupancy levels throughout the surveyed days for Ashgrove Road, Ashgrove Road West and Beechwood Road are summarised in Figure 6.9, Figure 6.10, and Figure 6.11 respectively.

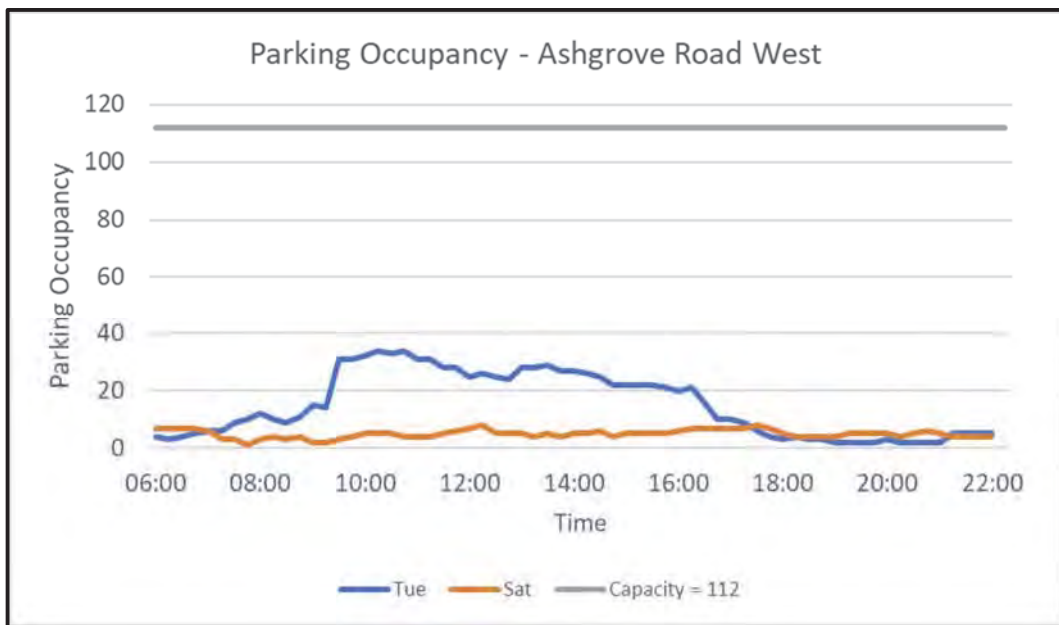


Figure 6.9 – Parking Occupancy and Capacity – Ashgrove Road



6.3.7. Parking occupancy on Ashgrove Road was near full capacity overnight and in the early morning for both the Tuesday and Saturday, and occupancy fell throughout the morning and afternoon in both days, with a minor rise around midday on Tuesday. Occupancy levels reached a minimum of around 50% on both days before rising once more in the evening.

Figure 6.10 – Parking Occupancy and Capacity – Ashgrove Road West



6.3.8. The occupancy on Ashgrove Road West was minimal overnight, and remained well below the total capacity of 112 parking spaces on both surveyed days. Occupancy was higher on the Tuesday,



reaching around 30 vehicles at approximately 09:00, and maintained a similar level throughout the day before dropping at 17:00.

- 6.3.9. The Saturday survey results show a very low number of parked vehicles; occupancy is well below capacity and remains low throughout the day.
- 6.3.10. These levels generally indicate that demand is primarily driven by employment, as occupancy levels coincide with typical weekday working hours.

Figure 6.11 – Parking Occupancy and Capacity – Beechwood Road



- 6.3.11. On Beechwood Road occupancy briefly exceeded capacity at both 09:00 and 15:00, coinciding with the pickup and drop off times at Cornhill Primary School. Outside these peak times, occupancy remains below 50% of capacity throughout Tuesday with some fluctuations.
- 6.3.12. The Saturday survey results show static occupancy levels throughout the day, and did not exceed an occupancy of approximately 50%.
- 6.3.13. A summary of the total vehicles observed across the survey, sorted by vehicle type, is presented in Table 6.6.
- 6.3.14. Three types of vehicles were observed across the entire survey – cars, LGVs, and HGVs, with cars making up the majority of the parking demand.
- 6.3.15. The two HGVs were observed on Ashgrove Road West both on Tuesday 26th April 2022:
 - The first parked in the CPZ parking area, without a permit, between 10:00 – 11:15
 - The second parked on double yellow lines between 07:30 – 09:45



Table 6.6 – Parking Totals by Vehicle Type

Street	Day	No. Cars	No. LGVs	No. HGVs	Total
Ashgrove Road	Tue	44	5	0	49
	Sat	49	2	0	51
Ashgrove Road West	Tue	58	22	2	82
	Sat	30	11	0	41
Beechwood Road	Tue	52	3	0	55
	Sat	12	0	0	12
Other Locations	Tue	24	5	0	29
	Sat	20	2	0	22

Parking Duration

6.3.16. The parking durations observed on Ashgrove Road, Ashgrove Road West, and Beechwood Road are summarised in Figure 6.12 and Figure 6.13.

Figure 6.12 – Parking Duration – Tuesday 26th April 2022



- 6.3.17. Tuesday parking duration results for Ashgrove Road show that most vehicles that parked on this street stayed for a duration longer than one hour, with a significant portion remaining for longer than five hours.
- 6.3.18. Ashgrove Road West shows similar results but skews more towards shorter durations, and with a higher overall number of parked vehicles. Around one third of vehicles parked for less than one hour and more than half parked for less than two hours. A large proportion of the remaining vehicles were recorded at between five and ten hours.
- 6.3.19. Parking durations on Beechwood Road are highly influenced by the nearby Cornhill Primary School; the majority of parked vehicles were short school pickups or drop-offs as described in the previous section.

Figure 6.13 – Parking Duration – Saturday 30th April 2022



- 6.3.20. Saturday parking duration results show a lower number of vehicles on all surveyed streets. The typical Ashgrove Road parking duration is relatively similar; the majority over one hour and a large proportion over five hours.
- 6.3.21. On Ashgrove Road West the majority of vehicles stay for less than two hours, in contrast to weekday observations. On Beechwood Road parking levels are very low outside of school access and egress times; vehicles that park here at the weekend generally stay longer than two hours. Only three vehicles were recorded on Cornhill Terrace on this day, all with a duration less than 15 minutes.



Restricted / CPZ Parking

- 6.3.22. A summary of number of vehicles parking in each type of location, whether a designated space, unrestricted space or otherwise, is presented in Table 6.7. This includes vehicles parked on single and double yellow lines, and on 'Keep Clear' signage. The number of vehicles parked in CPZ parking is also displayed, along with the number doing so without the correct permit in place.

Table 6.7 – Parking by Type of Restriction

Street	Day	Unrestricted	Single Yellow	Double Yellow	Keep Clear	CPZ	CPZ (no permit)	Total
Ashgrove Road	Tue	41	1	7	0	0	N/A	49
	Sat	46	1	4	0	0	N/A	51
Ashgrove Road West	Tue	0	15	6	0	61	50	82
	Sat	0	18	3	0	19	19	40
Beechwood Road	Tue	4	5	4	9	33	23	55
	Sat	0	0	0	0	12	4	12
Other Locations	Tue	12	0	2	0	14	9	28
	Sat	8	3	1	0	9	9	21

- 6.3.23. The majority of vehicles parking in the designated CPZ parking bays did so without the required permits, although it is noted that it is possible to pay using the PayByPhone smartphone app which cannot be observed during parking surveys., indicating that there is minimal enforcement of the CPZ restrictions. This also indicates that very few residents park on-road, particularly on Ashgrove Road West, the demand on which appears to be primarily driven by employment traffic. Several of those parking on Beechwood Road parked either on single or double yellow lines, or on the Keep Clear markings. A significantly lower proportion of those parking in the CPZ spaces did so without a permit on the Saturday. This further supports the short-term demand driven by pick-up and drop-off trips to Cornhill Primary School.



7. Active Travel Activity

7.1. Introduction

7.1.1. This section of the report will present the results of the pedestrian and cycle crossing surveys, and the public life surveys. The purpose of this analysis is to provide a baseline for existing demand and to inform the opportunities and constraints for options development.

7.2. Active Travel Crossing Surveys

7.2.1. Active travel crossing surveys were undertaken between 12th – 20th March 2022 and covered the 16-hour period from 06:00-22:00. The surveys were undertaken at key junctions within the Design Area, and at the three sets of bus stops on Ashgrove Road West. The junction locations are presented in Figure 7.1, and the bus stop locations are presented in Figure 7.2.

Figure 7.1 – Pedestrian / Cycle Crossing Survey Locations

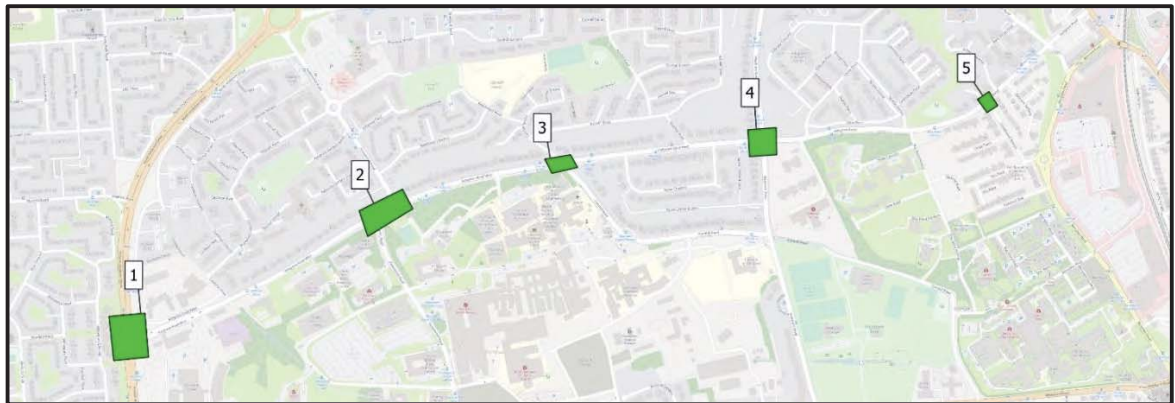
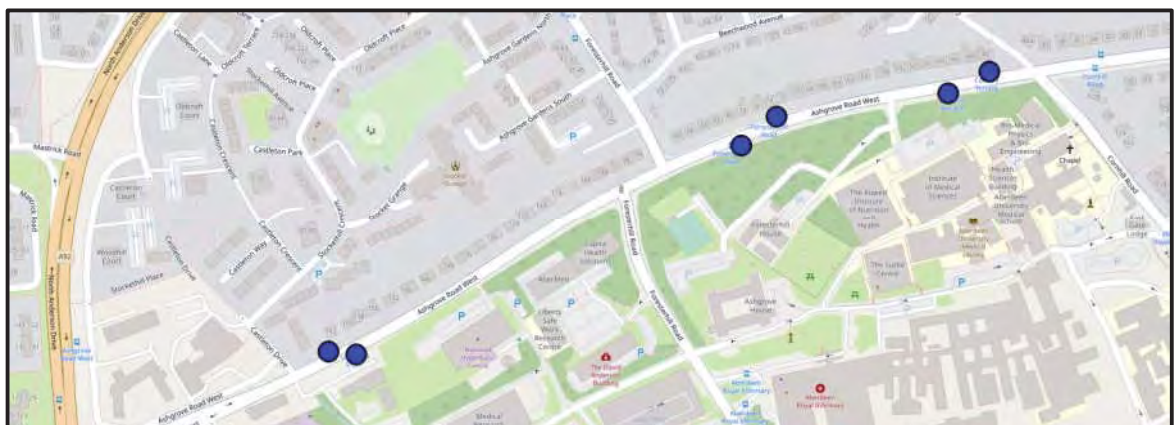


Figure 7.2 – Bus Stop Survey Locations



7.2.2. All active travel movements were recorded at the junctions and encompass each approach for a distance of at least 20m back from each junction. The surveys will be broken into 30-minute time periods and will record the direction of each movement.

7.3. Walking Movements

Figure 7.3 – Number of People Walking and Cycling in Survey Area on a Weekday



Table 7.1 – Summary of Walking and Cycling Survey Counts (Weekday)

Location	Pedestrians	Cycles	Total
Site 1	719	149	868
Site 2	1,466	145	1,611
Site 3	2,027	169	2,196
Site 4	2,805	277	3,082
Site 5	2,403	213	2,616

7.3.1. As was also the impression from site visits, the pedestrian activity is lowest to the west near North Anderson Drive and numbers rise further to the east. The total numbers are very low overall, and the level of pedestrian activity amounts to only a couple of people passing a count location per minute, even during the busier times of day. There are several locations that recorded zero pedestrian activity for a whole hour of counting. This is seen both in the outermost counts (6-7 am and 9-10 pm) but for site 1 this even occurs for several stretches during the day, in mid-mornings as well as afternoon.



- 7.3.2. This implies that area is not an attractive place to walk around in but has the additional negative impact of feeling empty and unsafe with no eyes on the street. As the number of cycles counted in the area is even lower there is also little chance of a cycle passing and so there is very little passive surveillance on the street. It is worth noting that the speed of passing traffic also impacts on the sense of safety as cars passing at high speeds are less likely to notice and incident or stop to intervene. This could be further explored as part of improving the pedestrian experience.
- 7.3.3. The primary movement on the stretch is the east-west movement however at the Foresterhill signalised crossing (site 2) the pedestrian movement on arm C which connects north-south across Ashgrove Road is the busiest one.

7.4. Cycle Movements

- 7.4.1. The number of people cycling within the Design Area is low. Cycles make up less than 10% of the total active travel count in the area which implies that the route is not an attractive cycle route. One reason might be that it does not feel safe to cycle there and this can also be seen in the fact that many people choose to cycle on the footway rather than on the carriageway.
- 7.4.2. A summary of the number and percentage of cyclists observed using the footways and carriageways at each of the surveyed sites is presented in Table 7.2.

Table 7.2 – Summary of Footway & Carriageway Usage by Cyclists (Weekday)

Location	Number			Percentage	
	Footway	Carriageway	Total	Footway	Carriageway
Site 1	74	75	149	50%	50%
Site 2	54	91	145	37%	63%
Site 3	34	135	169	20%	80%
Site 4	70	207	277	25%	75%
Site 5	34	179	213	16%	84%

- 7.4.3. Examples of where a high proportion of cycling was observed on the footway are presented in Figure 7.4 and Figure 7.5 at the Foresterhill Road junction (Site 2) and Cornhill Terrace junction (Site 3) respectively. While a full data set of cycle movements on the footways and carriageways at each of the sites has been collected, these locations have been selected as the proportion of cyclists using the footways was notable higher than elsewhere in the surveys. It is however noted that cycling movements across the entire survey are considered low, irrespective of whether they were observed on footways or carriageways.



Figure 7.4 – Site 2 Movements

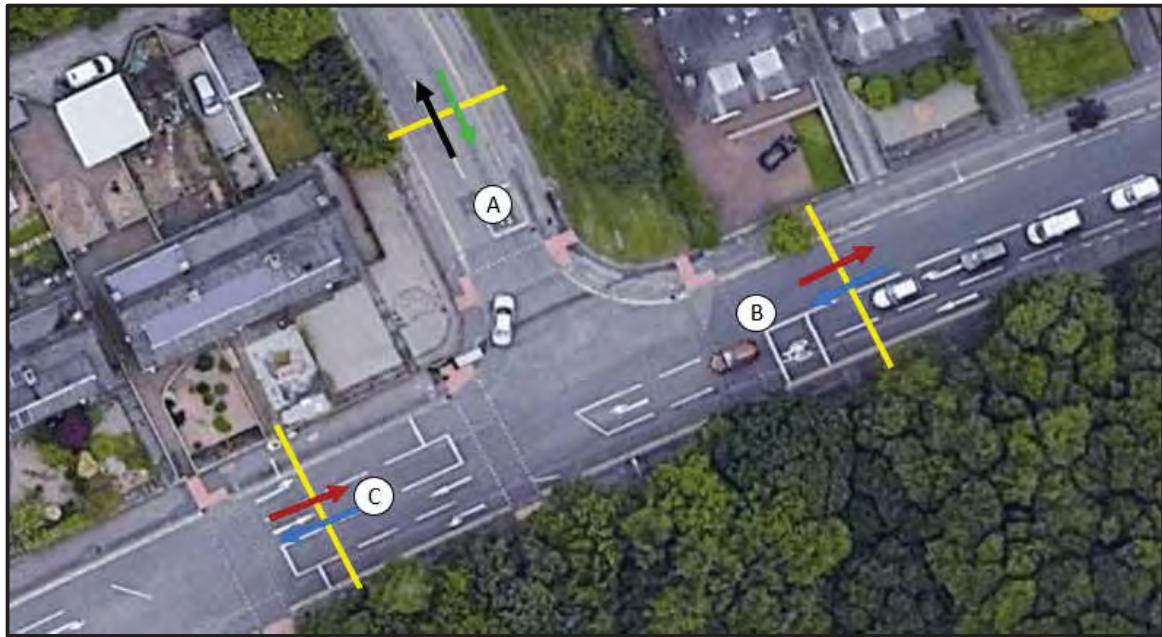


Table 7.3 – Site 2 Summary of Footway & Carriageway Usage by Cyclists (Weekday)

Approach	Number			Percentage	
	Footway	Carriageway	Total	Footway	Carriageway
Arm A	7	21	28	25%	75%
Arm B	24	43	67	36%	64%
Arm C	23	27	50	46%	54%
Total	54	91	145	37%	63%

- 7.4.4. In this situation almost half of all people cycling, chose to do so on the footway. This shows that Ashgrove Road West is not considered appropriate or safe to cycle on. Furthermore, even if it only happens occasionally, people cycling on the footway may also potentially create unsafe situations for pedestrians using the same space.
- 7.4.5. At site 2 cars are approaching the ring road and may be starting to drive at higher speeds. As this part of the road also has more commercial buildings and fewer residential there will be fewer locals cycling here and the people cycling are going further afield and may be commuter cyclists who feel confident to cycle in the road.



Figure 7.5 – Site 3 Movements

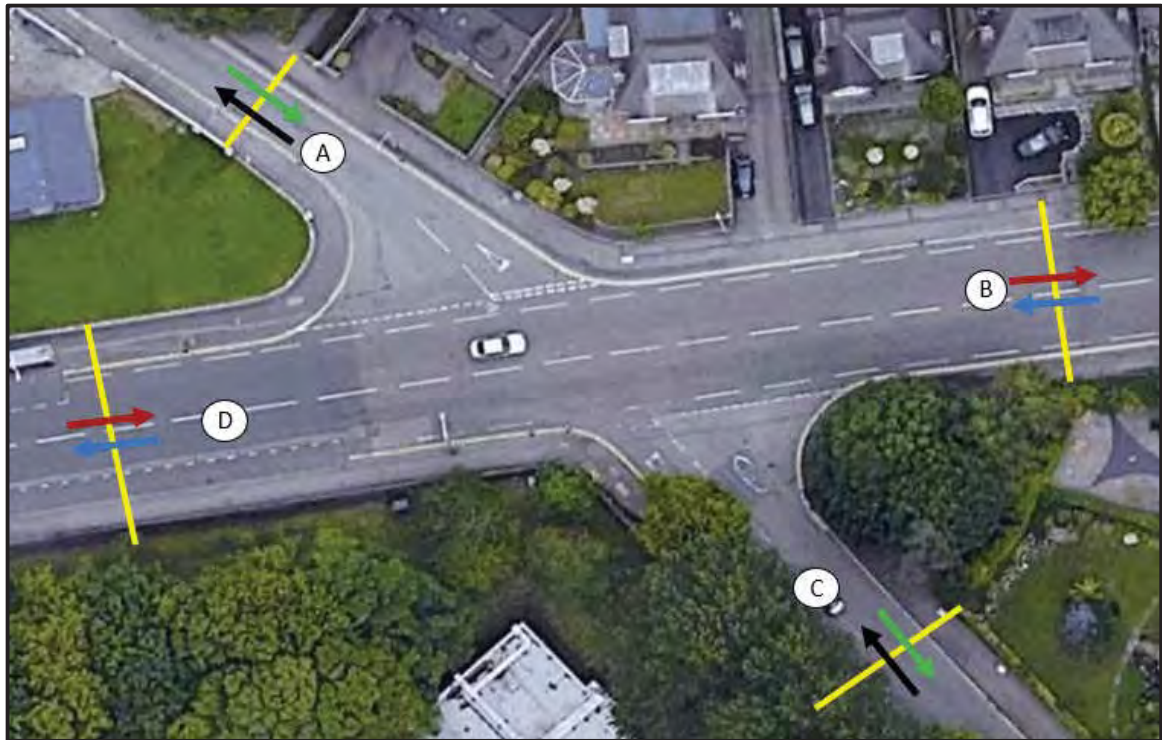


Table 7.4 – Site 3 Summary of Footway & Carriageway Usage by Cyclists (Weekday)

Approach	Number			Percentage	
	Footway	Carriageway	Total	Footway	Carriageway
Arm A	9	10	19	47%	53%
Arm B	9	51	60	15%	85%
Arm C	2	19	21	10%	90%
Arm D	14	55	69	20%	80%
Total	34	135	169	20%	80%

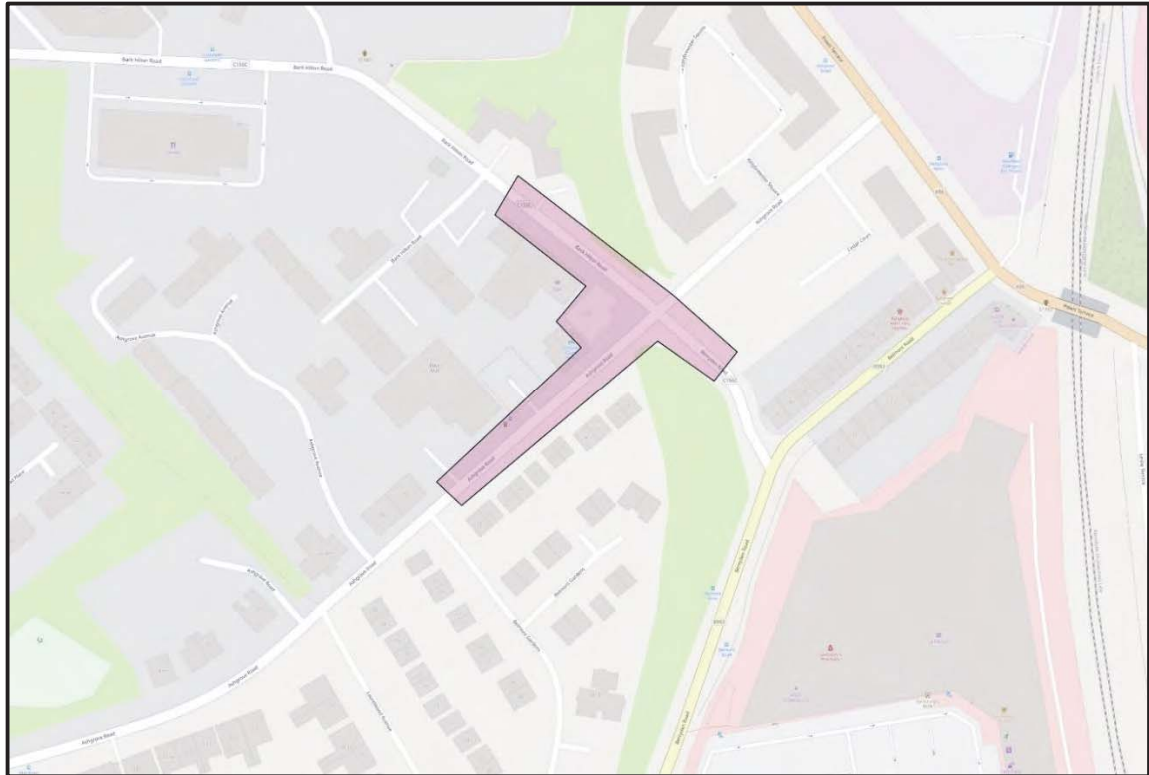
7.4.6. Site 3. Arm A, Cornhill Terrace which connects to the primary school has the highest number of people cycling on the pavement and this is likely to be a large number of children. Nonetheless it shows that even for a residential street in close proximity to a primary school the street environment is not inviting to people cycling. It is also worth noting that the southbound Cornhill Road has 90% of cycles on the carriageway which both implies that the street is more cyclable but could also partly be explained by the University site where people going to the university from Ashgrove Road West will enter/exit onto the street and may choose to cycle on the footway only once they get to Ashgrove Road West.



7.5. Public Life Survey

- 7.5.1. A Public Life Survey (PLS) has been undertaken at the east end of the Design Area, at the location shown in Figure 7.6. The PLS involved counting pedestrian and cycle movements within the designated survey area, as well as observing stationary activities and behaviours.

Figure 7.6 – PLS Location

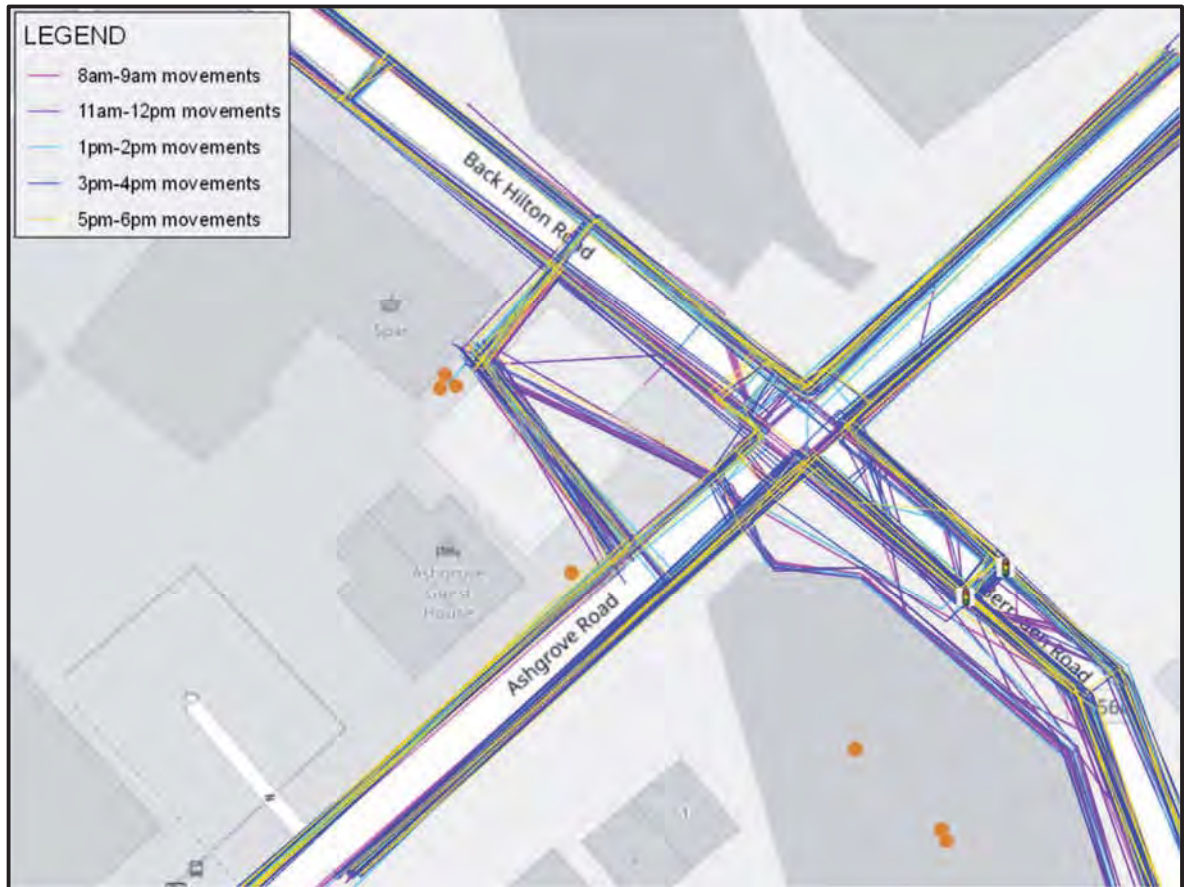


- 7.5.2. The PLS covers the same period as the crossing surveys but has gathered data over a nine-day period, with half-hour snapshots taken of the busiest periods of activity. This data is the basis for the movement tracing plan presented in Figure 7.7, which also includes locations of activity / gathering (known as 'sticky' locations).
- 7.5.3. The movement tracing shows how the junction is currently being used by pedestrians. While many people use the signalised pedestrian crossing it shows clearly that pedestrians choose to cross the street in many different locations when there are gaps in traffic rather than choosing the controlled crossing. It also shows how many pedestrians choose to follow their desire line and cross in a straight movement along Berryden Road/Back Hilton Road while others veer off their path and pass at the dropped kerbs further down Ashgrove Road.
- 7.5.4. The Public Life Survey showed very few instances of people lingering in the area. There were occasions of people walking their dog who would stay for short periods in the green area and the ATM outside the shop was a point of gathering, even if for very short time. In an instance there was



also an extended stay outside the gate to the parking area, a person being picked up in a car. The area therefore is not considered “sticky”, i.e. there are not many things keeping people in the area and the opportunities for informal gathering and meeting areas could be improved.

Figure 7.7 – Movement Tracing



7.5.5. While proposed changes to the Berryden Corridor will considerably alter pedestrian movement at the junction of Ashgrove Road, the public life survey indicates clear crossing desire lines on Ashgrove Road itself and heavy footfall on the footways. The project should consider how best to accommodate these desire lines.



8. Infrastructure Review

8.1. Introduction

- 8.1.1. The study roads are in a predominantly residential environment which connects the radial A92 to the arterial Berryden Road corridor. While it is not intended to serve an arterial / distribution function, its proximity to the key routes does make it vulnerable to through traffic. Its status is further elevated by its direct access to several major city civic facilities. The majority of the route emulates a wide traffic focused boulevard with limited attractiveness and appeal for people, place and amenity.
- 8.1.2. It is acknowledged the corridor is likely to continue to serve a semi strategic function on the local road network. This engineering review seeks to consider opportunities for redressing the balance and enhancing the study area's sustainable connectivity, place, and amenity, whilst maintaining an appropriate level of vehicular access.
- 8.1.3. The purpose of this section is to present the engineering and infrastructure conditions within the existing study area and explore design opportunities for enhancement.

8.2. Design Guidance

- 8.2.1. The reclassification of the street (in the North East Roads Hierarchy) from an A to a C class route provides the opportunity to deliver a more holistic street environment to respond to the principles of Designing Streets, the National Roads Development Guide and Cycling by Design.

Designing Streets

- 8.2.2. Designing Streets³ emphasises the importance of providing well designed streets at the heart of sustainable communities and demonstrates the benefits that can be realised by assigning a higher priority to pedestrians and cyclists from good street design. The document seeks a shift away from a rigid application of design standards and guidance to a more holistic approach to the creation of places. The overall aim can be summarised as:
- 8.2.3. *“Streets should not be designed just to accommodate the movement of motor vehicles. It is important that designers place the highest priority on meeting the needs of pedestrians, cyclist and public transport users so that growth in these modes of travel is encouraged in line with sustainable travel.”*
- 8.2.4. Designing Streets is the first policy statement in Scotland for street design and marks a change in the emphasis of guidance on street design towards place-making and pedestrian movement and away from a system focused upon the dominance of motor vehicles. It has been created to support

³ [Designing Streets: A Policy Statement for Scotland \(www.gov.scot\)](http://www.gov.scot)



the Scottish Government's place-making agenda and is intended to sit alongside the 2001 planning policy document Designing Places, which sets out government aspirations for design and the role of the planning system in delivering these.

8.2.5. Designing Streets emphasises the importance that prioritising sustainable modes is a key aspect to the creation of attractive and functioning urban environments. Designing Streets emphasises that street design should meet the following six qualities of successful places:

- Distinctive
- Safe & pleasant
- Easy to move around
- Welcoming
- Adaptable
- Resource efficient

National Roads Development Guide

8.2.6. The National Roads Development Guide (NRDG) has been produced by the Society for Chief Officers of Transport in Scotland (SCOTS), supported by Transport Scotland and Scottish Government. The document supports Designing Streets policy and bridges the gap to more traditional road design guides. The NRDG provides a framework which balances prescriptive standards with providing licence for freedom in design.

8.2.7. The NRDG was adopted by Aberdeen City Council in 2014, where a number of area specific alterations have been applied. The NRDG provides information including geometric provision, design / construction details and parking provision.

8.2.8. One of key parameters which will influence this study is the guidance pertaining to provision pedestrians. With regard to pedestrian network and routes within new developments, the NRDG states: *"Pedestrian movements should be made as convenient, safe and pleasant as possible by careful attention to the design and layout of pedestrian routes. The pedestrian network should reflect nature desire lines and be more attractive for pedestrians to use than the vehicular route. The provision for cyclists should be examined at the same time as the provision for pedestrians as the two can often be combined."*

8.2.9. Footway widths should take account of pedestrian volumes and compositions. These widths represent desirable minimums and footways should be provided to a suitable width giving cognisance to the local environment and pedestrian traffic, exceeding the minimums wherever possible.



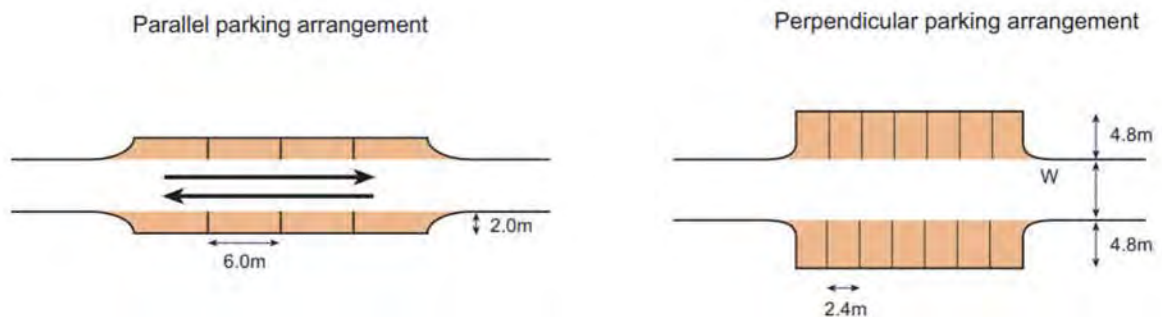
Table 8.1 – Minimum footway widths

Frontage Development	Width (metres)
None	2.5 – 3.0*
Industrial	2.0 – 5.0
Residential	2.0 – 3.0
Local Shops	4.0
Major Shops	5.0

*minimum 3.0m for arterial roads

- 8.2.10. Parking provision is another key aspect which is covered by the NRDG and Designing Streets. The NRDG makes it clear that it is important to consider a design-led approach to the provision of car parking space that is well integrated with a high-quality public realm. A design-led and contextual strategy for car parking can often lessen the impact on the built environment.
- 8.2.11. With regard to parking bay widths, the NRDG states: *“For parking parallel to the street, each vehicle will typically need an area of about 2 m wide and 6 m long. For echelon or perpendicular parking, individual bays will need to be indicated or marked.”*

Figure 8.1 – Parking Arrangements



- 8.2.12. Road widths should be considered by creating carriageway space which allows the appropriate type of vehicles to travel on the road safely and comfortably.
- 8.2.13. With regard to road widths, NRDG states: *“Road design should therefore commence with an analysis of the types of road users anticipated on the route along with the design speed. This should be considered along with the percentage of HGVs and buses and where this is expected to be high then widths should be able to accommodate these larger vehicles to pass each other in free-flowing traffic.”*
- 8.2.14. The tables below provide an indication of the necessary lane widths required to accommodate certain vehicle types.



Table 8.2 – Accommodating Different Vehicle Types

Vehicle Type	Width of Vehicle (m)	Minimum Lane Width (m)
Bicycle	0.6	1.0
Bus	2.5	3.0
HGV	2.5	3.0
Van	2.2	2.6
Car	1.8	2.0

Table 8.3 – Minimum Clearance Distances

Distance	20mph Design Speed	30mph Design Speed
Kerb to vehicle clearance	200mm	250mm
Vehicle to vehicle clearance	300mm	800mm







Cycling by Design 2021

- 8.2.15. Cycling by Design provides guidance for cycling infrastructure design on all roads, streets, and paths in Scotland. It aims to ensure that cycling is a practical and attractive choice for the everyday and occasional journeys of all people, particularly new, returning or less confident users.
- 8.2.16. The guidance provides designers with the information they need to make good design decisions and to prepare solutions which are appropriate in the overall context of each specific situation.
- 8.2.17. The guidance has been developed to respond to a key recommendation by the Active Travel Taskforce. The taskforce reported its findings in 2018 and sought to “*improve delivery of the ambitious and inclusive walking and cycling projects in Scotland that will help to create high-quality places and communities that support health and wellbeing*”. Cycling by Design supports this objective and the key infrastructure recommendations made by the taskforce.
- 8.2.18. The guidance supports the integration of cycling with people walking and wheeling in a holistic and attractive environment that serves the needs of all users, so that designs can facilitate the implementation of the Scottish Government’s Sustainable Travel Hierarchy.
- 8.2.19. Cycling by Design provides a variety of technical design considerations that should be met to ensure that active travel facilities are comfortable, safe, attractive, and suitable for walking and cycling users. This guidance includes, but is not limited to, track types, dimensions, buffers, and the need for segregation. These requirements are outlined in more detail below and overleaf.



8.2.20. Consideration must first be given to the suitability of the different cycle link types, with respect to the environments a route would navigate, and the opportunities and constraints faced. Figure 8.2 below provides an overview of the cycle link types and their differences, in terms of the level of separation provided between motor vehicles, cyclists and pedestrians.

Figure 8.2 – Link Type Considerations

Link Type	Considerations	
Mixed Traffic Streets	<ul style="list-style-type: none"> Mixing with motor traffic within suitable conditions Greatest freedom of movement for cycle users 	
Detached or Remote Cycle Tracks	<ul style="list-style-type: none"> Not adjacent to motor traffic, thus provide greatest protection May provide separation from pedestrians May not link to as many trip attractors as other options 	
Cycle track at carriageway level (adjacent to carriageway)	<ul style="list-style-type: none"> Provides physical protection from motor traffic (which may include light segregation) Provides separation from pedestrians 	
Stepped cycle track (adjacent to carriageway)	<ul style="list-style-type: none"> Provides physical protection from motor traffic Provides separation from pedestrians 	
Cycle track at footway level (adjacent to carriageway)	<ul style="list-style-type: none"> Provides physical protection from motor traffic May provide separation from pedestrians 	
Cycle lanes (on carriageway)	<ul style="list-style-type: none"> No physical protection from motor traffic Provides separation from pedestrians 	


8.2.21. The recommended route will utilise a combination of the cycle link types, and where possible, on carriageway cycle lanes will be avoided. With regards to sections of the route that extend along existing road networks, Cycling by Design outlines that due to the higher posted limits generally in place along rural road networks, that cycle paths detached or remote from the carriageway are preferred.

8.2.22. Figure 8.3 outlines the most appropriate type of cycle infrastructure for cycle links based upon the speed and volume of motor traffic in the area. It also outlines the different Cycling Level of Service provided by different infrastructure types depending on the setting and importantly, where certain infrastructure types should not be used.



Figure 8.3 – Level of Service

Motor Traffic Speed (85th percentile)	Two-way traffic flow (pcu per day)	Two-way traffic flow (pcu per hour)	Mixed Traffic Street	Detached or Remote Cycle Track	Cycle Track at Carriageway Level	Stepped or Footway Level Cycle Track	Light Segregation	Cycle Lane
0 to 30 kph	0 to 2000	0 to 200	●●●	●●●	●●●	●●●	●●●	●●●
	2000 to 4000	200 to 400	●●	●●●	●●●	●●●	●●●	●●●
	4000+	400+	●	●●●	●●●	●●●	●●●	●●
30 kph to 50 kph	0 to 1000	0 to 100	●●●	●●●	●●●	●●●	●●●	●●●
	1000 to 2000	100 to 200	●●	●●●	●●●	●●●	●●●	●●
	2000 to 4000	200 to 400	●	●●●	●●●	●●●	●●●	●●
50 kph to 65 kph	0 to 1000	0 to 100	●●	●●●	●●	●●	●●	●●
	1000 to 2000	100 to 200	●	●●●	●●	●●	●●	●
	2000+	200+	✗	●●●	●●	●●	●	●
65 kph to 80 kph	0 to 1000	0 to 100	●	●●●	●●	●●	●●	●
	1000+	100+	✗	●●●	●	●	●	●
80 kph to 95 kph	0 to 1000	0 to 100	●	●●●	●	●	●	●
	1000+	100+	✗	●●●	●	●	✗	✗
95 kph to 110 kph	All	All	✗	●●●	●	●	✗	✗



In relation to Design Principle – Safety

●●● **High Level of Service:** Suitable for most users.

●● **Medium Level of Service:** May not be suitable for some users, particularly novice users. Designer should consider the lack of attractiveness of the facility to these users and how this can be overcome or mitigated.

● **Low Level of Service:** Not suitable for a range of users, including novice and intermediate users. Should be avoided unless the risk to these users is conveyed to the Overseeing Organisation by the designer and accepted by the Overseeing Organisation. See Section 2.4.

✗ **Should not be used**

8.2.23. Another key consideration in the development of the route proposal is ensuring suitable widths are provided to accommodate path users safely and comfortably.

8.2.24. Figure 8.4 shows the recommended dimensions for cycle tracks based upon their geographical situation and anticipated cycle flows. Path and track dimensions should not be considered in isolation, instead in conjunction with Figure 8.5 which provides the guidance on appropriate buffer widths depending on the speed limit of adjacent roads. These two Figures will provide the baseline geometry and cross section for the proposed route.

Figure 8.4 – Recommended Buffer Widths by Road Speed

Speed Limit	Minimum Buffer Width
30 mph	0.50 m
40 mph	1.00 m
50 mph	2.00 m (including any hard strip)
60 mph	2.50 m (including any hard strip)
70 mph	3.50 m (including any hard strip)



Figure 8.5 – Recommended Cycle Track Widths

Cycle Track Types		Footway Width	Separation	Cycle track width* – One-way, less than 300 cycles per hour peak	Cycle track width* – One-way, more than 300 cycles per hour peak	Cycle track width* – Two-way, less than 300 cycles per hour peak (per direction)	Cycle track width* – Two-way, more than 300 cycles per hour peak (per direction)	Buffer Width
Remote Cycle Tracks Separated from Pedestrians	Desirable minimum	2.0 m	Varies with Facility	2.0 m	2.5 m	3.0 m	4.0 m	N.A.
	Absolute minimum	1.5 m	Varies with Facility	1.5 m	2.0 m	2.0 m	3.0 m	N.A.
Remote Cycle Tracks Shared with Pedestrians	Desirable minimum	N.A.	N.A.	Not Recommended	Not Recommended	4.0 m	Not Recommended	N.A.
	Absolute minimum	N.A.	N.A.	Not Recommended	Not Recommended	2.5 m	Not Recommended	N.A.
Cycle Tracks adjacent to Carriageway Separated from Pedestrians	Desirable minimum	2.0 m	Varies with Facility	2.0 m	2.5 m	3.0 m	4.0 m	Refer to Table 3.8
	Absolute minimum	1.5 m	Varies with Facility	1.5 m	2.0 m	2.0 m	3.0 m	Refer to Table 3.8
Cycle Tracks adjacent to Carriageway Shared with Pedestrians	Desirable minimum	N.A.	N.A.	Not Recommended	Not Recommended	4.0 m	Not Recommended	Refer to Table 3.8
	Absolute minimum	N.A.	N.A.	Not Recommended	Not Recommended	2.5 m	Not Recommended	Refer to Table 3.8

* On gradients greater than 3%, cycle track width should be increased by 0.25 m to allow for greater lateral movement.
 * Where gullies are present on a cycle track that do not allow cycles to easily overrun, the cycle track width should be increased by the widths of the gully.

8.3. Preliminary Review of Design Area Infrastructure

Table 8.4 – Preliminary Review of Design Area Infrastructure

Location and Environment

Ashgrove Road West is a wide two-lane single carriageway to the west of Aberdeen City Centre. It is positioned to the north of the A944 Westburn Road, the east of A92 North Anderson Drive and west of the A96 Great Northern Road. It generally lies on a west – east axis and is generally residential in nature. The road also provides access to a number of health, civic and commercial properties. The road is subject to a 30mph restriction and situated within a Controlled Parking Zone.

Ashgrove Road is predominantly a wide single carriageway which narrows east beyond the Laurelwood Avenue side road junction. The western section of the road has minimal direct frontages, with residencies and health facilities setback via a secondary carriageway. The eastern side of the road is predominantly fronted by flatted residential properties.

Transport Provision

Walking Provision

A continuous footway is provided on both sides of the carriageway. This is except for the northern footway between North Anderson Drive and Castleton Drive which deviates into a secondary carriageway. The footway widths appear to be approximately 3m wide, although this is constrained by trees and lighting columns. The footways narrow to 1.8-2m wide on Ashgrove Road between Laurelwood Road and Great Northern Road.

Most road crossings are uncontrolled except for the signal-controlled junctions at North Anderson Drive, Foresterhill Road and Westburn Drive. The drop kerb provision at crossings is also inconsistent.



	<p>Several of the side road crossings are long, for example at Cornhill Terrace the approximate crossing distance is 21m and Cornhill Road 17m. It is worth noting Chapter 6 of the Traffic Signs Manual suggests that for signal-controlled crossings a staggered crossing should be considered for crossings over 12m and implemented for crossings over 15m.</p>
Inclusivity	<p>There is limited provision for vulnerable or impaired pedestrians on the corridor. Tactile paving is only provided at the signal-controlled junctions of Foresterhill Road and Westburn Avenue.</p>
Cycling Provision	<p>Cycling provision is limited to marked on-road cycle lanes on both sides of Ashgrove Road West, with an approximate width of 1m.</p>
Public Transport	<p>Public transport provision is limited to Ashgrove Road West, where six bus stops are provided. Only one shelter is provided in the eastbound direction adjacent to Cornhill Terrace. Bus stop cages are marked on the carriageway, no bus stop has a lay-by.</p> <p>During the site visit a number of passengers were observed egressing and alighting at the stops nearest the University of Aberdeen Medical Campus.</p>
Parking	<p>Cycle parking is provided within the campus of the University of Aberdeen Medical Campus, the Hospital and Aberdeenshire’s Woodhill House. There is no cycle parking on Ashgrove Road / West.</p> <p>Ashgrove Road West is within the Controlled Parking Zone Z, therefore, all lengths of road must be covered by some form of restriction/ control. Marked parking bays are provided on;</p> <ol style="list-style-type: none"> Northern side, 25m west of Castleton Drive, westwards for approximately 90m. Southern side, four bays are provided; <ul style="list-style-type: none"> East of the Ambulance Service access (40m length); West of Foresterhill Road (South) (260m length); East of Foresterhill Road (South) (165m length); West of Cornhill Road (45m length) <p>Parking in the bays is restricted to those in possession of a valid resident’s permit, vouchers or have paid by phone. Occupancy levels were low during the day and evening visits. Junctions are protected by no waiting at any time restrictions whilst waiting was only prohibited between 9am and 5pm Monday to Friday.</p>
Environment	
Topography	<p>Ground levels along the corridor centre visually gently rise from the east extents of the corridor, where Ashgrove Road is approximately 38m above sea level, to a height of approximately 101m at North Anderson Drive. Ground levels to the south of the route corridor are either level or fall gently from the roadside. Land to the north of the corridor rises with varying degrees of severity. Ground level variations are less pronounced east of Westburn Drive.</p>



Land-Use

Land use along the northern perimeter of Ashgrove Road West is predominantly low density residential. This is with the exception of between North Anderson Drive and Castleton Drive, where an office complex and high-density residential properties are set back from the main carriageway and access via secondary carriageways. West of Cornhill Road the land on the south is primarily occupied by;

1. Aberdeenshire Council;
2. Scottish Ambulance Service;
3. JFD – National Hyperbaric Centre (training);
4. Aberdeen Royal Infirmary Campus; and
5. Aberdeen Universities Institute of Medical Sciences.

Land between Cornhill Road and Westburn Drive are occupied by residential properties similar to those on the opposite side of the carriageway.

On Ashgrove Road, between Westburn Drive and Laurelwood Avenue the built environment is generally set back from the corridor. Direct frontage is limited to a small number of medium density residential properties. East of Laurelwood Avenue the corridor is fairly constantly bounded flatted medium density residential properties. A number of non-residential facilities are located on the northern side of Ashgrove Avenue and Berryden Road, with the most prominent being the Royal Mail’s Kittybrewster Delivery Office and a SPAR convenience store and its associated car park.

Green Infrastructure

Trees and tree pits are provided on both northern and southern footways at varying intervals. At least four tree pits are empty, with the other being occupied by trees of varying girth, maturity and amenity. The trees all appear to be deciduous trees, as during site visits in February non had leaves. The trees and trees pits, as discussed within the pedestrian section, significantly impacts the effective width of the footways for pedestrians.

Most areas of unoccupied land adjacent to the corridor have areas of trees planted, with varying levels of density.

Space

The corridor does not contain any obvious vacant / unutilised space. There are significant parcels of land which are unoccupied greenspace, such as alongside Ashgrove Road West;

1. land north of the corridor between North Anderson Drive and Castleton Drive;
2. Portions of land within third party ownership of particular note as a wooded area within the Aberdeen Universities Institute of Medical Sciences. This land is immediately adjacent to the corridor and is situated between the core of the campus and the Hospital campus; and
3. Land alongside Braefoot Road.

A considerable proportion of land north of Ashgrove Road is unoccupied greenspace.



Play and Leisure

Direct play and leisure are limited to Beattie Avenue playpark, however there is considerable amount of outdoor space dedicated for play and leisure within a short distance of the corridor, including;

1. Westburn Park including tennis, a skatepark, lawn bowls, cycle proficiency space, play facilities;
2. Cornhill Park and Playground;
3. Stockethill Play Park; and
4. Midstocket Park.

Flooding

The likelihood of river and surface water flooding across the study area can be reviewed through the Scottish Environmental Protection Agency’s (SEPA) flood maps. The figure below contains flood maps for Aberdeen City and the study area.



SEPA’s flood map shows that the Ashgrove Road corridor is situated outside the flood risk area of any waterway in Aberdeen. To the south of the study area highlighted by the dark blue / light blue colouring, a high likelihood is categorised as an area with a 10% / 0.5% chance of flooding respectively.

The study area is susceptible to small, isolated areas of surface water flooding, marked by the purple colouring. The map shows areas of both high and medium likelihood of surface water flooding annually.

The likelihood of river and surface water flooding across the study area is highly unlikely to adversely impact any proposed active travel route alignments.

Carriageway, Traffic Management and Operations

Alignment / Cross Section

The full route follows a generally straight alignment, although there is a gentle curve Ashgrove Road West between Foresterhill Road and



	<p>Westburn Drive, however this is likely to be barely notable to road users and unlikely effects their behaviours. Ashgrove Road gently meanders between Westburn Drive and Laurelwood Avenue. The corridor follows a generally west – east orientation, although the western and eastern extents follow a more pronounced southwest – northeast orientation.</p> <p>The cross-section of the Ashgrove Road West is a two-lane single carriageway route which is subject to a 30mph speed restriction. However, the carriageway width varies between 11m – 13m, far in excess 6m – 7.3m width typical of a standard urban residential route. At signal-controlled junctions the carriageway is sub-divided into several lanes to separate designated movement.</p> <p>Similarly, Ashgrove Road, between Westburn Drive and Laurelwood Avenue is generally 9m – 10m, narrowing east of Laurelwood Avenue to 7m – 8m</p>
<p>Junctions / Accesses</p>	<p>A significant number of junctions are situated directly on the route and are summarised below;</p> <ol style="list-style-type: none"> 1. 1 x three arm signal-controlled junction at North Anderson Drive 2. 1 x staggered signal-controlled junction at Foresterhill Road 3. 1 x four arm signal-controlled junction at Westburn Drive 4. 1 x uncontrolled crossroad junction at Berryden Road (Ashgrove Road minor arms) <p>Ashgrove Road West forms priority junctions at least 7 side roads excluding commercial, third party, unadopted and residential accesses. No dedicated right turn facility is provided at priority junctions; however, this is unnecessary due to the road width. The majority of residencies alongside the road have private driveways accessed via footway crossovers. It is a similar situation with Ashgrove Road, where it also junctions with 7 side roads.</p>
<p>Traffic Signals</p>	<p>At North Anderson Drive, traffic is controlled by traffic signals. Ashgrove Road West is a minor arm. Two lanes are provided on the approach to the junction and two on the exit arm. Ashgrove Road West has a long central island which separates traffic flows. Traffic approaching from the north and turning left into the corridor, do so via a filter lane. Pedestrians are provided an all-green phase, however, due to the filter lane all crossings involve two stages.</p> <p>Foresterhill Road and Ashgrove Road West form a signal-controlled staggered crossroads. Like North Anderson Drive pedestrian appear to have an all-green phase, which due to the complexity of the junction can take some time to appear.</p> <p>Westburn Drive is a typical signal-controlled crossroads, with an all-pedestrian phase. All controlled crossings are push button activated.</p>
<p>Lighting</p>	<p>Ashgrove West is illuminated by streets lighting with columns provided on alternating sides of the carriageway at intervals of 30-40m and situated to the front of the footway. The columns are constructed with concrete and the brackets appear to be galvanised steel. The head appears to have been upgraded to LED. The base of the column is approximately 350mm by</p>

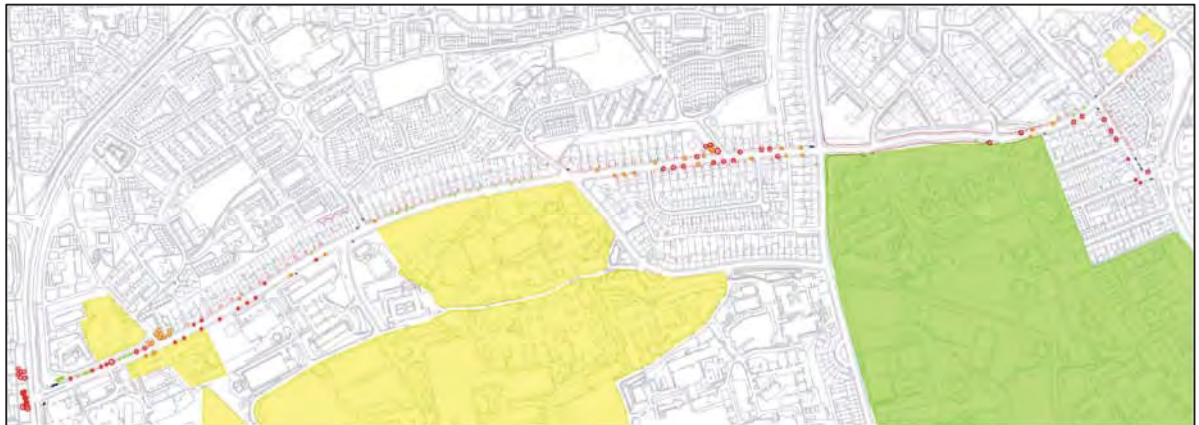


	<p>400mm which significantly reduced the actual and effective footway widths. Furthermore, to allow a 450mm offset from the carriageway the posts can effectively impact approximately 1m of the footway cross-section.</p> <p>On Ashgrove Road the columns are most slender and generally situated in grass verges. Between May Baird Avenue and Laurelwood Avenue the columns were predominantly on the southern side of the carriageway and further east on the northern side. The footways are narrower at these locations therefore the columns are situated to the rear of the footway to minimise impacts on effective widths.</p>
<p>Drainage</p>	<p>Through the preferred route corridor, surface water is generally removed from the carriageway through carriageway edge drainage. Visually there appears to be a shallow camber applied to the road and footways gently fall towards the carriageway.</p> <p>No obvious SuDS provision was noted within the preferred route corridor.</p>
<p>Pavement</p>	<p>No cores or intrusive carriageway surface surveys have been undertaken. Visually the carriageway is constructed of a typical bituminous surface. The condition is reasonable and most wear observed around patches and other localised carriageway works.</p>
<p>Utilities</p>	<p>A C2 notification was issued to Statutory Undertakers in line with the New Roads and Street Works Act 1991. Thirteen Statutory Undertakers have confirmed they had apparatus within the corridor.</p> <p>These include:</p> <ol style="list-style-type: none"> 1. Scottish Gas Networks currently have low and medium pressure gas mains below Ashgrove Road West and Ashgrove Road. The medium gas mains are generally situated within the carriageway boundary whilst the low-pressure main is situated below the footways. 2. BT Openreach, Neos Network, City Fibre and Vodafone all have fibre optic infrastructure within the study area. Generally, the cables are below either both footways or one of the footways. 3. Scottish and Southern Electricity Network have low voltage cables situated through Ashgrove Road and Ashgrove Road West. 4. Scottish Water have water distribution pipes and combined sewers situated below both Ashgrove Road West and Ashgrove Road.

8.4. Summary of Corridor Constraints and Opportunities

8.4.1. The corridor can be viewed as two separate zones, Ashgrove Road West, and Ashgrove Road including Laurelwood Avenue, with clear opportunity and constraint differences. **Figure 8.6** illustrates a snapshot of the key known constraints in the study area at this interim step.



Figure 8.6 – Key Constraints


- 8.4.2. Ashgrove Road West has a 12m wide carriageway with the restrictions located in the footways, trees, utility infrastructure, private property entrances. **Figure 8.6** highlights these restrictions, as trees are colour coded using the traffic light system, utility boxes are highlighted as black boxes, walls are highlighted as red dashed lines, and private drives are shown indicatively. Working within the current carriageway boundaries allow for a number of opportunities due to the width available without having to deal with the constraints. These opportunities may include widening existing footways, introducing cycling facilities suitable for all ages and abilities, while achieving a reduction in carriageway width available to motor vehicles.
- 8.4.3. Ashgrove Road has a narrower 7.5m-9m wide carriageway with similarly located constraints within the footways. Due to the narrower carriageway opportunities are limited within the current width and would potentially require reduction to the space available on footways and verges. These options then must deal with the restrictions within the footways. The opportunities described above are still available within this zone, but the width restrictions would require trade-offs to be made between different uses of the street.
- 8.4.4. There are businesses and services located along the length of the corridor, the key ones being the hospital, University of Aberdeen, the ambulance service, the Post Office, and the Spar (yellow highlights). These all come with their own restrictions, primarily accessibility. They all require good and clear access for non-motorised, public vehicle, and private vehicle, users.
- 8.4.5. Historical and conservation restrictions are indicated in green. The Rosemount and Westburn conservation area being the only conservation area within the study area, with a number of listed buildings. There are a few other listed buildings outwith the corridor. These are unlikely to cause any restrictions to the current scope and are not shown.



9. Net Zero Opportunities

9.1. Introduction

- 9.1.1. Aberdeen City Council has a Net Zero Vision which includes the pledge to reach Net Zero emissions in assets and operations by 2045 in line with Scottish Government targets. The plan includes interim goals of achieving 48% reduction by 2025 and 75% reduction by 2030 (against 2015/16 baseline). In addition to reducing carbon emissions and mitigating future climate change Aberdeen's Climate Plan also includes measures to adapt both infrastructure and operations to the shocks and stresses caused by climate change and ensure the city is climate resilient in the future.
- 9.1.2. There are opportunities to support this transition within the project both by providing the physical infrastructure required to achieve a low carbon future but also by planning for longer-term changes to mobility patterns, vehicle fleet standards and national legislation likely to be in place by the year of opening which will allow the operation of and access to the Ashgrove Road West and Ashgrove Road corridor to be substantially different from today.

9.2. Good practice examples of Net Zero Delivery Mobility Hubs

- 9.2.1. A key component of the transition to Net Zero is providing attractive, affordable and reliable alternatives to transport by private car. A good example of providing this service comes from Gloucester where Mobility Hubs will bring together both traditional modes of public transport as well as a host of transport alternatives to suit most needs such as electric scooters for fast urban mobility, e-cargo bikes as alternative for last mile delivery and local cargo transport. By combining it with practical facilities such as package collection points, public toilets, recycling points as well as social amenities like cafes and community space these hubs have the potential to be both practical crosspoints but also central gathering places for the community.

Complementary Behaviour Change measures

- 9.2.2. Moving communities off their reliance on private cars for their daily transport requires both a new infrastructure as well as a new way of going about daily life. A great example of a council which has seen a steep change in the daily mobility routines of its residents is Waltham Forest near London. Through a process that has gone on for nearly a decade, combining new infrastructure - such as segregated cycle tracks, speed reduction measures and filtered streets - with behaviour change campaigns to take people along on the ride Waltham Forest has become a model for active travel in the UK. While private car is still dominant the area has the highest share of active travel among outer London boroughs and the project has been especially successful in getting people to walk for their local trips instead of short car journeys.



Cycle to work campaigns – campaign and infrastructure

- 9.2.3. Many businesses across the UK have joined in the work to get more people to walk or cycle to work. One example is the NHS who have implemented cycle-to-work schemes that encourage more staff to cycle to work through campaigning but also makes the Cycle to Work tax exemption scheme easy to utilise. Apart from this encouragement NHS has also supported councils in designing and delivering protected cycle routes and invested in better infrastructure for safe bike parking on site. NHS Grampian are among the NHS sites that are actively supporting Active Travel and they are an important stakeholder in this project going forward.

Freight Consolidation

- 9.2.4. As a response to a planned 40% increase in retail floor space planned for Broadmead, Bristol's core retail area, and the outlook of a corresponding increase to the 100,000+ deliveries per year already causing challenges in the city centre, Bristol has developed a freight consolidation scheme. By encouraging a new business model for retailers including packaging collection and remote stock storage in a consolidation centre 10 miles from the city centre and well connected to the strategic road network the aim was to reduce the number of delivery vehicles operating in the centre and reduce the harmful effects of this operation such as poor air quality and danger to pedestrians and vulnerable road users deriving from vehicles manoeuvring dangerously in and around loading areas. The trial period saw a reduction in CO2 emissions of more than 20 tonnes and almost 200,000 km of vehicle kilometres saved, thus also affecting the main routes to the city centre in a positive manner.

Green Infrastructure

- 9.2.5. The transition to Net Zero takes place in other domains than Active Travel and Transport. As the Aberdeen Climate Plan highlights future-proofing the city will require both mitigation measures as well as adapting urban infrastructure to cope with the effects of climate change. A good example of re-designing streets to suit the future is Copenhagen's Climate Resilient Neighbourhood, a demonstration project for retro-fitting a dense urban neighbourhood with green infrastructure. By reducing the speed on Bryggervangen and optimising the street geometry, the project was able to include surface water management infrastructure which can accommodate an extreme rain event and prevent sewer flooding but in a way that contributes to the urban environment by including several hundred new trees, significant bio-diversity gain as well as formal and informal meeting places for the community.



9.3. Net-zero Opportunities for Ashgrove Connects

Physical Infrastructure

- 9.3.1. Aberdeen City Council already has targets to provide infrastructure that supports the transition to Net Zero such as installing Elective Vehicle charging points and replacing lit signs and bollards with low-energy, cost-effective intelligent LED lights and upgrading street lighting to intelligent solutions.
- 9.3.2. With the change of class from A-road to C-road there is scope to change the layout of the carriageway to give more space to low-emissions transport alternatives. The provision of a safe, attractive, and effective active travel connection between North Anderson Drive and Berryden Road would provide a great alternative for local journeys, especially travel to the local primary school, to the large workplaces in the area and to the university sites. By improving the streetscape and using placemaking tools to improve the experience of moving around Ashgrove Road the area would also become more attractive for both people cycling and walking/wheeling to travel actively to the local shops instead of using private car for short journeys.
- 9.3.3. While public transport is a small percentage of current traffic on the street there are opportunities to improve the function as a bus corridor by improving access for buses through the street with bus lanes/gates and priority through junctions.

Mobility Hubs

- 9.3.4. The push to Net Zero involves reducing the number of journeys taken in private cars and so providing attractive alternatives will be key. There is an opportunity to create clusters where several sustainable transport alternatives are available in one location so users can always chose the mode of transport that suits their need at any given time – jumping on a bus to city centre, renting a bike to take a cycle ride to Westburn Park or picking up a car-share vehicle for a weekend trip. By clustering several services in one location the quality of the place can also be improved. A mobility hub with high quality shelter, seating, safe bike storage, electric charging points and place to rest/play while waiting will be valuable to both people cycling, riding the bus or picking up a car-share car.

9.4. Net-zero Partnerships

- 9.4.1. The Net Zero transition requires reducing emissions at an operational level and so external parties will play a large part in achieving the reductions needed. A number of large businesses adjacent to the street are already in the process of reducing their emissions.
- 9.4.2. Dialogue has started with several businesses and depending on the desire expressed, the project may include provision of infrastructure for Electric vehicles, Hydrogen vehicles and other low-emissions vehicles from the vehicle fleet of large businesses (especially Royal Mail) or include space for Car-share schemes parking or safe cycle storage near their buildings.



- 9.4.3. NHS Grampian is a key stakeholder who already have active travel policies in place to support and encourage both staff and users to use active modes of travel rather than motor vehicles. The NHS has been part of walking audits in the Design Area and conversation will continue to determine how Ashgrove Connects can support the work that NHS Grampian is already doing to support the transition to Net Zero.

9.5. Green Infrastructure

- 9.5.1. While the Design Area has several greenspaces and many mature trees in the sites adjacent to the road they do not currently serve additional function and the project could explore opportunities to enhance greenspaces and add to their value by providing additional services such as surface water management, urban cooling or bio-diversity effects. New Green Infrastructure solutions may also be included as part of enhancements/improvements to the street design (narrowing of junctions, improved crossing points, etc.).

9.6. Summary

- 9.6.1. While many Net Zero opportunities may not be delivered directly through the Ashgrove Connects project the buy-in and support of the local community and large stakeholders will be key to achieving the carbon reduction targets set out in Aberdeen City Council policy. There is however an opportunity to produce a carbon management / reduction plan for the design, construction, and maintenance of any works to further reduce emissions.
- 9.6.2. The team will continue to engage the local community in conversations about sustainable transport and the transition to net zero and will engage with key businesses/organisations to ensure that the physical infrastructure provided through this project will be supported by operational changes and behaviour change measures, so the infrastructure is put to full use in the future. While this RIBA Stage 2 can identify the opportunities for change, specific proposals should be worked up further alongside RIBA Stages 3 and 4.



10. Engagement Analysis

10.1. Introduction

- 10.1.1. The project will take a participatory approach to engagement which will actively involve the public and stakeholders at all stages to ensure their needs and aspirations are identified, understood, and considered, and to provide a level of influence over decisions.
- 10.1.2. A key part of the project will be working directly with residents, businesses, pupils, students, and stakeholders to improve the street and public spaces through a series of activities online and in the local area, providing an opportunity for people to get involved at every stage.
- 10.1.3. A Stakeholder Engagement and Communications Plan has been developed which sets out the aims and objectives of the engagement process alongside a Stakeholder Matrix to identify levels of stakeholder influence against anticipated levels of interest in the project.
- 10.1.4. An activities tracker is being kept up to date to record the level of engagement throughout the project.

10.2. Engagement (Define Stage)

- 10.2.1. The initial engagement period for the project commenced on Tuesday 8th March and was originally due to close on Sunday 27th March. This was extended to Sunday 3rd April, recognising the level of local interest in the project and value for the community.
- 10.2.2. The purpose of this engagement period was to raise awareness and understanding of the project locally and gather information from the community on their experiences of using the streets. The information gathered will help to define priorities and shape how the project develops.
- 10.2.3. A Stakeholder Engagement and Communications Plan for the project has been developed and an activities tracker is being kept up to date to record the level of engagement throughout the project.

10.3. Communications

- 10.3.1. A briefing was issued to all members representing Wards 5 (Hilton/Woodside/Stockethill) and 7 (Midstocket/Rosemount) on Monday 7th March with an invitation to join an online meeting on Monday 14th March.
- 10.3.2. A press release was issued to local media on Monday 7th March. The Press and Journal covered this in their online edition on Wednesday 9th March. It was also published on the Nestrans and ACC websites.
- 10.3.3. Notifications were issued to all identified stakeholders on Tuesday 8th March to introduce the project, extend the consultation invite and request support to raise awareness of the project locally.



A social media pack with suggested posts was also included for stakeholders to raise awareness though locally established communication channels.

- 10.3.4. Leaflets were distributed to all households and a separate business pack delivered to businesses within the Study Area on Tuesday 8th March. An electronic leaflet was emailed to all Cornhill Primary School parents/guardians and posters were distributed on the street and to venues within the engagement area.
- 10.3.5. A dedicated project website was launched on Tuesday 8th March to act as the main communication reference point for the project moving forward: <http://ashgroveconnects.commonplace.is>

10.4. Engagement Activities

- 10.4.1. The activities held during this initial engagement period are summarised in Table 10.1.
- 10.4.2. A more detailed overview of the activities is provided in the Stage 1 Engagement Report (CR-D1)

Table 10.1 – Engagement Activity Summary

Date	Activity	Stakeholder Group	Attendees
Tuesday 8 th March	Walking audit	NHS Grampian	3
Wednesday 9 th March	Walking audit	Community Group Representatives (Cornhill, Cairncry and Rosemount Community Associations)	3
Thursday 10 th March	Meeting	Nestrans	1
Wednesday 16 th March	Webinar	Open to the public	15
Monday 21 st March	Meeting	Residents of Ashgrove Road West	21
Monday 21 st March	Walking audit	Open to residents	5
Tuesday 22 nd March	Walking audit	Open to residents	1
Wednesday 23 rd March	Walking audit	Cornhill Primary School	9
Wednesday 23 rd March	Walking audit	University of Aberdeen	3
Overall Attendees			61



Figure 10.1 – Walking Audits with Community Representatives



10.5. Summary of Responses

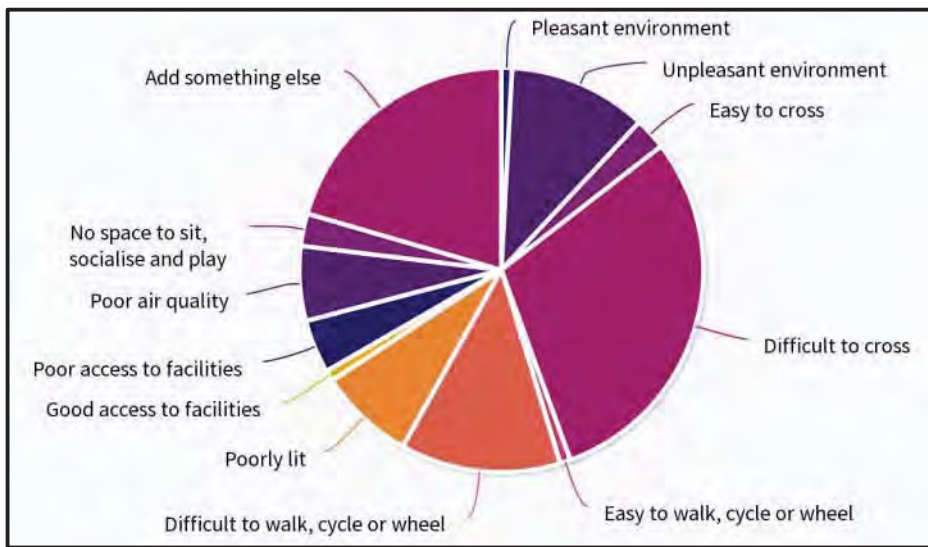
- 10.5.1. A more detailed analysis of respondents and contributions is provided in the Stage 1 Engagement Report (CR-D1).
- 10.5.2. Between Tuesday 8th March and Sunday 3rd April, the project website received 958 visitors with 677 contributions either submitted directly on the website or surveyed by the project team.
- 10.5.3. Most respondents either live and work in the area and normally travel by active modes when combining on foot and by bike. There were slightly more female respondents and most fell within the 35-44 age category.
- 10.5.4. The top three topics respondents commented on overall were *traffic and parking*, *moving around on foot, by bike or wheelchair* and *feeling safe*. Figure 10.2 presents the themes respondents commented on, with the most popular appearing the largest.

Figure 10.2 – Word Cloud of Respondents' Comments



10.5.5. When commenting on **traffic and parking**, respondents felt either negatively or mostly negatively (87%) towards this due to it being *difficult to cross, difficult to walk, cycle or wheel* and *unpleasant environment*. Figure 10.3 presents the reasons respondents gave for their sentiment towards traffic and parking. Respondents suggested this could be improved by *improve crossings, slow vehicles and add signage / navigation*.

Figure 10.3 – Respondents’ Reasons for Their Sentiment Towards Traffic & Parking



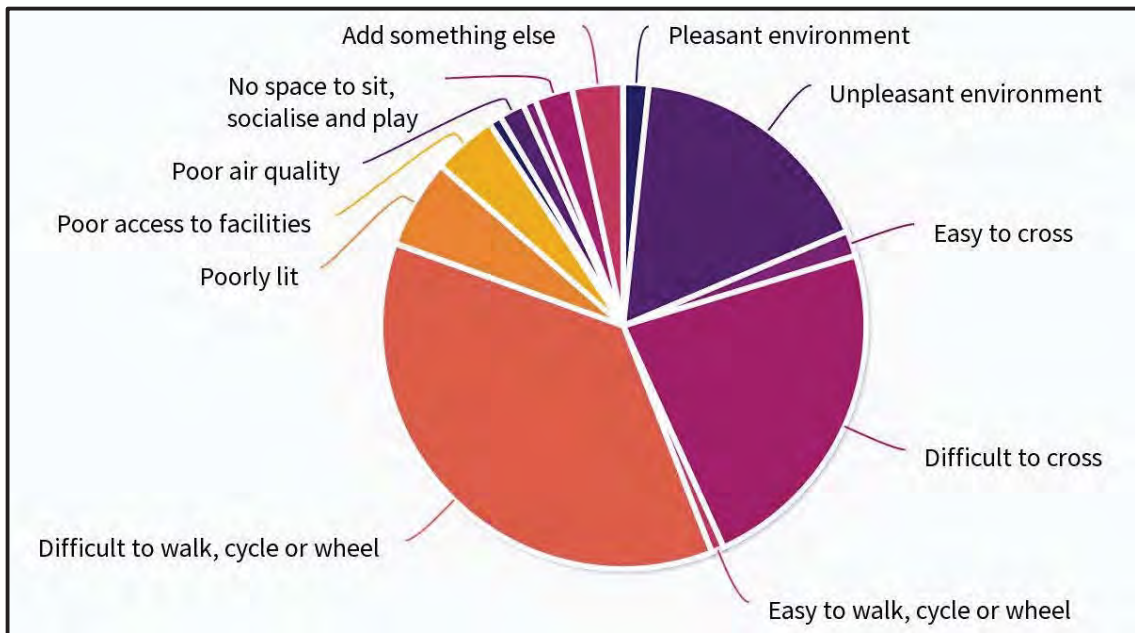
Survey respondent on traffic and parking (17 agreements):

“The Ashgrove Road West/Foresterhill Road staggered junction is confusing and overly complicated. Multiple times as a car driver and cyclist I have experienced near misses due to traffic in the wrong lane. The sequencing of the lights is suboptimal, with traffic getting stopped on the junction, blocking it for cross-traffic, and significant spells in the cycle where no traffic gets to use the crossing.”

10.5.6. When commenting on **moving around on foot, by bike and wheel**, respondents felt negatively or mostly negatively (81%) towards this due to it being *difficult to walk, cycle or wheel, difficult to cross* and *unpleasant environment*. Figure 10.4 presents the reasons respondents gave for their sentiment towards moving around. Respondents suggested this could be improved by *improve crossings, improve pavement conditions, and improve the look and feel of the street*.



Figure 10.4 – Respondents’ Reasons for Their Sentiment Towards Moving Around



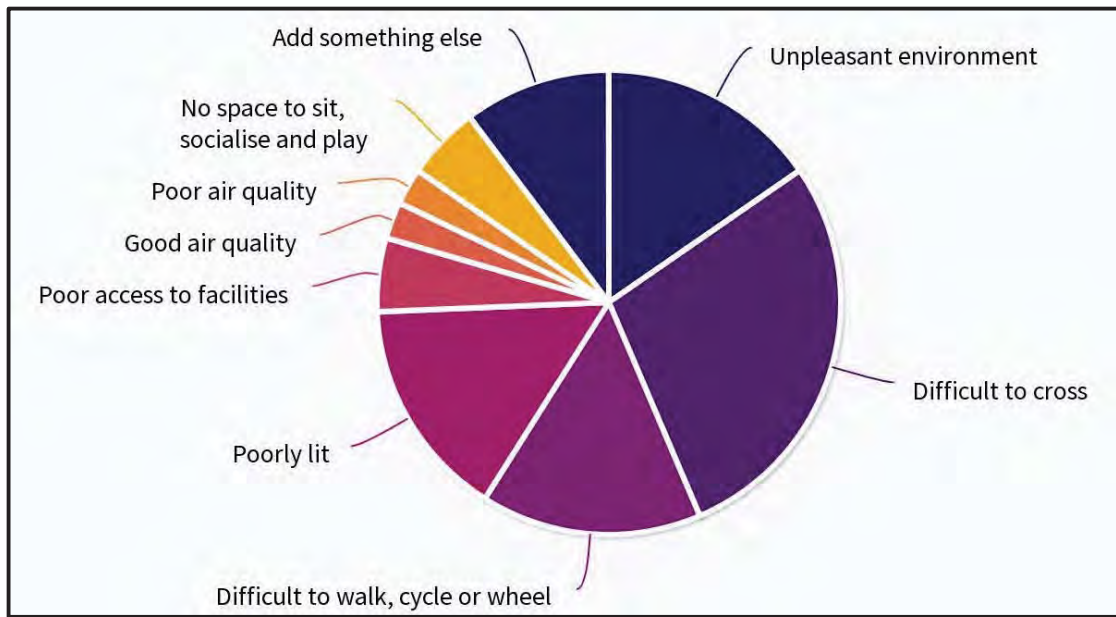
Survey respondent about moving around on foot, by bike and wheel (8 agreements):

“The Ashgrove road all the way down from the top is not safe for cyclists, especially using the junctions because of the traffic caused by purely designed parking and lighting systems, and invisible markings and fast riding drivers. It’s necessary to build a dual path for both cyclists and pedestrians and the width of the road is suitable enough to do that. This can encourage more people to cycle around neighbourhood and so the best solution for both traffic and air pollution.”

- 10.5.7. When commenting on **feeling safe**, respondents felt negatively or mostly negatively (100%) towards this due to it being *difficult to cross, difficult to walk, cycle or wheel, unpleasant environment and poorly lit*. Figure 10.5 presents the reasons respondents gave for their feeling towards feeling safe. People suggested this could be improved by *improve crossings, slow vehicle speeds and improve street lighting*.



Figure 10.5 – Respondents’ Reasons for Their Sentiment Towards Feeling Safe

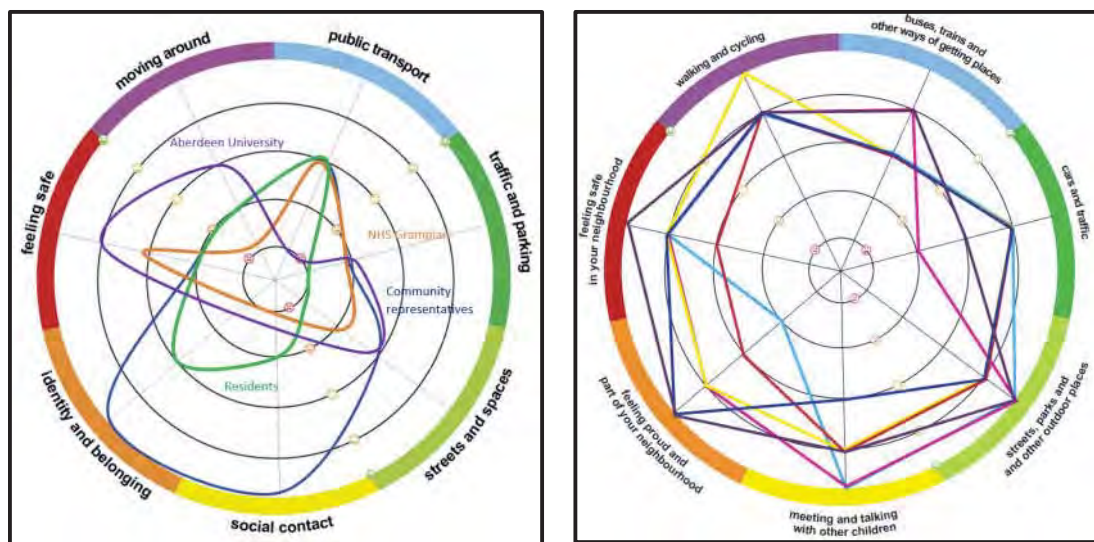


Survey respondent about feeling safe (11 agreements):

“Really difficult junction pulling out of Laurelwood as vision to the right obscured by fence and parked cars as well as angle of junction. Also difficult to cross as a pedestrian”

- 10.5.8. Contributions were also collected through the walking audits where stakeholder groups were able to discuss their experiences and score each topic in situ. Each stakeholder group had slightly different priorities. Figure 10.6 provides an overview of the scores recorded at each session.

Figure 10.6 – Joint Scoring Wheel from Four Walking Audits and Cornhill Primary School



School pupil said: “I feel proud to be part of this neighbourhood.”



10.6. Stakeholder Working Group

- 10.6.1. A Stakeholder Working Group was established providing stakeholder and community representation to help the project align with community priorities. A Terms of Reference was developed outlining the group's purpose, responsibilities, and membership.
- 10.6.2. At various stages of the project, the Stakeholder Working Group seeks representatives from different street users such as local residents, institutions, community groups, emergency services and disability groups.
- 10.6.3. To date, three meetings of the Stakeholder Working Group have taken place as summarised in Table 10.2. Each meeting has been held with a clear purpose and to seek stakeholder validation on key outputs including the emerging themes from Stage 1 and Design Objectives.



Table 10.2 – Stakeholder Working Group Meeting Schedule

Date	Validation	Attendees
Wednesday 27 th April	Emerging themes from Phase 1	ACC – Roads Projects ACC – Transport Strategy Atkins University of Aberdeen NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Rosemount & Mile End Community Council Grampian Cycle Partnership Aberdeen Health and Social Care Partnership
Wednesday 18 th May	Design Objectives (5 out of 6)	ACC – Roads Projects ACC – Transport Strategy Atkins University of Aberdeen NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Cairncry / Cornhill Community Association Grampian Cycle Partnership
Wednesday 15 th June	Design Objectives (6 out of 6)	ACC – Roads Projects ACC – Transport Strategy Atkins NHS Grampian Resident of Ashgrove Road West Resident of Ashgrove Road Rosemount & Mile End Community Council

10.6.4. Meetings with the Stakeholder Working Group will continue as the project develops.

10.7. Key themes and next steps

10.7.1. Engagement to date has overall been very strong. The extension was primarily in response to a request from members of the community.



- 10.7.2. From the information gathered during Stage 1, the following key themes emerged:
- Slower and less traffic
 - More crossings to reduce the severance effect of wide and heavily trafficked streets
 - A network of safe infrastructure to make cycling accessible for most people
 - Greater priority for pedestrians, particularly those with disabilities
 - Improved place quality and access to greenspace
 - A reduction in the negative impacts of parking and encourage use of off-street parking
- 10.7.3. These emerging themes will be presented to the Stakeholder Working Group for validation before being developed into Design Objectives.
- 10.7.4. The findings from the Phase 1 consultation have been communicated back to the community and stakeholders through the project website, ahead of Phase 2 engagement.
- 10.7.5. Known gaps in engagement response that are likely to require further work are:
- Invitations to join a walking audit and attend a meeting of Disability Equity Partnership (DEP) were extended to Aberdeen City Council Officers however a lack of response has meant engagement has not yet taken place with disability forums. Engagement with Shopmobility will take place during Stage 2 to discuss a meeting with DEP and invite feedback on the Initial Design Ideas. If there continues to be no response or availability from disability forums, engagement should take place with a local care home to understand and assess accessibility requirements.
 - Responses from businesses has been low. Further business drop-ins should take place during Stage 2 to establish key contacts and raise further awareness of the project.
- 10.7.6. Ahead of the next phase of engagement, Atkins will review the proposed methodology to consider any appropriate adjustments, which may include:
- consideration given to delivery of a newsletter to residents and businesses, updating on progress with the project and invitation to further engagement activities.
 - holding further meetings for residents living along the street and other stakeholders.
 - building relationships with businesses in advance of the presentation of options
 - engagement through Shopmobility to gain contact details of Disability Equity Partnership's and offer to attend an upcoming meeting to present on the project and seek their views on improvements.



11. Design Objectives Development

- 11.1.1. In response to the policy and technical analysis of opportunities and constraints and the themes emerging from the engagement process, Atkins prepared a set of Design Objectives for the project.
- 11.1.2. The purpose of the objectives is to represent the priorities of committed Council policy and those of the community and to ensure that the interventions are in line with those.
- 11.1.3. Draft Design Objectives were validated in discussion with the ACC project team and the Stakeholder Working Group to ensure that they were representative of the information collated during Phase 1 of the engagement process. The resulting Design Objectives are illustrated in Figure 11.1.

Figure 11.1 – Design Objectives



- 11.1.4. These Design Objectives will be presented to the community as part of the Phase 2 engagement and will be used throughout Stage 2 to assess the scheme options.



12. Summary

- 12.1.1. This Baseline Assessment summarises the technical assessment work to date and the background to developing and agreeing design objectives for the project.

12.2. Established Context

Policy

- 12.2.1. The adopted policy framework in Aberdeen sets out a clear direction towards the following goals:
- More active travel, public transportation, and improved multi-modal accessibility
 - Locking in the benefits of strategic network changes by reducing traffic volumes and speed
 - Greater prioritisation of space for people and community activities

Community and Stakeholder Feedback

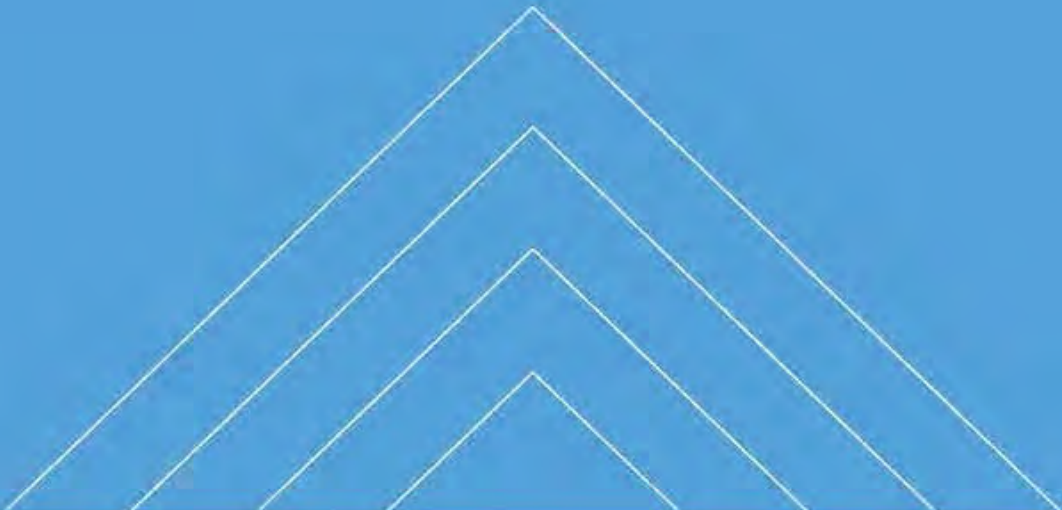
- 12.2.2. Extensive public engagement resulted in 677 contributions to the project website, with a further 61 direct engagements via walking audits and meetings, and 90 viewings of the online webinar. A Stakeholder Working Group was established, comprising Council officers, local businesses, community groups, and statutory stakeholders. The following key themes emerged from the engagement process:
- Traffic and parking
 - Moving around on foot, by bike, and by wheelchair
 - Feeling safe

Infrastructure

- 12.2.3. A review was undertaken of the heritage, streetscape, and landscape values of the design area, along with the transport infrastructure. Key observations included the following:
- Cycle provision throughout the area is poor, and in many locations non-existent
 - Footways are in poor condition, and crossing opportunities are limited by a lack of crossing provision and the width of the street, coupled with high vehicle speeds and traffic volumes
 - Greenspace in the area is generally underused
 -



Appendices



Appendix A. Engagement Analysis

Appendix B. Policy Review

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Constituent Report CR-L

Policy Review

Technical Note

Project:	Ashgrove Connects		
Subject:	Policy Review		
Author:	Craig Jolly		
Date:	09/09/2022	Project No.:	5212138
Distribution:	Project Team	Representing:	Atkins

Document history

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1.1	Final revised	CJ	AM	FA	AM	08/09/2022
1.2	Final revised revised	CJ	AM	EM	AM	09/09/2022

Client signoff

Client	Aberdeen City Council
Project	Ashgrove Connects
Project No.	5212138

1. Introduction

This Technical Note provides a summary of the desk-based review outlining relevant planning policy and strategy documents in relation to Aberdeen. The policy documents provide context in relation to transportation and local requirements, and where possible links these back to the Ashgrove Connects project.

The purpose of this review is to identify any frameworks or policy objectives that will guide the proposals for Ashgrove Connects, with particular consideration given to the time of development that would be in line with established policy, as well as traffic and travel, and environmental objectives.

1.1. Policy Review

The following documents have been reviewed:

- Aberdeen City Council:
 - Local Transport Strategy 2021-26
 - Climate Change Plan 2021-25
 - Aberdeen Active Travel Action Plan 2017-2021
- Community Planning Aberdeen
 - Local Outcome Improvement Plan 2016-26
 - Aberdeen City – Central Locality Plan 2021-26
 - Partnership Development Plan
- Nestrans
 - Regional Transport Strategy 2040
- Nestrans / ACC / Aberdeenshire Council
 - North East Scotland Roads Hierarchy Study 2019
 - A944 / A9119 Transport Corridor Study – STAG-Based Appraisal 2020
- Civitas Portis
 - Aberdeen Sustainable Urban Mobility Plan 2019
- Transport Scotland
 - National Transport Strategy 2
 - Strategic Transport Projects Review

2. Aberdeen City Council Policy Documentation

2.1. Local Transport Strategy 2021-26

The vision for the Local Transport Strategy (LTS) is to develop: “A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment”

This vision will be realised through a series of transport objectives as follows:

- Rail: To work with partners to increase opportunities for rail travel to, from and within Aberdeen;
- Air services: To support the future growth and improvement of Aberdeen International Airport, including surface access;
- Road Carriageway and Footway Maintenance: To improve the condition of the road, footway and cycle networks;
- Winter Maintenance: To ensure the safe movement of traffic on carriageways, footpaths and cycle paths to minimise delays caused by adverse winter weather;
- Land Use Planning: To promote and enable development that reduces the need to travel, minimises reliance on the private car and facilitates and encourages walking and cycling for everyday trips;
- Travel Plans: To ensure that the transport impact of existing and new developments are minimised by requiring workplaces, schools and developers to prepare Travel Plans and, where appropriate, Travel Packs for all sites in the City;
- Car Sharing: To continue to promote and facilitate car sharing as a sustainable transport option;
- Car Clubs: To continue to facilitate and promote the Car Club in order to provide transport choice without necessitating individual car ownership;
- Travel Information and Awareness: To engage with members of the public, employers and schools on travel behaviour change campaigns, events and promotions and to provide the information that citizens and visitors need to let them undertake ‘smarter’ journeys in the City;
- Walking: To increase the number of people walking, both as a means of travel and for recreation, in recognition of the significant health and environmental benefits it can bring;
- Cycling: To foster a cycling culture in Aberdeen by improving conditions for cycling so that it becomes an everyday, safe mode of transport for all;
- Bus: To increase public transport patronage by making bus travel an attractive option to all users and competitive with the car in terms of speed and cost;
- Public Realm and the Sustainable Urban Mobility Plan (SUMP): To improve the public realm by prioritising pedestrians, cyclists and public transport (to enhance environment, aesthetic quality and air quality of the City) for the benefit of shoppers, visitors and residents.

2.2. Council Climate Change Plan 2021-2025

The purpose of the Council climate change plan is to set out the Council’s approach, pathway and actions towards net zero and climate resilient Council assets and operations, by 2045. Showing early leadership in transitioning to net zero through Council assets and operations and improving their climate resilience. The Plan sets out the scope of the City Council’s ambitions with net zero and interim targets for a reduction in carbon emissions.

The national policy drivers are:

- The Road to Zero Industrial Strategy (UK)
- Transport (Scotland) Act 2019
- National Transport Strategy (NTS2) 2020 includes the priority to take climate action: reduce emissions from the transport sector; adapt to the effects of climate change; and promote greener, cleaner choices.

The Local policy drivers are:

- Regional Transport Strategy – 2013. A new strategy Nestrans 2040 is in development.
- Local Transport Strategy (2016-2021) includes the objective; to contribute to Aberdeen’s carbon emissions targets and develop climate resilient infrastructure.
- The Strategic Infrastructure Plan: Energy Transition includes a goal for Sustainable Mobility.
- Aberdeen Hydrogen Strategy and Action Plan 2015-2025.
- Electric Vehicle Framework for Aberdeen.
- Aberdeen Active Travel Action Plan.
- Aberdeen Sustainable Urban Mobility Plan (SUMP).

The Council General Fund Revenue Budget and Capital Programme contains a funding commitment towards achieving net zero emission targets, with funding for initiatives that will support the development of net zero and climate adaptation priorities with initiatives including fleet replacement, active travel, electric vehicle charging, energy efficiency,

The Council Climate Change Plan links what is being done internally in the Council and in Schools in terms of promoting active travel options (staff & schools) – cycling and walking and the reduced emissions that can be achieved from increased staff uptake of active, sustainable and alternative travel choices, reducing the need for travel through use of technology. There is a focus on reduced emissions from staff travel which has decreased, but fluctuated in the last five years by mode and km travelled. The Staff commute is currently out of scope of Council reporting, however a cycle to work scheme is in place and pool bikes and cycle storage are available in several premises.

2.3. Aberdeen Active Travel Action Plan 2017-21

The Aberdeen Active Travel Action Plan (AATAP) *“identifies the policies and design principles that Aberdeen City Council will abide by over the next five years (and in some cases beyond) and a series of actions and interventions that will be pursued in order to increase the proportion of journeys undertaken in our City by active travel...”*.

Its aim is defined as:

“To create an environment and culture in which walking and cycling are convenient, safe, comfortable, healthy and attractive choices of travel for everyday journeys.”

The AATAP notes the opportunities to capitalise on the freed-up road capacity and reconsider the city’s urban spaces offered by the Aberdeen Western Peripheral Route (AWPR), and also notes the importance of the Road Hierarchy Study in allowing for the reprioritisation of walking and cycling.

While the AATAP does not directly reference Ashgrove Connects it does note a dozen areas to be prioritised for infrastructure improvements. These areas include projects that are noted to potentially interact with Ashgrove Connects, and as noted as follows:

- A96 (Aberdeen to Inverurie) – known as the A96 Multi-Modal Transport Study
- A944 (Aberdeen to Westhill)
- A90 Anderson Drive (now known as the A92 Multi-Modal Study)
- Access to Universities
- Access to NHS sites
- Local Improvements

The AATAP goes on to identify a range of projects in the 2016-21 Network Development Plan, including estimates of costs and funding partners. Beyond those already outlined above, the Network Development Plan notes the Berryden Corridor Improvement scheme, to be funded by ACC. It also presents a more detailed timetable and status update for each of the listed improvements

3. Community Planning Aberdeen Policy Documentation

3.1. Local Outcome Improvement Plan 2016-26

Refreshed in 2021, the Local Outcome Improvement Plan (LOIP) represents an opportunity for greater joint working towards early intervention and prevention to improve outcomes for citizens. The document sets out a vision for 2026 of an Aberdeen where all people can prosper, where all people can access the opportunities available in the City, regardless of background or circumstances.

Online consultation undertaken in March 2021 involved participants allocating points to 26 projects based on their importance. This was considered alongside the population Needs Assessment in prioritising projects in the new Local Outcome Improvement Plan. Five main themes emerged: People, spaces, wage, health, support. 15 Stretch Outcomes break down ACC's overall vision for the Economy, People (Children and Young People and Adults), Place.

The document links prosperity to health and sustainability, recognising that working to end poverty goes hand-in-hand with strategies that improve health and reduce inequality. Its aims are aligned with the United Nations Sustainable Development Goals, and although the ambitions are city wide its efforts are very much grounded in the needs of the most disadvantaged communities.

Links are made within the document between a reduction in car private transport, Net Zero, connectivity, low energy use, health active travel and public open space, access to schools, shops employment and leisure within walking distance from home.

Increasing sustainable travel and sustaining the increase in walking and cycling due to the pandemic are seen as key priorities. As such the document sets a stretch outcome to increase sustainable travel, with a target of 38% of people walking and 5% of people cycling as their main mode of travel by 2026. It also includes commitments to increase the percentage of people walking to work by 10%, and those cycling to work by 2%, by 2023.

3.2. Aberdeen City – Central: Locality Plan 2021-26

The plan links to the re-refresh of the City's Local Outcome Improvement Plan (LOIP) which highlights the breadth of work taking place and aims to utilise the city's assets to their full potential by working together.

Set out are priority neighbourhoods for Central locality, which include Tillydrone, Seaton and Woodside, as well as Ashgrove, Stockethill and George Street.

The Vision for Aberdeen City is a "place where all people can prosper".

Locality Priorities were set, along with how they link with city wide LOIP Priority Themes of Economy, People and Place along with projects that help achieve those priorities. The local priorities set were:

- Reduce the number of people living in poverty through creation of opportunities for employment and development of skills, and create solutions to tackle food and fuel poverty
- Ensure people have the digital means to ensure they don't miss out on opportunities
- Improve mental health & wellbeing of the population
- Ensure people can access services timely through a person-centred approach where the needs of the whole population are considered
- Create safe and resilient communities where hate crime will not be tolerated and develop initiatives which reduce the impact of substance misuse and anti-social behaviour
- Maximise use of spaces in communities to create opportunities for people to connect and increase physical activity

3.3. Partnership Development Plan 2021

The Community Planning Aberdeen Partnership Development Plan was produced to support the implementation and delivery of the refreshed Local Outcome Improvement Plan (LOIP) and Locality Plans in response to feedback gathered in April and March 2021.

The plan includes five themes for improvement under which actions have been identified to provide cross cutting support to colleagues across the Partnership in the delivery of the LOIP and underpinning Locality Plans. The plan includes a number of activities that include capacity building, advice support and coaching and the collection of data and research. Training will also be given in cross cutting campaigns, in involving children and young people, taking whole family; reducing inequalities; and trauma informed approaches to reduce the barriers of involvement and engagement for people in seldom heard communities.

The Development plan sets out a commitment to Development of a Collective Leadership Programme focussing on collaboration and innovation, and reflecting on what the Community Planning Aberdeen Management Group needs to do differently

4. Nestrans Policy Documentation

4.1. Regional Transport Strategy 2040

The Regional Transport Strategy (RTS) for the NESTRAN area is a statutory document covering Aberdeen City and Aberdeenshire Council areas. Published in 2021 this RTS focusses less on the provision of new infrastructure and more on optimising infrastructure to influencing behaviours.

The vision set out in the Regional Transport Strategy is: “A transport system for the north east of Scotland which enables a more economically competitive, sustainable and socially inclusive society.”

The Strategy is expressed through four strategic objectives, reflecting different ways of achieving the objectives and indicators:

- SO1: Economy – to improve the movement of goods and people within the north east
- SO2: Accessibility, Safety and Social Inclusion – Enhance travel opportunities and reduce the number and severity of casualties for all transport users. To also achieve increased use of active travel modes;
- SO3: Environment – Reduce the proportion of journeys made by car; and
- SO4: Spatial Planning – Improve connectivity between Aberdeen City and towns and enhance public transport opportunities.

The Strategy identified a number of key transport projects relevant to this project. These are:

- Aberdeen Western Peripheral Route - Transport Scotland: Construction works completed in 2019
- Park and Ride sites at A96 (including link road from A96 to the Airport) and A90 (south). To be delivered in conjunction with the AWPR with construction of both expected by 2018 (Construction works completed in 2017);
- Aberdeen Crossrail: Service improvements: Enhancement to Sunday services and Aberdeen-Inverness line upgrade (Phase 1 due for completion in 2019).

Note: This document is linked to the National Transport Strategy and the Strategic Transport Appraisal, as objectives are similar in each of these documents. Additionally, many of the projects which emerge from the Strategic Transport Appraisal will be taken forward in the Regional Transport Strategy.

5. Plans and Projects

5.1. North East Scotland Roads Hierarchy Study 2019

The purpose of this document was to develop options for the updated roads hierarchy and to identify possible levels of intervention that could be implemented to support the delivery of the updated hierarchy.

The two key outcomes to be delivered as part of the work were:

- Development of roads hierarchy options to deliver a new roads hierarchy; and
- Identification of intervention levels to support that new roads hierarchy.

A series of Transport Planning Objectives (TPOs) were developed as part of a Scottish Transport Appraisal Guidance (STAG)-based assessment undertaken to identify how Aberdeen City and Aberdeenshire should operate in the post-AWPR scenario:

1. Create a city centre that is conducive to walking and cycling;
2. Reduce bus journey times to make them more competitive with car journey times;
3. Improve reliability to make public transport more attractive;
4. Ensure effective and efficient movement of goods to the city centre and harbour;
5. Facilitate removal of air quality management areas (AQMAs);
6. Ensure effective use of the post-AWPR transport network and maximise the benefits by “locking-in” the additional capacity created by committed road schemes towards sustainable transport modes; and
7. Support implementation of the CCMP.

The Study notes that Ashgrove Road West provides an access point to the Aberdeen Royal Infirmary (ARI), along with providing access to other destinations including the University of Aberdeen Medical Campus, SSE Enterprise, and Scottish Ambulance Service, and is the most efficient route for those arriving from the north.

The Study proposes that “the existing primary route along Ashgrove Road West is downgraded to tertiary ... the route no longer functions as a priority route as it does not provide a connection with the strategic route network”. This downgrading to a tertiary route is linked with the downgrading of the A92 and A978 orbital routes, meaning that because Ashgrove Road West would no longer link with a priority route it would not adhere to the definition of a secondary route.

The Study acknowledges that while Ashgrove Road West would no longer meet the requirements of a priority or secondary route, it would still serve as the primary route to hospital and the other aforementioned destinations. Further details of the road hierarchy in the local network are outlined in Chapter 5 of the main report.

5.2. A944/A9119 Transport Corridor Study – STAG-Based Appraisal 2020

Undertaken in 2020, the purpose of this document was to identify and appraise options for improving transport connections (particularly active travel and public transport connections), in line with the Sustainable Travel & Investment Hierarchies, between Westhill and Aberdeen City Centre. The study focusses on the key western approaches to the city, the A944 and A9119 (formerly B9119) corridors, and other roads used by public transport services serving the west of the city, reflecting the status of these corridors within the North East Scotland Roads Hierarchy.

The study did not require a four-stage STAG Appraisal, but took a focussed and proportionate appraisal underpinned by STAG principles, to guide the development of business cases for any emerging interventions and consisted of two main deliverables;

- an Initial Appraisal: Case for Change, outlining the need for intervention, completed in July 2020, and
- a ‘hybrid’ Preliminary Options Appraisal, supported by Appraisal Summary Tables (ASTs).

In undertaking the audits for the study, a significant number of problems, issues and constraints were identified across the network including inconsistent and incoherent cycling infrastructure, poor surface conditions for pedestrians and cyclists, vehicles parking in advisory cycle & bus lanes and all-round poor level of service for sustainable active travel transport users.

Considering the COVID pandemic the study found that it is crucial that investment is targeted and focussed to ensure that:

- It maximises the potential benefits and current captured market with cycling and walking;
- It improves the attractiveness of the public transport network and reassures the public about the use of bus services to minimise any negative connotations of health fears using public transport to avoid future service cuts; and
- travel by car does not become the first choice again undoing investment and achievements thus far in achieving modal shift or the risk of widening equality gaps between those that have access to a car and those who don't.

The study prioritised delivery of options in timescales of 1-2 years, 2-4 years, and 5+ years set out in Table 5.1.

Table 5.1 - A944/A9119 Transport Corridor Options Delivery

<p>1-2 Years</p>	<p>ACTO4: Identify and formalise a city centre cycle network PTO5: Changes to bus lane operational hours and enforcement PTO13: Develop Sustainable Transport Hubs ACTO8: Create cycle route on Old Lang Stracht</p>	<p>This initial set of options establishes a series of quick win projects. Identifying and formalising a cycle network is key before any work commences to ensure the correct and appropriate routes are identified and connections assessed.</p> <p>The cycle route along Old Lang Stracht will support the option identified by AECOM and provide direct links between Kingswells and A944 Lang Stracht and routing to A9119.</p>
<p>2-4 Years</p>	<p>ACTO2: Review of pedestrian desire lines and installation of pedestrian friendly crossing facilities to suit ACTO1: Programme of pavement maintenance and decluttering GTO2: Improve Wayfinding and Signage PTO10: Rebrand of Kingswells Park and Ride PTO11: Advanced VMS on AWPR PTO12: Establish a Bus Service Improvement Programme (BSIP) covering the A944 and A9119 corridors</p>	<p>These options provide a mix of quick wins and those which will take some time and complement the delivery of future options. The BSIP is crucial to the delivery of the investment required to deliver the infrastructure changes. Therefore, establishing this ahead of time then helps design and confirm the delivery of bus shelters and bus lanes, and subsequent cycle lanes.</p>
<p>5+ Years</p>	<p>PTO8: Reallocate all lay-by bus stops to on-street bus stops. PTO6: Bus Stop upgrade programme and stop rationalisation PTO3: Continuous Bus Lane from Westhill to Aberdeen via A944 PTO4: Continuous Bus Lane from Westhill to Aberdeen City Centre via A9119 ACTO7c: Replace and extend all existing advisory cycle routes with mandatory cycle lanes to provide a connected network, with the option of including light segregation PTO7: Bus Prioritisation / Pre-Signals at all signalised junctions on the corridors ACTO9: Provide advance stop lines or cycle by-passes at all signalised junctions ACTO3: Development of Green Corridors within the city centre and between development sites on the corridors PTO9a: Make Castle Street to Union terrace, bus, cycle and walk only</p>	<p>These remaining options will be delivered once the first two phases are complete. Bus and cycling infrastructure will be delivered in conjunction to maximise efficiencies in the works and to reduce costs. Development of green corridors and pedestrianisation of Castle Street will be programmed to coincide with the CCMP.</p>

5.3. Aberdeen Sustainable Urban Mobility Plan (SUMP) 2019

The Sustainable Urban Mobility Plan (SUMP) was developed as part of the EU CIVITAS PORTIS programme. PORTIS (PortCities: Innovation for Sustainability) is a four-year project (2016-2020) testing innovative and sustainable urban mobility solutions in five European port cities (Aberdeen, Antwerp, Constanta, Klaipeda, and Trieste) with Ningbo in China as a follower city.

Aberdeen City Council (ACC) leads Aberdeen's involvement in the project, supported by partners Nestrans, Aberdeenshire Council, Aberdeen Harbour Board, the University of Aberdeen, and the Robert Gordon University.

This Sustainable Urban Mobility Plan (SUMP) was developed to:

- Identify interventions that will help realise the city centre elements of the revised roads hierarchy, in particular the principles of reducing the volume of through-traffic and improving accessibility and permeability of the area for people walking, cycling and using public transport;
- Complement, and further develop, the transport principles and proposed projects identified in the CCMP;
- Identify some enabling infrastructure that may be required to support the success of other proposed projects such as a city centre Low Emission Zone and bike hire scheme; and
- Reflecting its status as a CIVITAS PORTIS project, consider opportunities for improved active travel connections between the city centre and the new Aberdeen South Harbour (ASH).

The plan highlights a significant risk that the benefits of recent rail and road investment will gradually erode should steps to 'lock in' the benefits not be taken, particularly in terms of encouraging people to use this new infrastructure in an appropriate way, and taking advantage of available road capacity afforded by the opening of the Aberdeen Western Peripheral Route (AWPR) and other schemes to give more priority to sustainable modes of transport, particularly walking, cycling and public transport. There is a need for the opportunities to travel sustainably to be taken up if traffic should grow to fill the space that has been created, resulting in continued congestion, potentially worsening air quality and rising carbon dioxide (CO₂) emissions.

A review of the city's roads hierarchy was commissioned by Aberdeen City Council and regional partners Nestrans, Aberdeenshire Council and the Strategic Development Planning Authority (SDPA) undertaken in 2018 is now complete.

One of the objectives of the review was to unlock the benefits of recent freed-up road capacity within the city with the opening of the Aberdeen Western Peripheral Route (AWPR) to give more priority to sustainable transport journeys with a particular focus on improving conditions for active travel and public transport. Physical improvements to the road network are now underway including reclassification and reprioritisation in line with the new North East Roads Hierarchy.

The document:

- Recognises a perception that accessibility to, travelling around and parking in the city centre by car is too easy and this discourages other modes of transport.
- makes a commitment to developing a revised Car Parking Framework for Aberdeen, giving consideration to the recommendations of the Strategic Car Parking Review.
- States that where SUMP projects result in the loss of on-street parking efforts will be made to minimise the impacts of this on local residents
- States one of its key principles is to lock in the benefits of the AWPR to prioritise the movement of active and sustainable travel through the reallocation of carriageway space and other prioritisation and traffic management measures. reallocation of carriageway space and other prioritisation and traffic management measures.

The SCPR (Strategic Car Parking Review) was completed in 2018 and identifies options for better managing city centre car parking in the context of CCMP and roads hierarchy aspirations, and to support the local economy. This is currently being developed into a Car Parking Framework by ACC separate to the SUMP.

6. National Policy Context

6.1. National Transport Strategy 2

National Transport Strategy 2 (NTS2) was published February 2020, and it identifies the strategic framework for Scotland's transport system for the next 20 years. It sets out priorities to support the vision for Scotland's transport system - reduces inequalities; takes climate action; helps deliver inclusive economic growth; improves our health and wellbeing.

The document states that transport accessibility will influence planning and future development, and will help ensure that communities are sustainable. It acknowledges the inter-dependency of its objectives, for example improving public health by increasing active travel use will also reduce carbon emissions.

The document defines its vision as follows:

"We will have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors."

It outlines four priorities, each with three associated outcomes:

- Reduces inequalities
 - Will provide fair access to services we need
 - Will be easy to use for all
 - Will be affordable for all
- Takes climate action
 - Will help deliver our net-zero target
 - Will adapt to the effects of climate change
 - Will promote greener, cleaner choices
- Helps deliver inclusive economic growth
 - Will get people and goods where they need to get to
 - Will be reliable, efficient and high quality
 - Will use beneficial innovation
- Improves our health and wellbeing
 - Will be safe and secure for all
 - Will enable us to make healthy travel choices
 - Will help make our communities great places to live

6.2. Strategic Transport Projects Review

The Strategic Transport Projects Review (STPR2) is a core part of the delivery plan for NTS2. It "provides an overview of transport investment, mainly infrastructure and other behaviour change recommendations" required to deliver the objectives identified in NTS2, and presents the Strategic Business Case for these recommendations.

The STPR2 recommendations are grouped as follows:

- Improving active travel infrastructure
- Influencing travel choices and behaviours
- Enhancing access to affordable public transport
- Decarbonising transport
- Increasing safety and resilience on the strategic transport network
- Strengthening strategic connections

7. Summary

The adopted North East Scotland Roads Hierarchy downgrades the street to one primarily for local access, albeit it will remain the primary access route for the hospital and other local destinations.

Adopted policies point towards a future direction for Aberdeen of more walking, cycling, bus travel and improved accessibility as well as local priorities for places where people activities have greater prominence.

Proposals for the Berryden Road corridor improvements, at an advanced stage of delivery planning, will provide improved cycling and walking facilities for people to access the city centre.

Combined, this presents an opportunity for the street. The opportunity is to reduce the speed and volume of vehicular traffic using the route and to increase the space given over to people accessing destinations for walking, cycling, wheeling and local residential and local economic and community activities.

Table 7.1 summarises the relevant aims of each of the reviewed local and regional policy documents and highlights how they support the strategic aims of Ashgrove Connects.

Table 7.1 – Policy Document Summary

Document	Summary of policy	Synergy with Ashgrove Connects
Local Outcome Improvement Plan 2016 to 2026 (2017, refreshed 2021)	The LOIP is a document which sets out how Community Planning Aberdeen will improve outcomes for and with local people and communities. The vision set out in the LOIP is that Aberdeen will be 'a place where all people can prosper' by 2026.	Links reduced car usage with various issues such as net zero, connectivity, and employment Sets percentage targets for increasing walking and cycling as main mode of travel by 2026
Climate Change Plan (2021)	The purpose of the Council climate change plan is to set out the Council's approach, pathway and actions towards net zero and climate resilient Council assets and operations, by 2045. The plan sets out the scope of the City Council's ambitions with net zero and interim targets for a reduction in carbon emissions.	Sets out scope of ACC's net zero ambitions, with interim targets Note that Council General Fund Revenue Budget and Capital Programme has funding commitment for initiatives that will support development of net zero
NESTRANS Regional Transport Strategy for the North East of Scotland (2021).	The RTS for the NESTRANS area is a statutory document covering Aberdeen City and Aberdeenshire Council areas. The RTS focusses less on the provision of new infrastructure and more on optimising infrastructure to influencing behaviours.	Aims include enhancing travel opportunities, reducing number and severity and casualties, increasing use of active travel, reducing proportion of journeys by car
NE Scotland Roads Hierarchy Study (2019)	The purpose of this document was to develop options for the updated roads hierarchy and to identify possible levels of intervention that could be implemented to support the delivery of the updated hierarchy.	Led to the reclassifying Ashgrove Road West as a C-class road / tertiary route
Local Transport Strategy (2016-2024) (2016)	The vision for the Local Transport Strategy (LTS) is to develop "a sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment"	Increase no. people walking / cycling / using public transport Improve public realm by prioritising pedestrians, cyclists, public transport
Aberdeen City Central Locality Plan 2021-26 (2021)	The plan links to the re-refresh of the City's Local Outcome Improvement Plan (LOIP)	Identifies Ashgrove and Stockethill as priority neighbourhoods. Aims include

	which highlights the breadth of work taking place and aims to utilise our assets to their full potential by working together.	creating employment opportunities, improving access to services, create opportunities for people to connect and increase physical activity
Aberdeen Active Travel Action Plan 2017-2021 (2017)	This Action Plan identifies the policies and design principles that Aberdeen City Council will abide by and a series of actions and interventions that will be pursued in order to increase the proportion of journeys undertaken in our City by active travel.	Delivers on the Council's commitment to "identify and implement projects that prioritise sustainable transport movements in the City" and "ensure that new cycling infrastructure adheres to best practice guidelines"
Aberdeen Sustainable Urban Mobility Plan (2019)	Aberdeen City Council has developed a Sustainable Urban Mobility Plan (SUMP) for the city centre. A SUMP is a transport strategy for a specific area which identifies projects that could be delivered by the Council and partners to enable and encourage users of that area to travel on foot, bike, public transport, or other low-emission forms of transport more often.	Key principle is to lock in benefits of AWPR to prioritise movement of active and sustainable travel through the reallocation of carriageway space and other prioritisation and traffic management measures

Constituent Report CR-E

Preliminary Ecological Appraisal

Ashgrove Connects

Preliminary Ecological Appraisal Report

Aberdeen City Council

August 2022

Notice

This document and its contents have been prepared and are intended solely as information for Aberdeen City Council and use in relation to the proposed Active Travel Route at Ashgrove Road West, Ashgrove Road and Laurelwood Avenue.

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The information which Atkins Limited has provided has been prepared by an environmental specialist in accordance with the Code of Professional Conduct of the Chartered Institute of Ecology and Environmental Management. Atkins Limited confirms that the opinions expressed are our true and professional opinions.

This document does not purport to provide legal advice.

This document has 43 pages including the cover.

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Summary

Report purpose	<p>The aims of this report are to:</p> <ul style="list-style-type: none"> • Identify key ecological constraints to the proposed development; • Identify if additional ecological surveys are required to inform an ecological impact assessment; and • Identify avoidance, mitigation, compensation and enhancement measures.
Proposed Scheme	<p>Aberdeen City Council are proposing to redesign Ashgrove Road, Ashgrove Road West and Laurelwood Avenue to create a new travel route in the area. The aim of this is to provide extra facilities for well-connected, accessible and safe transport links for people walking, cycling and wheeling in the local area.</p>
Desk studies and field surveys	<p>A desk study was completed on 07/07/2022 which included a data request from North East Scotland Biological Records Centre (NESBReC) for protected and notable species and local sites of importance. An online search was also carried out to search for nearby statutory and non-statutory designated sites of nature conservation importance, ancient woodland inventory, waterbodies and priority habitats.</p> <p>A walkover survey following UK Habitat Classification System (UKHab)¹ methodology was undertaken of the site between 21/07/2022 and 22/07/2022, including land up of 50 m in all directions (where accessible) to record habitats and evidence of, or the suitability for, protected and priority species.</p>
Ecological features	<p>No statutory designated sites for nature conservation were recorded within 2 km of the Site.</p> <p>Two non-statutory designated sites for nature conservation were recorded within 1 km of the Site: Aberdeen to Inverness - Kittybrewster Railway Line Local Nature Conservation Site (LNCS), and; Hilton Wood LNCS.</p> <p>The Site consisted mostly of hardstanding (roads and pavements) and houses with associated gardens. Areas of species poor modified grassland, ornamental scrub planting and broadleaved woodland were scattered throughout the length of the Proposed Scheme around community amenity areas and commercial businesses. Urban trees lined streets and boundaries.</p> <p>Habitats within the Survey Area have suitability to support bats, badger, nesting birds, common species of reptile, red squirrel, hedgehog and priority invertebrates. Possible veteran trees were also recorded within the Survey Area.</p>
Avoidance, mitigation and compensation measures	<p>Avoidance and mitigation measures include retention of habitat within the Survey Area as far as possible (including trees), avoidance of night-time working (taken to be 30 minutes prior to sunset to 30 minutes after sunrise), implementation of pollution prevention measures, and methods to prevent accidental harm to wildlife during the works.</p>
Recommendations for further survey	<p>A preliminary bat roost assessment (PBRA) of structures and ground level tree assessment (GLTA) may be required depending on the nature of the proposed works. If the suitability for roosting bats is identified, further presence/likely absence surveys may be required.</p> <p>If works are likely to impact suitable habitat for red squirrel a survey for the presence/likely absence of squirrel dreys may be required.</p>
Opportunities for biodiversity enhancements	<p>Opportunities for biodiversity enhancement include the installation of woodcrete bat and bird boxes within woodland areas, the creation of habitats through habitat piles in grassland areas, and an increase in the floristic diversity through locally-sourced green hay and woodland floristic communities.</p>

¹UK Habitat Classification. 2018 - 2022. [online] Available at: <https://ukhab.org>

Report Validity

In the event of scope or programme changes or if works do not commence within 12 months of the date of this report then updates to the surveys may be required to ensure the validity of the data, as per CIEEM guidance².

1. Introduction

Terms of Reference

- 1.1. Atkins Limited was commissioned by Aberdeen City Council to undertake a Preliminary Ecological Appraisal (PEA) in connection with the proposed Active Travel Route (hereafter referred to as the Proposed Scheme). The Proposed Scheme is located along Ashgrove Road, Ashgrove Road West and Laurelwood Avenue in Aberdeen city, as shown on Figure A-1 in Appendix A (hereafter referred to as the Site).
- 1.2. This report has been undertaken with reference to current good practice³ and provides an initial appraisal of any likely ecological constraints upon designated site, protected species and other features of ecological interest.
- 1.3. Following the principles of the mitigation hierarchy and British Standard (BS) 42020:2013⁴, this report also identifies the need for measures to avoid, mitigate or compensate for damage and disturbance to habitats and species. Opportunities to provide biodiversity enhancements in accordance with local, regional and national biodiversity planning strategies are also identified where relevant. Furthermore, it identifies recommendations for further ecological surveys that may be required to establish the presence or likely absence of ecological features within and adjoining the Proposed Scheme.
- 1.4. This report is intended to inform design development, site layout and/or site investigations. In addition, it provides the indicative scope for further ecological surveys and/or ecological impact assessment required in connection with a planning application or to contribute to an Environmental Impact Assessment.

The Site

- 1.5. The Site is located in Aberdeen city centre along Ashgrove Road and Ashgrove Road West, and includes Laurelwood Avenue to the south which adjoins to Ashgrove Road at the eastern end of the Proposed Scheme. The Site runs for approximately 2.25 km from Ordnance Survey National Grid Reference (OSNGR) at NJ 91036 07031 from its western-most point to NJ 93135 07751 at its eastern-most point.
- 1.6. The Site consists predominantly of road and pavement, with housing and associated gardens immediately adjacent. Several commercial businesses are located along Ashgrove Road and Ashgrove Road West with small areas of grassland, scrub and woodland. Individual trees are scattered throughout the Site along streets and within areas of grassland and scrub. The Site is bounded to the west by North Anderson Drive and to the east by the A96. It is intersected by Westburn Drive along with minor residential roads.
- 1.7. In the wider area, the urban settlement of Aberdeen spreads out from the Site in all directions. The Aberdeen to Inverness rail line lies approximately 150 m east of the Site, running perpendicular, north to south.

The Proposed Scheme

- 1.8. Details of the Proposed Scheme, as they are currently understood, are to redesign the road and street and create a new active travel route in the area to provide extra facilities for well-connected, accessible and safe transport links for people walking, cycling and wheeling in the local area. These facilities will include segregated cycle and walking infrastructure, as well as a range of junction and crossing upgrades. An overview of the initial design can be found in the Phase 2 Report.

² CIEEM (2019) Advice Note on the Lifespan of Ecological Reports and Surveys

³ CIEEM (2017) Guidelines for preliminary ecological appraisal. 2nd Edition.

⁴ British Standard (2013) BS 42020:2013 Biodiversity - code of practice for planning and development

Scope of the Assessment

- 1.9. This report presents ecological information obtained during the following:
 - A desk-study undertaken on 07/07/2022; and
 - A walkover survey of accessible land within 50 m and adjacent to the Site on 21/07/2022 and 22/07/2022.
- 1.10. The walkover survey and identification of potential ecological constraints was based on the condition of the Site and its immediate surrounds encountered at the time of the walkover survey, and information about the Proposed Scheme available at the time. If information on the Proposed Scheme should change, the Site may need to be re-visited to establish if there are any further ecological constraints arising from changes to the design.
- 1.11. The report also presents a preliminary condition assessment of habitats. As preliminary designs are still being drawn up and the full extent of the Site is unknown, baseline biodiversity units have not been calculated. Instead, the condition of habitats present at the time of the walkover survey have been presented to allow for calculation of any biodiversity value in the future, should this be required.
- 1.12. Condition assessment has been made using Defra Biodiversity Metric 3.1⁵. This allows the current baseline biodiversity units to be assessed. The method, results and assumptions made while using this metric are outlined below.
- 1.13. Once the final detailed design has been received, the baseline habitats, habitats to be lost, and the post-development habitats can be compared and the likely change in biodiversity value resulting from the Proposed Scheme presented. This is not covered by the current scope of works.

2. Methods

Desk Study

- 2.1. The geographical area for obtaining ecological data through desk studies has been determined using best practice guidance (as detailed in 2.10) and professional judgement. Baseline data has been gathered from a range of sources through data requests, consultation, and using online resources as outlined below. This included data gathering in relation to statutory and non-statutory designated sites for nature conservation and protected and priority species⁶. The study areas used for the data gathering are detailed in Table 2-1. The desk study was undertaken in 07/07/2022. For species records collected, only those within 10 years of the data collection date have been considered within the assessment.
- 2.2. The following online resources were accessed:
 - NatureScot's SiteLink⁷;
 - NatureScot's Habitat Map of Scotland⁸;
 - Woodland Trust's Ancient Tree Inventory⁹; and
 - Aberdeen City Council Protected Trees¹⁰
- 2.3. Ordnance Survey maps and the Grid Reference Finder website¹¹ was used to identify the presence of waterbodies within 500 m of the Site boundary, in order to establish if the land within and immediately surrounding the Site could be used as terrestrial habitat for great crested newts. This species typically uses suitable terrestrial habitat up to 500 m from a

⁵ <http://publications.naturalengland.org.uk/publication/6049804846366720>

⁶ These are defined in CIEEM (2017) Guidelines for Preliminary Ecological Appraisal 2nd Edition

⁷ <https://sitelink.nature.scot/home>

⁸ <https://map.environment.gov.scot>

⁹ <https://ati.woodlandtrust.org.uk/tree-search/?v=2115968&ml=map&z=16&nwLat=57.16062880103179&nwLng=-214764884400634&seLat=57.15063196428174&seLng=-2.10645011353759>

¹⁰ <https://www.aberdeencity.gov.uk/services/environment/protected-trees>

¹¹ <https://gridreferencefinder.com/>

breeding pond¹². However, there is a notable decrease in great crested newt abundance beyond a distance of 250 m from a breeding pond¹³.

- 2.4. The following organisations were contacted to request records of protected and priority species and habitats and details of non-statutory designated sites for nature conservation:
- North East Scotland Biological Records Centre (NESBReC)

Table 2-1 - Data search areas

Data Type	Search area – distance from Proposed Scheme boundary
Statutory designated sites for nature conservation	2 km
Non-statutory designated sites for nature conservation	1 km
Ancient woodland	1 km
Priority habitats (including veteran and protected trees) and species	1 km (reduced to 50 m for protected trees and extending to 2 km for bats)

- 1.1. A review of national and local planning policy relevant to the Proposed Scheme was undertaken as part of the data gathering. The following policy documents were subject to review. A summary of which is provided in Appendix B:
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework¹⁴;
 - Aberdeen City and Shire Strategic Development Plan (2020)¹⁵;
 - Aberdeen Local Development Plan (2017)¹⁶;
 - Supplementary Guidance to the Aberdeen Local Development Plan (2017)¹⁷; and
 - North East Scotland Biodiversity Partnership website¹⁸.

Field Surveys

- 2.5. The geographical area for undertaking ecological field surveys has been determined using the current survey guidance (as detailed in section 2.7), professional judgement and the zones of influence, which have been determined based on likely effects arising from the Proposed Scheme.

Surveyor Competencies

- 2.6. All the surveys were led by surveyors who have been assessed to be at least of capable experience and knowledge following the Chartered Institute of Ecology and Environmental Management (CIEEM) competency framework¹⁹.

¹² English Nature (2004). Great Crested Newt Mitigation Licences

¹³ English Nature (2004). An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt (ENRR576) <http://publications.naturalengland.org.uk/publication/134002>

¹⁴ National Planning framework 3. Available online at: <https://www.gov.scot/publications/national-planning-framework-3/> [Accessed 15/08/2022]

¹⁵ Aberdeen City and Shire Strategic Development Planning Authority. Available online at: <http://www.aberdeencityandshire-sdpa.gov.uk/> [Accessed on 31/08/2022]

¹⁶ Aberdeen City Council. Available online at: https://www.aberdeencity.gov.uk/sites/default/files/LDP_WS_20170328.pdf [Accessed on 31/01/2020]

¹⁷ Aberdeen City Council Supplementary Guidance: Natural Heritage. Available online at: <https://www.aberdeencity.gov.uk/sites/default/files/6.1.PolicySG.NaturalHeritage.pdf> [Accessed on 13/01/2020]

¹⁸ North East Scotland Biodiversity Partnership (not dated) The Big 5. Available online at : <https://www.nesbiodiversity.org.uk/our-biodiversity-in-the-north-east-of-scotland/the-north-east-scotland-big-5/> [Accessed 13/01/20]

¹⁹ <https://www.cieem.net/competency-framework>

Ecological Walkover Survey

- 2.7. An ecological walkover survey of areas within and adjacent to the Site, including land up to 50 m from the Site boundary where access was allowed (the Survey Area), was undertaken on 21/07/2022 and 22/07/2022. The walkover survey recorded information within the Survey Area using UK Habitat Classification System (UKHab)¹ survey methodology and also included a search for evidence of, and the potential of each habitat to support, protected and priority species as recommended by CIEEM²⁰.
- 2.8. This survey method comprised mapping habitats present according to the UKHab¹. A list of plant species was recorded to aid in the identification and evaluation of habitats. Information on the environment, management and origin of mapped features was recorded using UKHab Secondary Codes and is provided in Appendix D. Features of ecological importance (e.g. ponds, complex habitat mosaics) were also recorded and provided as Target Notes (TNs) in Appendix D. In addition, the survey comprised assessing the suitability of the habitats present for, and recording any activity of the following species (in line with current guidance):
- amphibians (terrestrial and aquatic habitats), including an assessment of aquatic habitat for its suitability to support great crested newts using the Habitat Suitability Index (HSI) assessment²¹
 - bats²²;
 - badger²³;
 - breeding and wintering birds²⁴;
 - red squirrel²⁵;
 - pine marten²⁶;
 - water vole²⁷;
 - otter²⁸;
 - reptiles²⁹;
 - hedgehog³⁰; and
 - priority invertebrates³¹;
- 2.9. Evidence of the following invasive species was recorded where seen:
- Evidence of animal species as listed on the Invasive Alien Species (Enforcement and Permitting) Order 2019; muntjac deer and grey squirrel.
 - Evidence of the presence of the following invasive species: Japanese knotweed, giant knotweed, hybrid knotweed, giant hogweed, Himalayan balsam, rhododendron, New Zealand pigmy weed, Virginia creeper, variegated yellow archangel, and cotoneaster. These are listed on Schedule 14 of the Wildlife and Countryside Act 1981 (as amended in Scotland) and subject to strict legal control.

²⁰ CIEEM (2017) Guidelines for preliminary ecological appraisal. 2nd Edition.

²¹ Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*) Herpetological Journal 10 (4), 143-155 (2000).

²² Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London

²³ Harris, S., Cresswell, P. & Jefferies, D. (1989) Surveying Badgers. *Occasional Publication No.9*. The Mammal Society, London

²⁴ Gilbert, G., Gibbons, D.W. and Evans, J. (1998) Bird monitoring methods: A manual of techniques for key UK species. RSPB: Sandy.

²⁵ SNH. (2019) Standing Advice for Planning Consultation Protected Mammals: Red Squirrels. Scottish Natural Heritage. Available online at: <https://www.nature.scot/sites/default/files/2019-10/Species%20Planning%20Advice%20-%20red%20squirrel.pdf> [Accessed on 31/01/2020].

²⁶ SNH. (2019) Standing Advice for Planning Consultation Protected Mammals: Pine Marten. Scottish Natural Heritage. Accessed online at: <https://www.nature.scot/sites/default/files/2019-10/Species%20Planning%20Advice%20-%20pine%20marten.pdf> [Accessed on 31/01/2020].

²⁷ Dean, M. et al (2016) The Water Vole Mitigation Handbook. Mammal Society, London

²⁸ SNH (2019) Standing Advice for Planning Consultation Protected Mammals: Otter. Scottish Natural Heritage. Available online at: <https://www.nature.scot/sites/default/files/2019-10/Species%20Planning%20Advice%20-%20otter.pdf> [Accessed on 31/01/2020].

²⁹ Froglife (1999) Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife advice sheet 10

³⁰ Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trehwella, W.J., and Wray, S. (eds). (2012) UK BAP Mammals: Interim Guidance for survey methodologies, impact assessment and mitigation. Mammal Society, Southampton

³¹ As relevant to the location, identified through the desk study

Data Collection for Baseline Habitats Condition

- 2.10. Habitats were identified following the UKHab classification system and assigned a condition (where required, as not all habitat types require a condition to be assigned, e.g. built linear features) according to the methodology and criteria outlined within the Defra Biodiversity Metric 3.1 technical supplement³². It relies on professional opinion and was based on the data collected during the walkover survey. This involves checking features against the technical supplement list of criteria for habitat in 'good', 'moderate' and 'poor' condition.
- 2.11. Quantum GIS (QGIS) was used to digitise the onsite habitats, to the standard minimum mapping units³³. The GIS habitat used the Ordnance Survey Topography Master Map. GIS was then used to calculate the area of each habitat present within the Survey Area and was further broken down by condition to give the overall area of each habitat type of each condition level.

Limitations

- 2.12. This section identifies any limitations to the surveys or assessment and provides an explanation as to the effect of these on the appraisal.
- 2.13. The search for waterbodies within 500 m of the Site was undertaken by using Ordnance Survey plans and aerial photographs only. These sources may not show all waterbodies within 500 m of the Site boundary and therefore some waterbodies may not have been identified.
- 2.14. The list of invasive plant species included on Schedule 14 of the Wildlife and Countryside Act 1981 (as amended in Scotland) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The ecological walkover survey checked for the presence of Japanese knotweed, giant knotweed, hybrid knotweed, giant hogweed, Himalayan balsam, rhododendron, New Zealand pigmyweed, Virginia creeper, variegated yellow archangel, and cotoneaster species.
- 2.15. The desk study reviewed the Woodland Trust Veteran Trees inventory. This provides records of veteran trees, but is not an exhaustive list and other veteran trees may be present in the area. The walkover survey aimed to identify such features and as such this is not considered a constraint.
- 2.16. NESBREc records are not exhaustive, and the absence of records does not demonstrate the absence of species.
- 2.17. Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The ecological surveys undertaken to support this PEA have not therefore produced a complete list of plants and animals and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

3. Results

- 3.1. Statutory and non-Statutory Designated Sites Table 3-1 details the statutory and non-statutory designated sites for nature conservation identified through the desk study. These are shown on Figure C-1 in Appendix C. No statutory designated sites for nature conservation were present within 2 km of the Site.

Table 3-1 - Non-statutory designated sites for nature conservation within 1 km³⁴ of the Site

Site name	Designation	Location of designated site ³⁵	Features of interest ³⁶
Aberdeen – Inverness –	Local Nature Conservation Site (LNCS)	0.2 km east	A live railway line providing a green

³² Panks, S., White, N., Newsome, A., Nash, M., Potter, T., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S., Heaver, M., Scott, S. H., Treweek, J., Butcher, B. and Stone, D. (2002) Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.

³³ Minimum mapping units taken to be 400m² for area features, 20m length for linear features and 5m maximum width of linear features

³⁴ This is the zone of influence for designated sites.

³⁵ Where designated sites are situated outside of the Site boundary, the distance and direction is given to the closest point that the designated site is from the Site.

³⁶ including qualifying features of internationally designated sites and reasons for designation for SSSIs

Site name	Designation	Location of designated site ³⁵	Features of interest ³⁶
Kittybrewster Railway Line			wildlife corridor through lengths of the city of Aberdeen. Mainly comprising neutral grassland, tall ruderal, scrub and pockets of woodland.
Hilton Wood	LNCS	0.7 km north	A relatively small site of managed broadleaved woodland comprising predominantly sycamore, beech, wych elm, horse chestnut and Norway maple. A disused quarry is also present within the site. There has been some recent tree planting to improve the site.

Ancient woodland, veteran and protected trees

- 3.2. No ancient woodland was recorded within 1 km of the Site.
- 3.3. Seven notable trees listed on the Woodland Trust's Ancient Tree Inventory were recorded south of the Site in Westburn Park and Victoria Park. The closest of these was a wych elm located 0.3 km south of the Site. Full details are provided in Table 3-2, below.

Table 3-2 - Veteran trees within 1 km³⁷ of the Application Site

Location of veteran trees	Description of tree/s	Distance from Site (km)
Westburn Park	Five wych elm trees of 'notable tree' veteran status.	0.3
Victoria Park	Two wych elm trees of 'notable tree' veteran status.	0.6

- 3.1. Additionally, trees within the Survey Area Aberdeen City Council have several Conservation Areas or trees under Tree Protection Orders (TPOs). Several of these lie within the Survey Area. Full details are provided in Table 3-3 below and the locations of these trees are shown on Figure C-1.

Table 3-3 - Details of Protected Trees

TPO Reference Number / Conservation Area Name	Distance from Site
Rosemount Conservation Area	Adjacent from Site
TPO Ref. No. 92	Adjacent from Site

Habitats

- 3.2. The Survey Area predominantly comprised of sealed surfaces of roads and pavements (classified as Urban – Developed land; sealed surface), and a mosaic of developed and natural surface formed of vegetated gardens (classified as Urban – Suburban mosaic of

³⁷ This is the zone of influence for veteran trees.

developed/natural surface) associated with the residential housing which bordered the majority of the Site to the north and south. Commercial buildings were sporadic throughout the length of the Site.

- 3.3. Urban trees (classified as Perimeter Block or Linear Blocks) lined many streets and areas of broadleaved woodland (classified as Woodland; other broadleaved) were present to the south of the Site adjacent to Shaw Crescent and in the grounds of Elmhill Apartments (TN 1) and the University of Aberdeen (TN 2). Ground layers in woodland included bluebell, ground elder, bramble and blue wood grass.
- 3.4. Tree species recorded included alder, beech, elm, hawthorn, London plane, Norway maple, oak, plum, rowan, Scot's pine, cherry, whitebeam and sycamore. Additionally, conifer species and ornamental tree species were also recorded.
- 3.5. Seven mature, potential veteran tree specimens, were recorded adjacent to Shaw Crescent (TN 3). These consisted of two oaks, two horse chestnuts, two sycamore and a standing dead tree. These trees are located within the Rosemount Conservation Area and are subject to TPO Ref 92 from Aberdeen City Council.
- 3.6. Modified grassland (TN 4 and 5) dominated non-built areas within the Survey Area, including verges and parks. Modified grassland were characterised by Yorkshire fog and *Agrostis* species, with herbs including white clover, lesser trefoil, selfheal, ribwort plantain, dandelion agg., great willowherb, *Epilobium* species, and common mouse ear. Several parcels of grassland contained scattered trees (TN 6 and 7).
- 3.7. At the eastern end of the Survey Area, an area of scrub with scattered trees was recorded (classified as Heathland and scrub; Mixed scrub), dominated by bramble with species of creeping thistle, nettle, and dock also recorded. Adjacent to this area of scrub was an area of modified grassland; both areas were recorded to have ephemeral species along the eastern perimeter, including but not limited to rosebay willowherb, common ragwort, sow thistle and poplar.
- 3.8. A number of intact, species poor hedgerows (classified as Other hedgerow) including managed privet and yew were recorded adjacent to private vegetated gardens and commercial spaces and areas of ornamental planting (classified as Introduced shrub) throughout.
- 3.9. Table 3-4 lists all of the habitats present within the zone of influence, identifies those habitats which are listed on Annex 1³⁸ and/or listed as priority habitats³⁹. The table also provides details of the area⁴⁰ of each habitat within the Survey Area, the proportion of the Survey Area this makes up and the condition of each habitat type. Habitats are mapped on the extended UKHab survey plan on Figure D-1 in Appendix D.
- 3.10. The condition of each habitat was assessed using the appropriate Condition Sheet³², details are provided in Table 3-4.

Table 3-4 - Habitat types within the Survey Area

Habitat Type	Condition	Condition Sheet	Location of habitat	Area of habitat/ distance of linear feature Ha/M	Annex 1 habitat y/n	Priority habitat y/n
Other woodland; broadleaved	Poor	Woodland	Within Survey Area	0.86	N	N
Other woodland; broadleaved	Moderate	Woodland	Within Survey Area	0.87	N	N

³⁸ <http://jncc.defra.gov.uk/page-1523>

³⁹ <http://jncc.defra.gov.uk/page-5706>

⁴⁰ Measurements made using ArcGIS. Urban Tree area calculated using the Defra Metric 3.1 Urban Tree Calculator

Habitat Type	Condition	Condition Sheet	Location of habitat	Area of habitat/ distance of linear feature Ha/M	Annex 1 habitat y/n	Priority habitat y/n
Other woodland; mixed	Moderate	Woodland	Within Survey Area	0.01	N	N
Modified grassland	Moderate	Low Distinctiveness Grassland	Within Survey Area	4.54	N	N
Mixed scrub	Poor	Scrub	Within Survey Area	0.04	N	N
Introduced shrub	N/A	N/A	Within Survey Area	0.3	N	N
Suburban/ mosaic of developed/ natural surface	N/A	N/A	Within Survey Area	6.6	N	N
Developed land; sealed surface	N/A	N/A	Within Survey Area	8.66	N	N
Artificial unvegetated unsealed surface	N/A	N/A	Within Survey Area	0.05	N	N
Buildings	N/A	N/A	Within Survey Area	3.56	N	N
Urban Trees	Poor	Urban trees	Within Survey Area	3.89	N	N
Urban Trees	Moderate	Urban trees	Within Survey Area	4.39	N	N
Urban Trees	Good	Urban trees	Within Survey Area	3.30	N	N

Protected and Priority Species

- 3.11. Evidence of protected and priority species, or habitats with the potential to support protected and priority species are indicated on the extended UKHab Survey Plan (Figure D-1 in Appendix D). Details of legislation relating to protected species is provided in Appendix E.

Amphibians

- 3.12. NESBReC returned no records of amphibians, including great crested newts within 1 km of the Site. The desk study identified no suitable waterbodies for great crested newts within 500 m of the Site.
- 3.13. No evidence of amphibians, including great crested newts, was recorded within the Survey Area during the walkover survey.

- 3.14. Habitats within the Survey Area (including grassland and scrub) may provide suitable terrestrial habitat for great crested newts. However, due to the absence of suitable breeding habitat within 500 m, absence of desk study records, and urban situation of the Site (creating barriers to movement in the form of roads, buildings and hardstanding areas), amphibians are not considered to pose a constraint to the Proposed Scheme and are not discussed further.

Bats

- 3.15. NESBReC provided 41 recent records of bats within 2 km of the Site which included general records of bats not described to species level, pipistrelle species, common pipistrelle, soprano pipistrelle and Daubenton's bat. Records were generally of bat passes and foraging activity. A single roost was recorded at St Machar's Cathedral, approximately 1.4 km north-east of the Site. However, a dead specimen was also recorded within the communal staircase of a building near MacRobert Memorial Garden, close to University of Aberdeen buildings, approximately 1 km north-east of the Site. The closest record was 0.1 km south of the western-most extent of the Site and comprised a record for common pipistrelle and soprano pipistrelle.
- 3.16. The walkover survey identified areas of woodland and scattered trees that may provide suitable commuting corridors and foraging habitats for bats, which also acts to connect bats to further, more extensive foraging and roosting habitat in the wider area.
- 3.17. No specific preliminary bat roost assessment (PBRA) was undertaken of any structures or trees within the Survey Area. The walkover survey identified a number of buildings, predominantly residential buildings, within the Survey Area that may have suitability for roosting bats. Due to the urban nature of the Site, disturbance from human activity such as noise and light pollution reduces the suitability of residential properties adjacent to the route option for bats to roost. Additionally, warming effects from heating reduces the suitability for hibernating bats. However, as the extent of internal space or crevices across buildings within the Survey Area is not known, it is possible that these buildings offer limited opportunities for common species of bat to roost and hibernate.
- 3.18. The walkover survey identified a number of trees within the Survey Area with suitability to support roosting bats given their age and size, as well as presence of potential roost features (PRFs) for bats; however as this was a preliminary walkover no specific survey for bats was undertaken and recommendations are provided below. Woodland and parkland habitats provide opportunity for bats to forage and commute, however, this is reduced by background levels of human disturbance and light pollution
- 3.19. Due to the presence of suitable roosting, foraging and commuting habitat within the Survey Area, bats may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Badgers

- 3.20. NESBReC provided one record of badger sighted 0.6 km north-east of the eastern extent of the Site.
- 3.21. Habitats within the Survey Area (including the grassland, scrub and woodland) provide suitable habitat for badger to commute and forage. However, as the Survey Area is predominantly uniform in topography, and in an urban area, habitats are not considered suitable for badger to build setts.
- 3.22. As no badger evidence has been recorded within the study area, they are not considered to pose a significant risk to the Proposed Scheme and, therefore, there are no further mitigation measures made in this assessment specific to badger, however, general mitigation measures are provided in Section 4 below and it is considered that these will prevent any potential impacts to badger as a result of the Proposed Scheme.

Birds

- 3.23. NESBReC provided 228 records of birds within 1 km of the Site. This included the Schedule 1 species black-tailed godwit and redwing. The closest record was a house sparrow within the Site on Ashgrove Road. Details are provided in Relevant Scottish Biodiversity List (SBL) species returned within 2 km included brambling and siskin.

- 3.24. Habitats within the Survey Area (including trees, scrub, and grassland) provide suitable habitat for common species of nesting birds. As such, breeding birds may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Reptiles

- 3.25. NESBReC provided no records of widespread reptile species (i.e. adders, common lizards and slow worms) within 1 km of the Site.
- 3.26. Habitats within the Survey Area have the potential to support widespread reptile species. The grassland and scrub, particularly at the eastern end of the Survey Area, offer suitable habitat for reptiles to commute, forage, bask and shelter. However, no suitable features for reptiles to hibernate (such as log piles) were identified within the Survey Area.
- 3.27. Therefore, taking a precautionary approach and due to the presence of suitable habitat for widespread reptile species within the Survey Area, reptiles may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Hedgehogs

- 3.28. NESBReC provided eight records of hedgehogs within 1 km of the Site. The closest records was approximately 20 m from the Site in gardens on Belmont Gardens.
- 3.29. No nests or evidence of hedgehog activity was recorded within the Site during the extended UKHab survey. Trees, woodland and areas of tall ruderals within the Site provide material and cover to establish summer or winter nests. Linear features, including hedgerows provide commuting and foraging habitat. Most linear features are connected to suitable habitat within the wider landscape, including residential gardens.
- 3.30. As suitable habitat for hedgehog was recorded within the Survey Area this species may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Red Squirrels

- 3.31. NESBReC returned 17 records of red squirrel within 1 km of the Site. The closest record was on Carnie Drive approximately 105 m from the Site.
- 3.32. Residential gardens and woodland, including broadleaved woodland within the Survey Area provide suitable foraging and nesting habitat for red squirrel. No dreys or other evidence of their presence was recorded.
- 3.33. As suitable habitat for red squirrel was recorded within the Survey Area this species may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Otter

- 3.34. NESBReC provided a single record of otter; a road traffic accident approximately 0.9 km south-east of the Site.
- 3.35. No watercourses or waterbodies were recorded within the Survey Area. As no suitable aquatic habitat is recorded within the Site or within the immediate proximity, otters are not considered a constraint to the Proposed Scheme and are not discussed further.

Priority Invertebrates

- 3.36. NESBReC provided 13 records of six distinct priority moth species within 1 km of the Site. This included dusky brocade, grey dagger, rosy minor, rustic minor, small phoenix and small square spot. All records were located approximately 960 m south of the Site in residential gardens. The larval food plants of these moths included a variety of herbaceous species recorded within the site including *Epilobium* sp., numerous grasses such as cock's foot and a range of broadleaved trees such as hawthorn, lime and rowan. No other priority invertebrates were recorded. Details of records and the designations of the species are provided in
- 3.37. Areas of scrub, grassland, individual trees and woodland habitats within the Survey Area may provide suitable habitat for priority and common species of invertebrates. As such, invertebrates may pose a constraint to the Proposed Scheme and recommendations are provided in Section 4 below.

Invasive Non-native Species

- 3.38. NESBReC provided 28 records of invasive non-native plant species (INNPS) within 1 km of the Site. This included Japanese knotweed, giant hogweed, and rhododendron. The closest record was for Japanese knotweed located approximately 75 m south easternmost extent of the Site.
- 3.39. The walkover survey identified areas of *Buddleia* sp. throughout the Survey Area, including in the vegetated gardens of private properties. Stands of cotoneaster were also recorded to the east of the Survey Area. In Scotland, it is illegal to release, plant or allow to spread any non-native species into the wild. A specialist contractor should be contacted to provide advice on how to control the spread of non-native species if these are being impacted by the Proposed Scheme.

4. Constraints and Recommendations

Key Constraints

- 4.1. The key ecological constraints associated with the Proposed Scheme are detailed below:
- Aberdeen to Inverness – Kittybrewster Railway Line LNCS;
 - Hilton Wood LNCS;
 - Bats;
 - Birds;
 - Reptiles;
 - Hedgehog;
 - Red squirrel;
 - Priority Invertebrates; and
 - INNPS

Further Survey Requirements

- 4.2. Once details of the Proposed Scheme are confirmed, it is recommended that the following ecological surveys are undertaken:
- Depending on the nature of the works, a preliminary bat roost assessment (PBRA) of structures and ground level tree assessment (GLTA) may be required to determine the suitability for roosting bats in structures/trees likely to be directly or indirectly (through noise and vibration) affected. Once the full extent of works are known an ecologist should be consulted to determine an appropriate buffer zone around works. Any trees that are due to be felled/cut to facilitate the works will require a GLTA to determine the suitability for roosting bats. If the suitability for roosting bats is identified, further presence/likely absence surveys may be required.
 - Where trees that are suitable to support red squirrel (generally considered to be trees 15 years or older and can be coniferous or broadleaf species) require felling, a survey for the presence/likely absence of red squirrel dreys should be undertaken. If dreys are found to be present further surveys may be required to determine the status of the drey.
- 4.3. Where works are likely to impact a bat roost or red squirrel drey, a licence from NatureScot should be obtained before works proceed.

Mitigation

- 4.4. The following general mitigation measures have been recommended with respect to the Proposed Scheme, based on the current proposals. Once details of the Proposed Scheme are confirmed, it is recommended that an ecologist is consulted to ensure the mitigation is appropriate and sufficient to ensure that impacts on ecological receptors are minimised.
- Existing habitats (such as woodland, trees, and scrub) should be retained as far as practicable to avoid and reduce potential loss and severance of habitats. Where possible, access routes and compounds should be restricted to areas of hardstanding or amenity grassland;
 - Any tree felling and vegetation clearance that is required should be minimised as far as practicable and undertaken outside the core bird nesting season (the core bird nesting season is 1 March to 31 August) to avoid damage or destruction of occupied nests or harm to breeding birds. If this cannot be achieved, an inspection of vegetation to be cleared for nesting birds should be undertaken by a suitably qualified ecologist no more than 24 hours prior to any works being undertaken. If any nesting birds are identified during the survey, they should be left in situ for their entire nesting period until the young birds have fledged;
 - Works likely to impact suitable habitat for red squirrel should avoid the red squirrel breeding season (the red squirrel breeding season is 1 February to 30th September) to avoid disturbance to squirrels using any breeding dreys present. Where dreys are

present an exclusion zone should be implemented (likely to be 5 m or to the nearest neighbouring tree, whichever is less, in the non-breeding season only). Where it is not possible to avoid the breeding season a larger exclusion zone, up to 50 m, may be required where breeding dreys are present.

- Night works (i.e. 30 minutes before sunset to 30 minutes after sunrise) should be avoided where possible. Where night works cannot be avoided, light spill onto surrounding habitats should be avoided or minimised to reduce potential impacts of the works on any species commuting or foraging (such as bats, badgers and great crested newts);
- Works should be carried out under a Precautionary Method of Working (PMW) with regard to reptiles. This should include undertaking vegetation clearance using a two-stage cut method where vegetation suitable to support reptiles is first cut to 150 mm to encourage reptiles to move away and then is hand searched by an ecologist before being cut to ground level where it should be maintained for the duration of works. Works within the core hibernation period for reptiles (the core hibernation period is November to March) should be avoided;
- Retained trees will be protected in line with guidelines provided in BS 5837 Trees in relation to construction⁴¹;
- General measures should be implemented to avoid potential impacts on any wildlife that may be present within the Site. Storage areas should be kept tidy and free from hazards, and any excavations should be filled or covered, or a means of escape should be provided to prevent animals from entering them and becoming trapped;
- If vegetation clearance is required, a specialist INNPS contractor should be contacted for advice to provide advice on the type and extent of mitigation required to avoid the spread of INNPS; and
- If any protected species including red squirrel or hedgehog, or evidence of legally protected species, or any additional INNPS, are unexpectedly encountered at any point during the works, all works should cease, and an ecologist should be contacted for further advice on how to proceed.

Biodiversity Opportunities for Ecological Enhancements

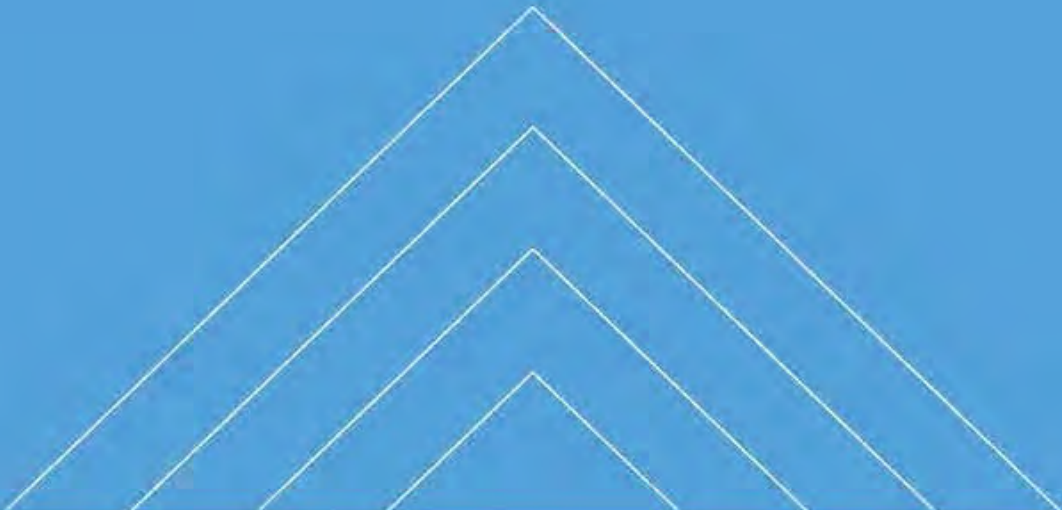
4.5. The following opportunities for biodiversity enhancement have been identified:

- The provision of woodcrete bat and bird boxes within woodland across the Site;
- The creation of habitat piles within the grasslands and woodlands across the Site, comprising materials such as deadwood, brash and stone, to provide habitat for small mammals, reptiles, amphibians and invertebrates;
- The introduction of native and locally-sourced woodland ground flora community to the woodlands on Site, with species that are appropriate to the woodland type and soil conditions⁴²; and
- Alterations to the management of the other grassland within the Site, including the collection of arisings following cutting, and increasing floristic diversity through overseeding with locally-sourced green hay, or if this is not possible overseeding using a seed mix appropriate to the location.

⁴¹ British Standards (2012) BS5837:2012 – Trees in relation to design, demolition and construction. Recommendations.

⁴² Worrell, R., Holl, K., Long, D., Laverack, G., Edwards, C., Fuentes-Montemayor, E. and Crawford, C.L. 2021. Establishing woodland plants in broadleaved woods - interim best practice guidance for conservation translocations. Nature Scot Research Report 1211.

Appendices



Appendix A. Site Location and Scheme Drawings

Figure A-1 - Site Plan



Appendix B. Planning Policy Review

Table B-1 - Summary of Relevant Biodiversity Planning Policy

Plan	Policy Statement	Description
National Planning Framework 3	Respect, enhance and make responsible use of our natural and cultural assets.	<p>Scotland now</p> <p>Biodiversity in Scotland is rich and varied. We have numerous internationally and nationally important habitats and species with a diverse network of protected sites, concentrated particularly in the north and west of Scotland, along our coasts and estuaries and in our upland areas. However, biodiversity is not just confined to our rural areas – our built environment, key infrastructure corridors and the greenspaces within our cities and towns also provide important habitats and can together contribute to a wider national ecological network. Our marine wildlife is rich and varied. Geodiversity underpins our landscapes and provides important ecosystem services.</p> <p>Scotland tomorrow</p> <p>The 2020 Challenge for Scotland’s Biodiversity aims to promote and enhance Scotland’s nature, and to better connect people with the natural world. Maintaining our natural capacity to provide services makes economic sense – to help achieve this, biodiversity in Scotland needs to be viewed at a landscape scale.</p>
Aberdeen City and Shire Strategic Development Plan	To make sure new development maintains and improves the region’s important built, natural and cultural assets.	<p>Spatial priorities for change</p> <p>Well-designed green infrastructure can support regeneration efforts within our towns and cities, and improved attractiveness and environmental performance can act as a catalyst for economic investment. Temporary uses for vacant and derelict land, for example for community growing or supporting biodiversity, can also help to attract investment in specific sites or wider areas. Whilst re-use of vacant land remains a priority, in some cases greening initiatives could be the best permanent solutions for sites where built development is unrealistic for cost or other reasons.</p> <p>Local development plans (and supplementary guidance) will make sure the North East’s natural environment and historic sites and buildings continue to be protected and improved.</p> <p>Aberdeen City Council will take a proactive approach towards development that ensures the sustainable use of natural resources, the ability to live within the area’s environmental capacity, can deal with climate change, and creates a more open, inclusive society.</p> <p>Both councils will take part in the River Basin Management Planning process, particularly as it relates to new development.</p>

Plan	Policy Statement	Description
Aberdeen Local Development Plan	Policy NE8 - Natural Heritage	<p>Both Councils will protect and enhance biodiversity, wildlife habitats, landscape, green and water networks and other sensitive areas, and prevent habitat fragmentation, in identifying land for development, preparing masterplans and assessing development proposals.</p> <p>Designated Sites</p> <p>Direct and indirect effects on sites protected by natural heritage designations, be they international, national or local, are important considerations in the planning process.</p> <p>In all cases, a development that is likely to have a significant effect on a Natura site, either alone or in combination with other plans or projects, will require an appropriate assessment (under the Habitats Regulations) to demonstrate that it will not adversely affect the integrity of the site. Development that would have an adverse effect will only be permitted where there are no alternative solutions and there are imperative reasons of overriding public interest, including those of a social or economic nature, and compensatory measures are provided to ensure that the overall coherence of the Natura network is protected.</p> <p>Development that affects a site designated at a national level, including Sites of Special Scientific Interest, will only be permitted where it will not adversely affect the integrity of the area or the qualities for which it has been designated. Where adverse effects are unavoidable, they must be clearly outweighed by social, environmental or economic benefits of national importance.</p> <p>Development that is likely to impact a locally designated site should seek to address this through careful design and mitigation measures. Development that, taking into account any proposed mitigation measures, has an adverse effect on a locally designated site will be permitted only where the adverse effects are clearly outweighed by social, environmental or economic benefits of city-wide importance.</p> <p>Protected Species</p> <p>Some of the species found in Aberdeen are protected under international and national law (including European Protected Species, and species protected under the Wildlife and Countryside Act 1981) while others are identified as being of local importance (North East Scotland Local Biodiversity Action Plan species⁴³).</p> <p>Development should seek to avoid any detrimental impact on protected species through the carrying out of surveys and submission of protection plans describing appropriate mitigation where necessary. Development likely to have a detrimental impact on protected species will not be approved unless: for European protected species, a thorough assessment of the site has demonstrated that the development is required for imperative reasons of overriding public interest and the population is</p>

⁴³ Superseded by the North East Scotland Biodiversity Partnership.

Plan	Policy Statement	Description
		<p>maintained at a favourable conservation status in its natural range; or, for non-bird species protected under the Wildlife and Countryside Act 1981 (as amended) or the Protection of Badgers Act 1992, there will be significant social, economic or environmental benefits. In either case there must also be no other satisfactory solution. Please see relevant Supplementary Guidance for more information regarding protected species and licensing.</p> <p>Licenses will only be granted if certain tests are met. Please see relevant Supplementary Guidance for more information on European Protected Species and licensing.</p> <p>Carbon-rich soils</p> <p>New development should avoid areas of peatland or carbon-rich soil. There will be a presumption against development which would involve significant draining or disturbing of peatland or carbon-rich soil. In all cases of development at any location:</p> <ol style="list-style-type: none"> 1. No development will be permitted unless steps are taken to mitigate negative development impacts. 2. An ecological assessment will be required for a development proposal on or likely to affect a nearby designated site, or where there is evidence to suggest that a habitat or species of international, national and local importance exist on the site. 3. A Construction Environmental Management Plan may be required to address any potential negative impacts on designated sites, protected species, peatlands or carbon-rich soils, waterbodies or local biodiversity during the construction phase of a development. 4. Natural Heritage beyond the confines of designated sites should be protected and enhanced. Measures will be taken, in proportion to the opportunities available, to enhance biodiversity through the creation and restoration of habitats and, where possible, incorporating existing habitats. 5. Where feasible, steps to prevent further fragmentation or isolation of habitats must be sought and opportunities to restore links which have been broken will be taken. 6. Natural Riparian Buffer Strips should be created for the protection and enhancement of water bodies and local biodiversity, including lochs, ponds, wetlands, rivers, tributaries, estuaries and the sea. <p>For further information please see relevant Supplementary Guidance.</p>

Appendix C. Designated Sites of Nature Conservation

Figure C-1 - Designated Sites of Nature Conservation

- Proposed Active Travel Route (Site)
- 1 km Search Area
- Local Nature Conservation Sites (LNCS)
- Rosemount Conservation Area
- TPO Ref. No. 92



Original Scale:	1:25,000
Drawn by: EW	Date: 15/09/22
Checked by: LG	Date: 19/09/22
Reviewed by: LG	Date: 19/09/22

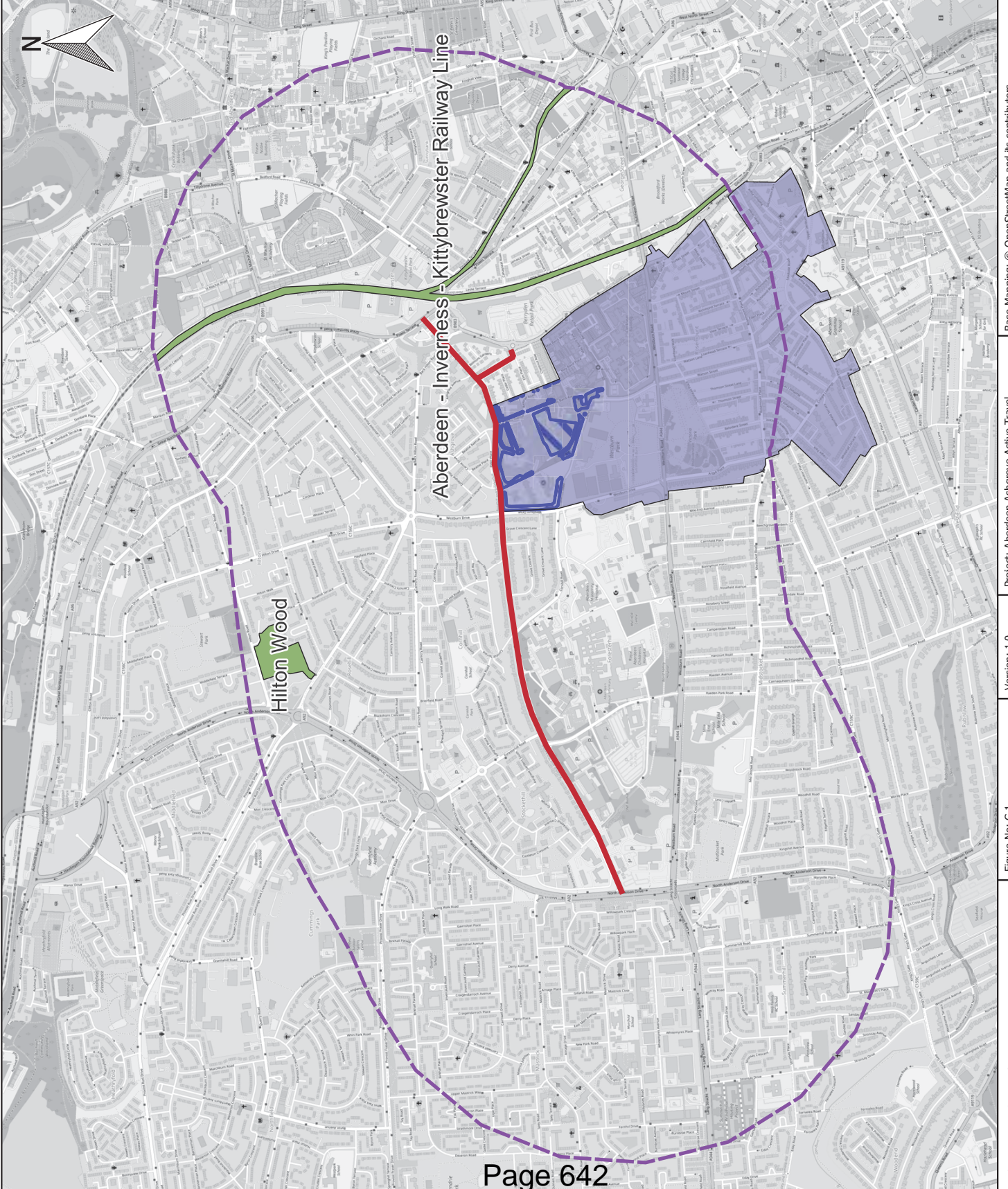


Figure No: C-1	Version: 1.0	Project: Aberdeen Ashgrove Active Travel	Base Mapping: © OpenStreetMap and its contributors
Job No: 5212138	Client: Aberdeen City Council	Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ	

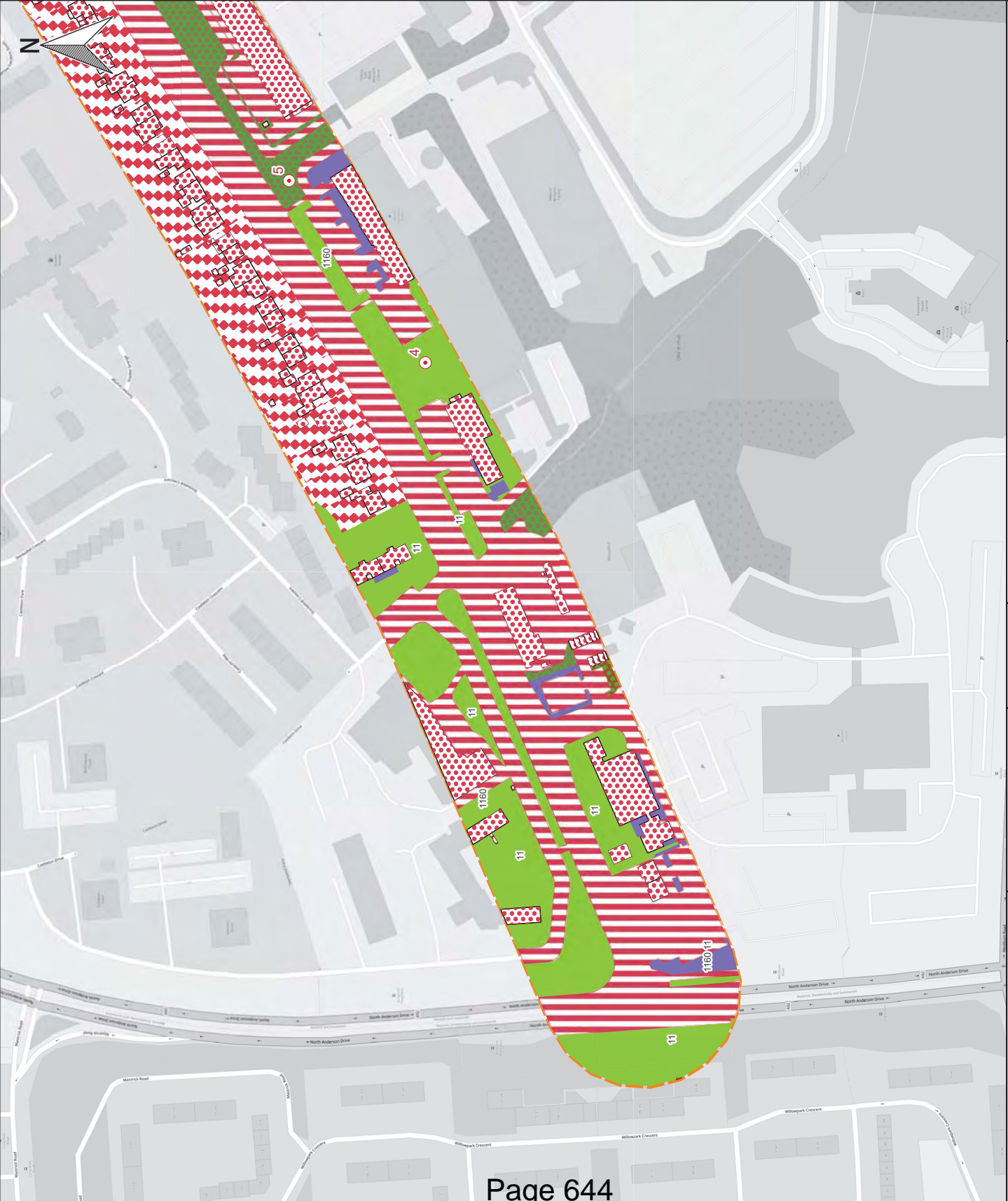
Appendix D. Extended UKHab Survey

Figure D-1 - Extended UKHab Survey Plan








Survey Area
Target Notes (ID)

UKHab Classification (Secondary Codes)

- g4 - modified grassland
- w1g - other woodland-broadleaved
- w1h - other woodland mixed
- h - heathland and shrub
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1d - suburban mosaic of developed/natural surface



<p>Figure No: D-1</p> <p>Job No: 5212138</p>	<p>Version: 1.0</p>	<p>Project: Aberdeen Ashgrove Active Travel</p> <p>Client: Aberdeen City Council</p>	<p>Base Mapping: © OpenStreetMap and its contributors</p> <p>Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ</p>
<p>Title: Extended UKHab Survey Plan</p>		<p>Original Scale: 1:3,500</p>	<p>Drawn by: EM Date: 18/09/22</p> <p>Checked by: LG Date: 19/09/22</p> <p>Reviewed by: LG Date: 19/09/22</p>

-  Survey Area
-  Target Notes (ID)
- UKHab Classification (Secondary Codes)**
-  g4 - modified grassland
-  w1g - other woodland-broadleaved
-  u1b - developed land, sealed surface
-  u1b5 - buildings
-  u1c - artificial unvegetated unsealed surface
-  u1d - suburban mosaic of developed/natural surface



Title: Extended UKHab Survey Plan	Figure No: D-1	Version: 1.0	Project: Aberdeen Ashgrove Active Travel	Base Mapping: © OpenStreetMap and its contributors	Original Scale: 1:3,500	Drawn by: EW	Checked by: LG	Reviewed by: LG
	Job No: 5212138	Client: Aberdeen City Council	Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ	Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ	1:3,500	Date: 18/09/22	Date: 19/09/22	Date: 19/09/22



Survey Area



Target Notes (ID)

UKHab Classification (Secondary Codes)



g4 - modified grassland



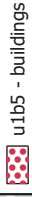
w1g - other woodland-broadleaved



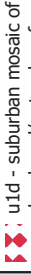
h - heathland and shrub



u1b - developed land, sealed surface



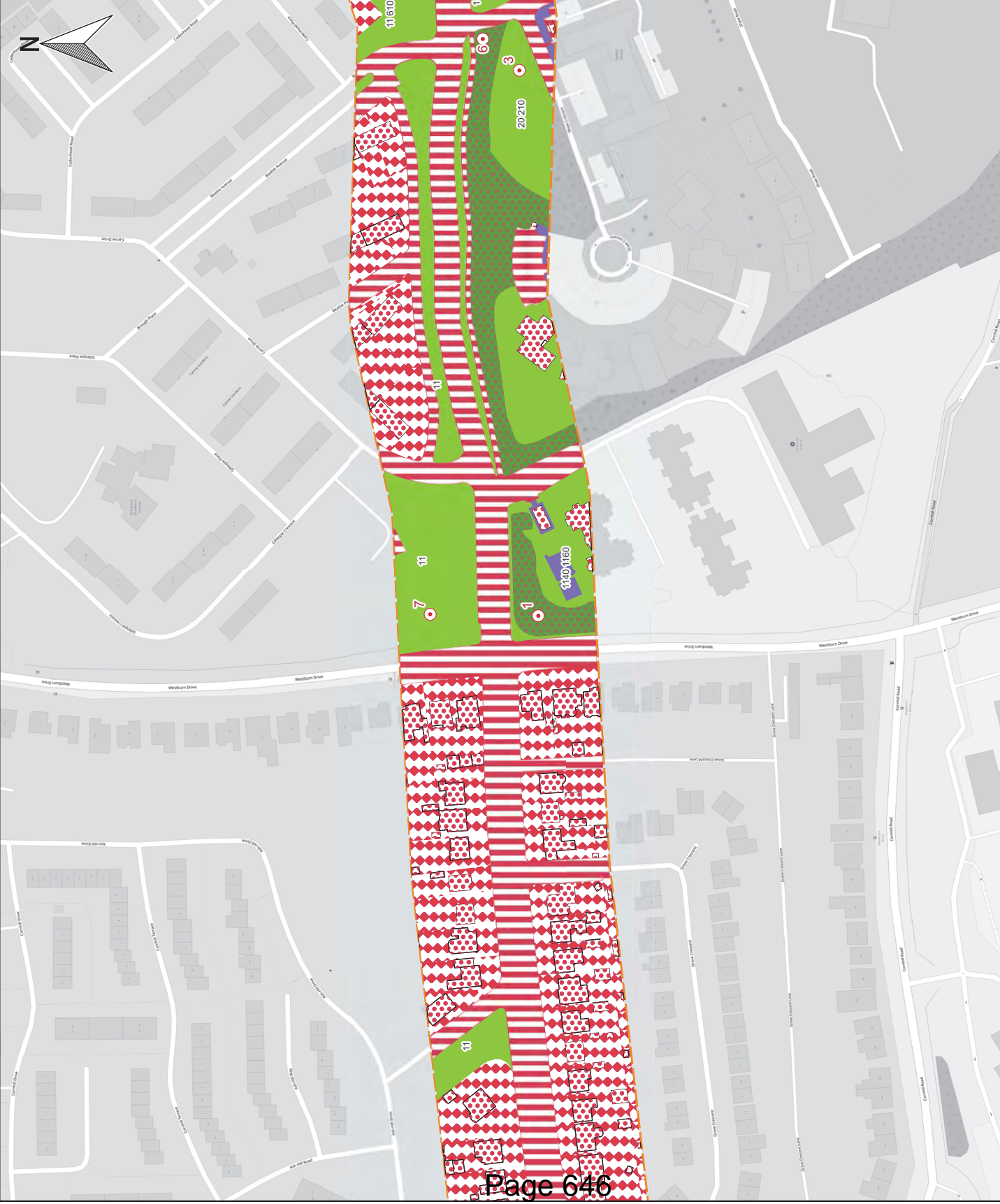
u1b5 - buildings



u1d - suburban mosaic of developed/natural surface



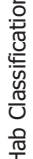
u1d - suburban mosaic of developed/natural surface



Title: Extended UKHab Survey Plan	Figure No: D-1	Version: 1.0	Project: Aberdeen Ashgrove Active Travel	Base Mapping: © OpenStreetMap and its contributors	Original Scale: 1:3,500	Drawn by: EM	Checked by: LG	Reviewed by: LG
	Job No: 5212138		Client: Aberdeen City Council	Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ	1:3,500	Date: 18/09/22	Date: 19/09/22	Date: 19/09/22



Survey Area



Target Notes (ID)

UKHab Classification (Secondary Codes)



g4 - modified grassland



w1g - other woodland-broadleaved



h - heathland and shrub



h3 - dense scrub



u1b - developed land, sealed surface



u1b5 - buildings



u1c - artificial unvegetated unsealed surface



u1d - suburban mosaic of developed/natural surface

Original Scale:	1:3,500
Drawn by: EW	Date: 18/09/22
Checked by: LG	Date: 19/09/22
Reviewed by: LG	Date: 19/09/22

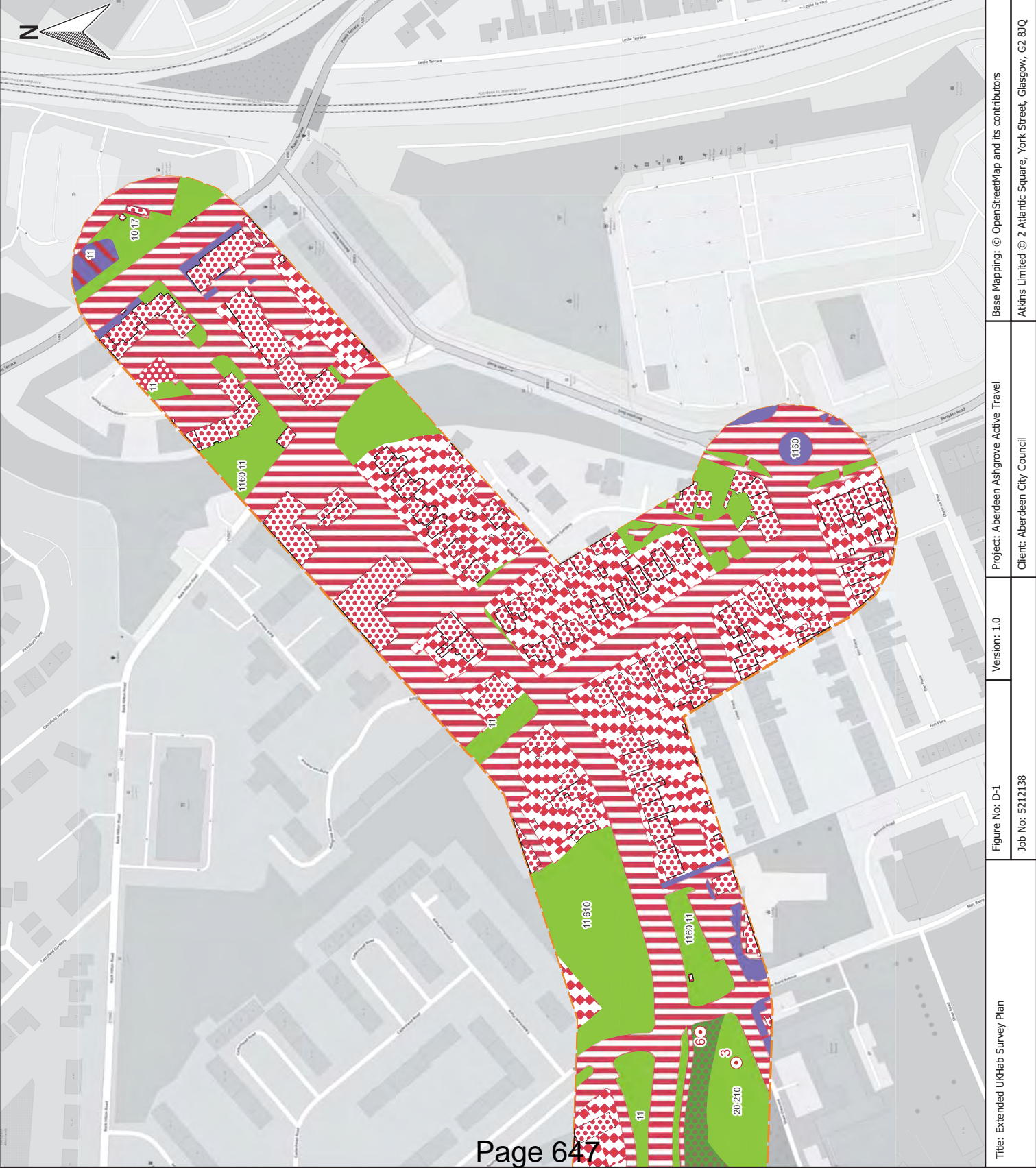



Figure No: D-1	Version: 1.0	Project: Aberdeen Ashgrove Active Travel	Base Mapping: © OpenStreetMap and its contributors
		Client: Aberdeen City Council	Atkins Limited © 2 Atlantic Square, York Street, Glasgow, G2 8JQ

Table D-1 - Secondary Codes

Secondary Code	Description	Secondary Code Group
10	Scattered scrub	Habitat Mosaic
11	Scattered trees	Habitat Mosaic
20	Wood-pasture and parkland	Habitat Complex
48	Non-native	Origin
75	Active management	Management
210	Urban park	Green Infrastructure
610	Children's play space	Green Infrastructure
1140	Ground level planters	Green Infrastructure
1160	Introduced shrub	Green Infrastructure

Table D-2 – Summary of Target Notes

Target note	Description	Photograph
1	Broadleaved woodland recorded adjacent to Westburn Drive in the middle of the Site, on the south aspect of Ashgrove Road. Suitability for breeding birds, roosting bats, priority invertebrates and red squirrel.	

2

Broadleaved woodland recorded adjacent to Foresterhill on the western side of the Site, on the south aspect of Ashgrove Road West. Suitability for breeding birds, roosting bats, priority invertebrates and red squirrel.



3

Seven mature, possibly veteran, trees recorded adjacent to Shaw Crescent. These trees are protected under Tree Preservation Order Reference Number 92 with Aberdeen City Council. Tree tags were present on each: (a) horse chestnut, 0938; (b) pedunculate oak, 0939; (c) pedunculate oak, 0940; (d) horse chestnut, 0941; (e) sycamore, 0943; (f) standing dead tree 0943; and (g) sycamore, 0946. Suitability for breeding birds, roosting bats and priority invertebrates.





4

Modified grassland adjacent to Foresterhill and the Scottish Ambulance Service on the western end of the Site, on the south aspect of Ashgrove Road West.



5

Modified grassland adjacent to the Scottish Ambulance Service on western end of the Site, on the south aspect of Ashgrove Road West.



6

Modified grassland with scattered trees to the eastern end of the Site, on the south aspect of Ashgrove Road. Suitability for breeding birds, roosting bats, priority invertebrates and red squirrel.



7

Modified grassland with scattered trees adjacent to Westburn Drive to the eastern end of the Site, on the north aspect of Ashgrove Road. Suitability for breeding birds, roosting bats and priority invertebrates.



Appendix E. Legislation table

Species	Legislation	Offences	Licensing procedures and guidance
Bats <i>European Protected Species</i>	Conservation (Natural Habitats, & c.) Regulations 1994 (as amended) Regulation 39	<p>To deliberately or recklessly:</p> <ul style="list-style-type: none"> capture, injure or kill bats; disturb a bat while it is occupying a structure or place used for shelter or protection; disturb a bat while it is rearing or otherwise caring for its young; obstruct access to a breeding site or resting place, or otherwise deny use of the breeding site or resting place; disturb a bat in a manner or in circumstances likely to (i) significantly affect the local distribution or abundance of the species; or (ii) impair its ability to survive, breed or reproduce, or rear or otherwise care for its young. <p>Damage or destroy a breeding site or resting place of such an animal [note that this does not need to be deliberate or reckless to constitute an offence].</p>	<p>Licences for development are issued by NatureScot.</p> <p>Licence from NatureScot is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.</p> <p>Guidance documents: NatureScot Standing Advice: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/bats-and-licensing Bat Workers Manual (JNCC 2004) Bat Surveys: Good Practice Guidelines (BCT 2016)</p>
Birds	Wildlife and Countryside Act 1981 (as amended) Section 1	<p>To intentionally or recklessly:</p> <ul style="list-style-type: none"> kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst that nest is in use or being built; at any other time takes, damages, destroys or otherwise interferes with any nest habitually used by any wild bird included in Schedule A1; 	<p>No licences are available to disturb any birds in regard to development.</p> <p>Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development.</p> <p>General licences are available in respect of 'pest species' but only for certain very specific purposes (e.g. public health, public safety, air safety).</p> <p>The nests of Schedules 1A and A1 bird species are protected all year round.</p> <p>Guidance document:</p>

<p>Red squirrel</p>	<p>Wildlife and Countryside Act 1981 (as amended) Section 9</p>	<ul style="list-style-type: none"> obstruct or prevent any wild bird from using its nest; take or destroy an egg of any wild bird; disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young (including those that lek while doing so); disturbs any wild bird included in Schedule 1 (including dependent young of the species); harasses any wild bird included in Schedule 1A. <p>To intentionally or recklessly:</p> <ul style="list-style-type: none"> kill, injure or take a red squirrel; damage, destroy or obstruct access to any structure or place red squirrel uses for shelter or protection (a drey); <p>disturb a red squirrel while it is occupying a structure or place for that purpose.</p>	<p>NatureScot Standing Advice: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species/licensing-z-guide/birds-and-licensing</p> <p>Licenses for development are issued by NatureScot.</p> <p>Guidance documents:</p> <p>NatureScot Standing Advice: https://www.nature.scot/doc/standing-advice-planning-consultations-red-squirrels</p> <p>Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trehwella, W.J., Wells, D., and Wray, S. (eds.) (2012) <i>UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation</i>. Southampton: Mammal Society.</p> <p>Forestry Commission. (2009) Practical techniques for surveying and monitoring squirrels: Practical Note FCPN011 [online]. Available from https://www.forestresearch.gov.uk/</p>
<p>Reptiles <i>With specific reference to widespread reptile species including adder, common lizard and slow worm.</i></p>	<p>Wildlife and Countryside Act 1981 (as amended) Section 9</p>	<p>To intentionally kill or injure any widespread species of reptile.</p>	<p>There are no licensing provisions to allow the killing or injuring of reptiles and so measures must be put in place to minimise the risk of this happening and avoid an offence being committed.</p> <p>Guidance document:</p> <p>NatureScot Standing Advice: https://www.nature.scot/standing-advice-planning-consultations-reptiles-adder-slow-worm-common-lizard</p>

<p>Invasive species <i>With specific reference to Japanese knotweed, hybrid knotweed, giant knotweed, giant hogweed, rhododendron and Himalayan balsam</i></p>	<p>Wildlife and Countryside Act 1981 (as amended) Section 14</p>	<p>To plant a plant in the wild at a place out with its native range, or otherwise cause a plant to grow in the wild at a place out with its native range.</p>	<p>Any contaminated soil or plant material that is intended to be discarded is classified as controlled waste under the Environmental Protection Act 1990; and must be disposed of by a SEPA licensed haulier to a licensed or permitted landfill site. The waste must be accompanied by appropriate waste transfer documentation prepared by the haulier.</p> <p>Guidance documents: NatureScot Standing Advice: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/invasive-non-native-species The Knotweed Code of Practice (Environment Agency, 2013 version 3) Managing Invasive Non-native Plants (Environment Agency 2010)</p>
<p>Rabbits, foxes and other wild mammals</p>	<p>Wild Mammals (Protection) Act 1996</p>	<p>To intentionally inflict unnecessary suffering to any wild mammal.</p>	<p>Lawful and humane pest control of these species is permitted.</p>

Designated Sites

Site Designation	Legislation	Protection	Guidance
<p>Local Sites With specific reference to County Parks, Regional</p>	<p>Countryside (Scotland) Act 1967 (as amended)</p>	<p>Enables the designation of Country Parks and Regional Parks that are considered to be locally important. The relevant local authority can make by-laws to safeguard habitats and species within Country Parks and Regional Parks.</p>	<p>Development proposals that would potentially affect a local site would need to provide a detailed justification for the work, an assessment of likely impacts, together with proposals for mitigation and restoration of habitats lost or damaged. Guidance documents:</p>

Site Designation	Legislation	Protection	Guidance
Parks and Local Nature Conservation Sites		Local Nature Conservation Sites are identified to local authorities and protected by planning policy as areas that contain natural heritage features of some merit.	NatureScot Standing Advice: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/local-designations

Priority Habitats and Species

Habitats & Species	Legislation	Protection	Guidance
Habitats and species	Nature Conservation (Scotland) Act 2004	A duty to further the conservation of biodiversity was placed on all public sector bodies in Scotland in 2004. This biodiversity duty is about connecting people with the environment and managing biodiversity in the wider environment, not just in specific protected sites. Duty on every public body to further the conservation of biodiversity. Scottish Ministers to designate one or more strategies for the conservation of biodiversity as the Scottish Biodiversity Strategy, and to publish lists of species of flora and fauna and habitats of principal importance.	The Scottish Biodiversity List (SBL) is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the list is to help public bodies carry out their Biodiversity Duty by identifying the species and habitats which are the highest priority for biodiversity conservation in Scotland. The SBL was published in 2005 and revised in 2013 to satisfy the requirement under Section 2(4) of The Nature Conservation (Scotland) Act 2004. Full SBL list: http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/16118/Biodiversitylist/SBL NatureScot Standing Advice: https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-list
	Wildlife and Natural Environment (Scotland) Act 2011	The Wildlife and Natural Environment (Scotland) Act 2011 introduced a requirement for all public bodies to make publicly available a report on their compliance with the biodiversity duty.	

Appendix F. Desk Study Records

Table F-1 - Protected and priority bird species records provided by NESBReC

Feature	Annex I ⁴⁵	Schedule 1 ⁴⁶	SBL Priority ⁴⁷	BoCC Red ⁴⁸	BoCC Amber ⁴⁸
Black Headed Gull			Yes		Yes
Bullfinch			Yes		Yes
Black-tailed Godwit		Yes	Yes	Ye	
Cuckoo			Yes	Yes	
Duncock			Yes		Yes
Goldeneye					Yes
Herring Gull			Yes	Yes	
House Sparrow			Yes	Yes	
Kestrel			Yes		Yes
Linnet			Yes	Yes	
Pink-footed Goose					Yes
Redwing		Yes	Yes	Yes	
Siskin			Yes		
Song Thrush			Yes	Yes	
Starling			Yes	Yes	
Swift			Yes		Yes

⁴⁵ European Directive 2009/147/EC on the conservation of wild birds.

⁴⁶ Wildlife and Countryside Act 1981 (as amended in Scotland).

⁴⁷ Scottish Biodiversity List.

⁴⁸ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) 'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man'. *British Birds* 108, pp708–746.

Table F-2 – Protected and priority invertebrate species records provided by NESBReC

Common Name	Latin Name	Taxon	Annex II ⁴⁹	Schedule 5 ⁵⁰	SBL Priority ⁵¹	NESBIP ⁵²
Dusk Brocade	<i>Apamea remissa</i>	Moth	No	No	Yes	No
Grey Dagger	<i>Acronicta psi</i>	Moth	No	No	Yes	No
Rosy Minor	<i>Litologia literosa</i>	Moth	No	No	Yes	No
Rosy Rustic	<i>Hydraecia micacea</i>	Moth	No	No	Yes	No
Small Phoenix	<i>Ecliptopera silaceata</i>	Moth	No	No	Yes	No
Small Square-spot	<i>Diarsia rubi</i>	Moth	No	No	Yes	No

⁴⁹ European Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

⁵⁰ Wildlife and Countryside Act 1981 (as amended in Scotland).

⁵¹ Scottish Biodiversity List.

⁵² North East Scotland Biodiversity Partnership.

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Drawing Package



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KEY

ASH-ATK-HGN-ZZZZZ-DR-CH-000002	DRAWING REFERENCE NUMBER
[Empty Box]	DRAWING COVERAGE

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Use
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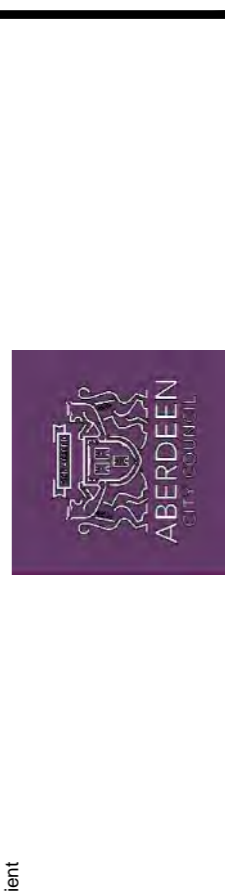
Decommissioning / Demolition
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Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE							
DESCRIPTION	S0	P02	CM	GM	SS	MC	06/09/22
FIRST ISSUE							
DESCRIPTION	S0	P01	CM	GM	SS	MC	26/08/22

CONCEPT DESIGN

STATUS: S0

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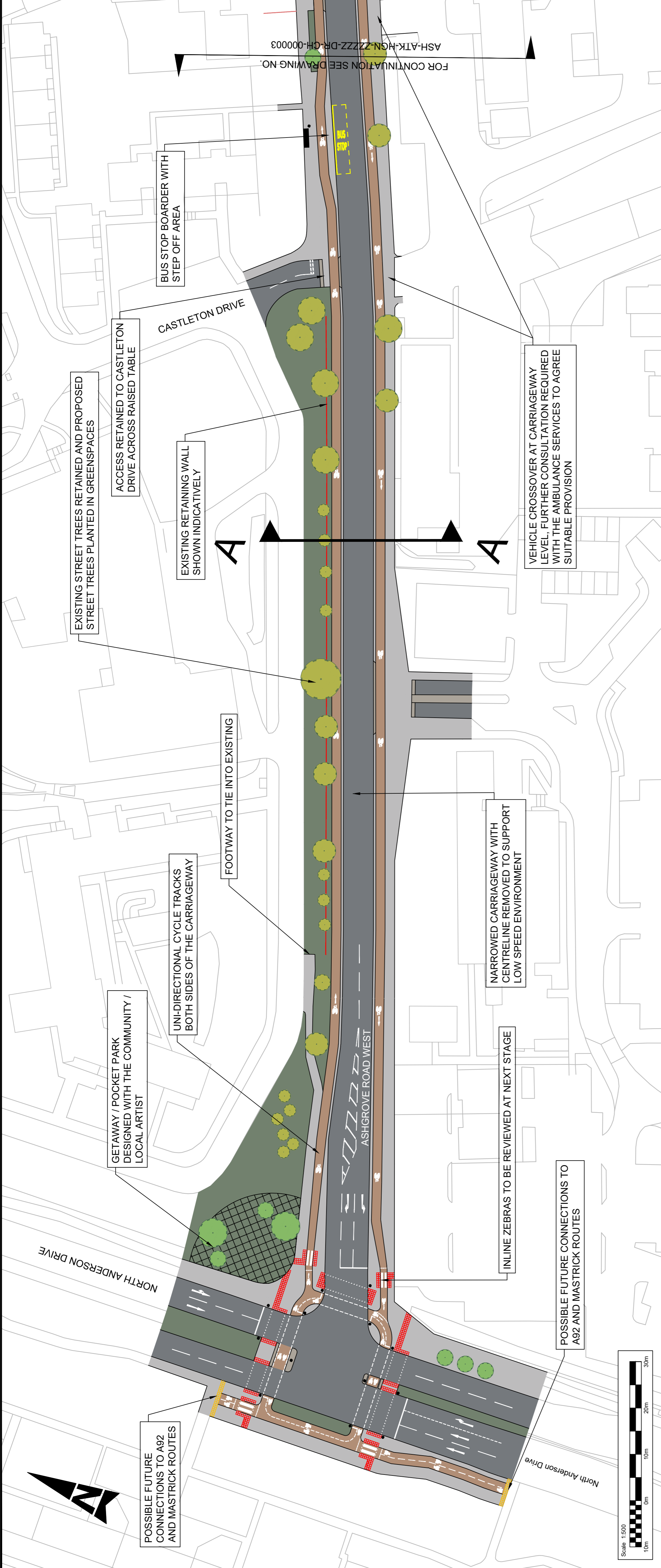
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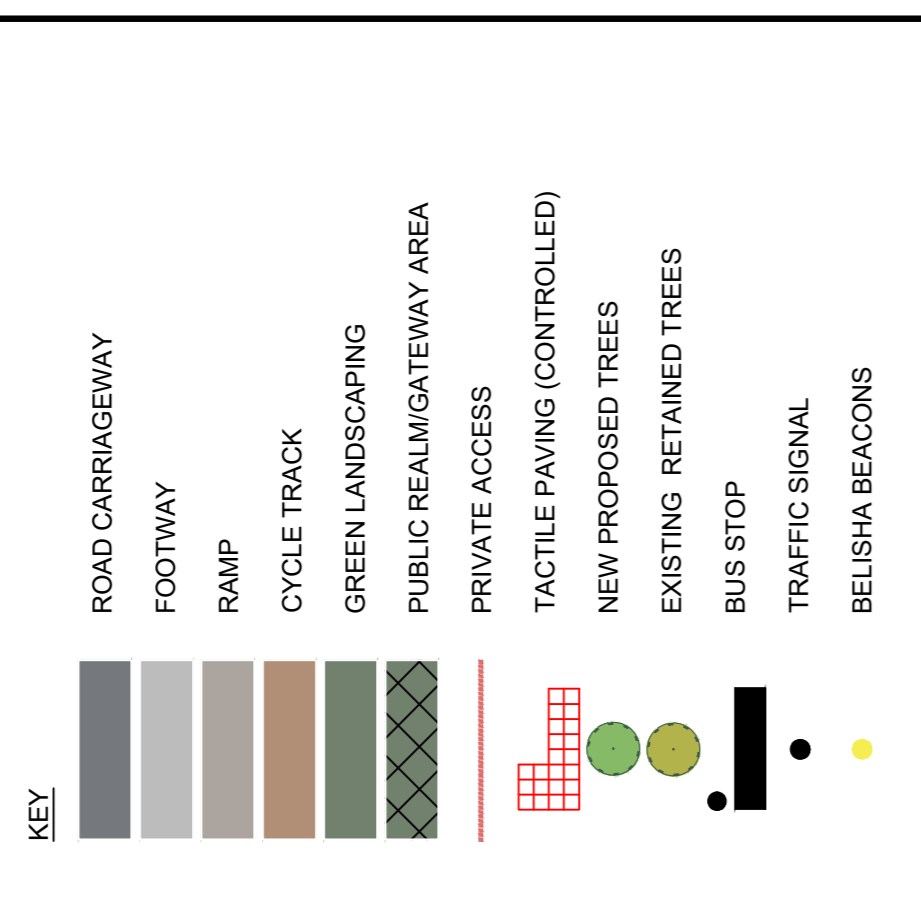
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Drawing Title: LOCATION PLAN

Drawing Number: ASH	Originator: ATK	Version: HGN
Project: ZZZZZ	Type: DR - CH	Number: 000001
Location: A1	Scale: 1:2000	Sheet: 1 of 1
Revision: 1	Ref No: 5212138	Rev: P02



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 4. CONSTRAINTS ARE SHOWN IN RED AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 5. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
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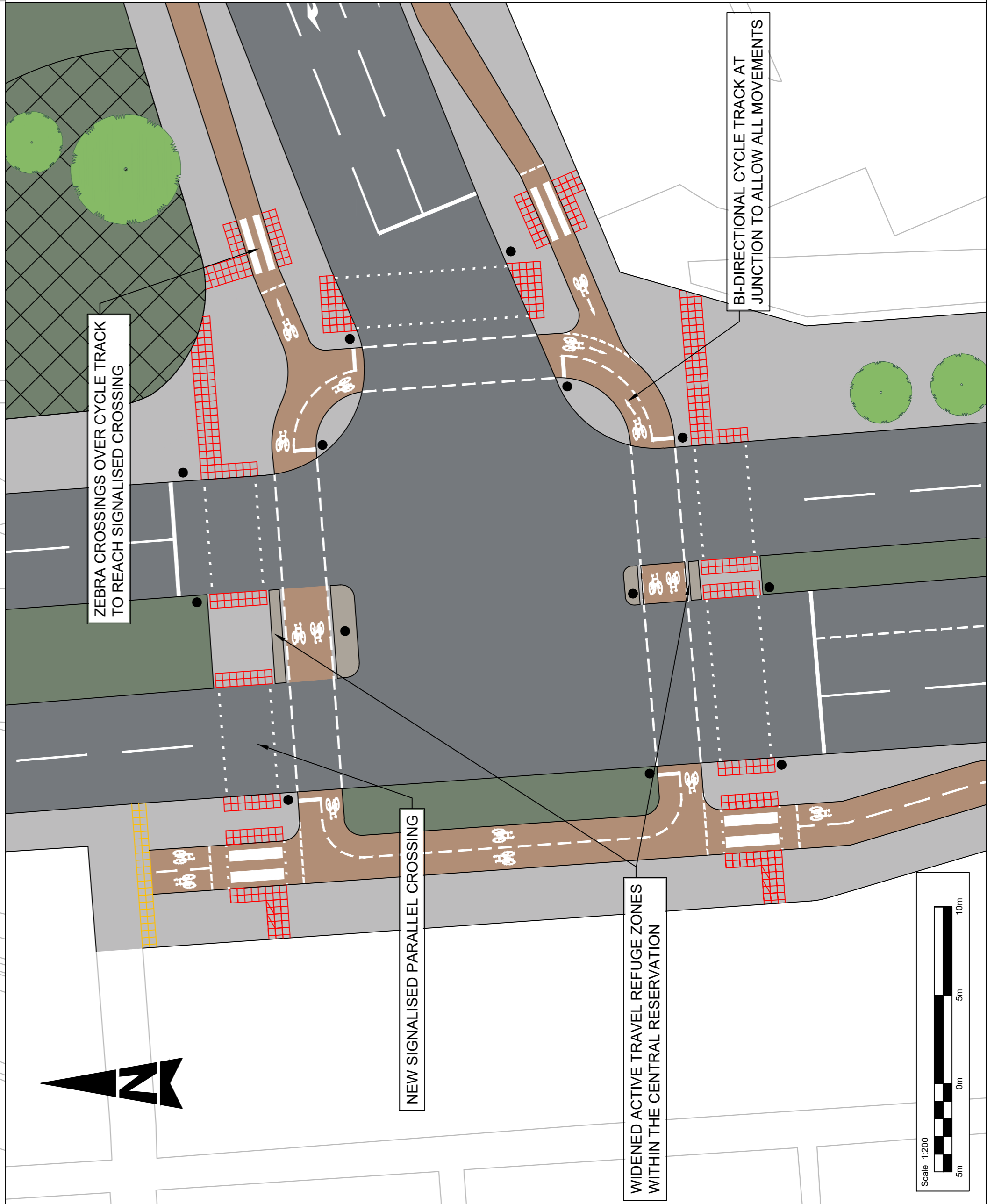
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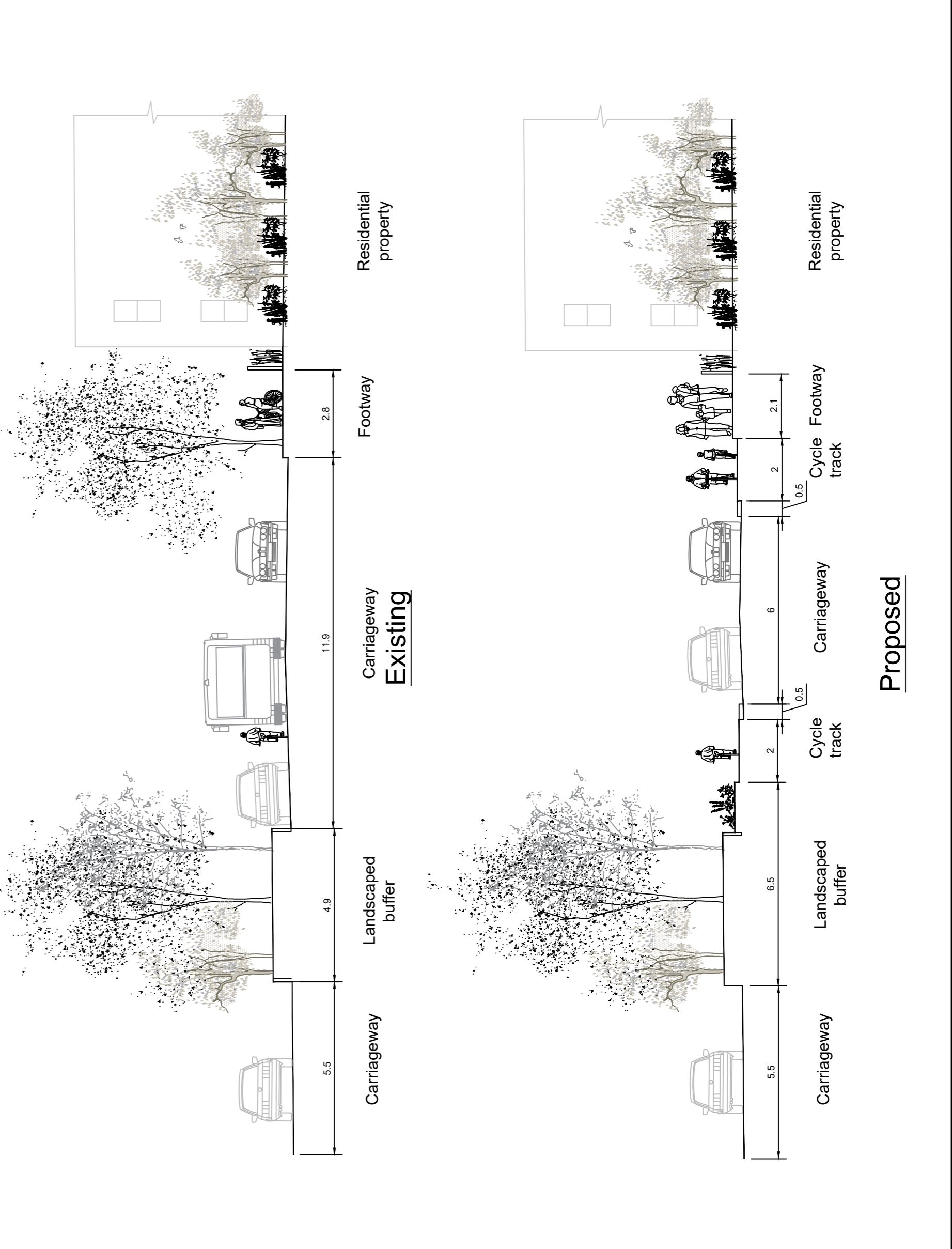
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Cross Section A-A



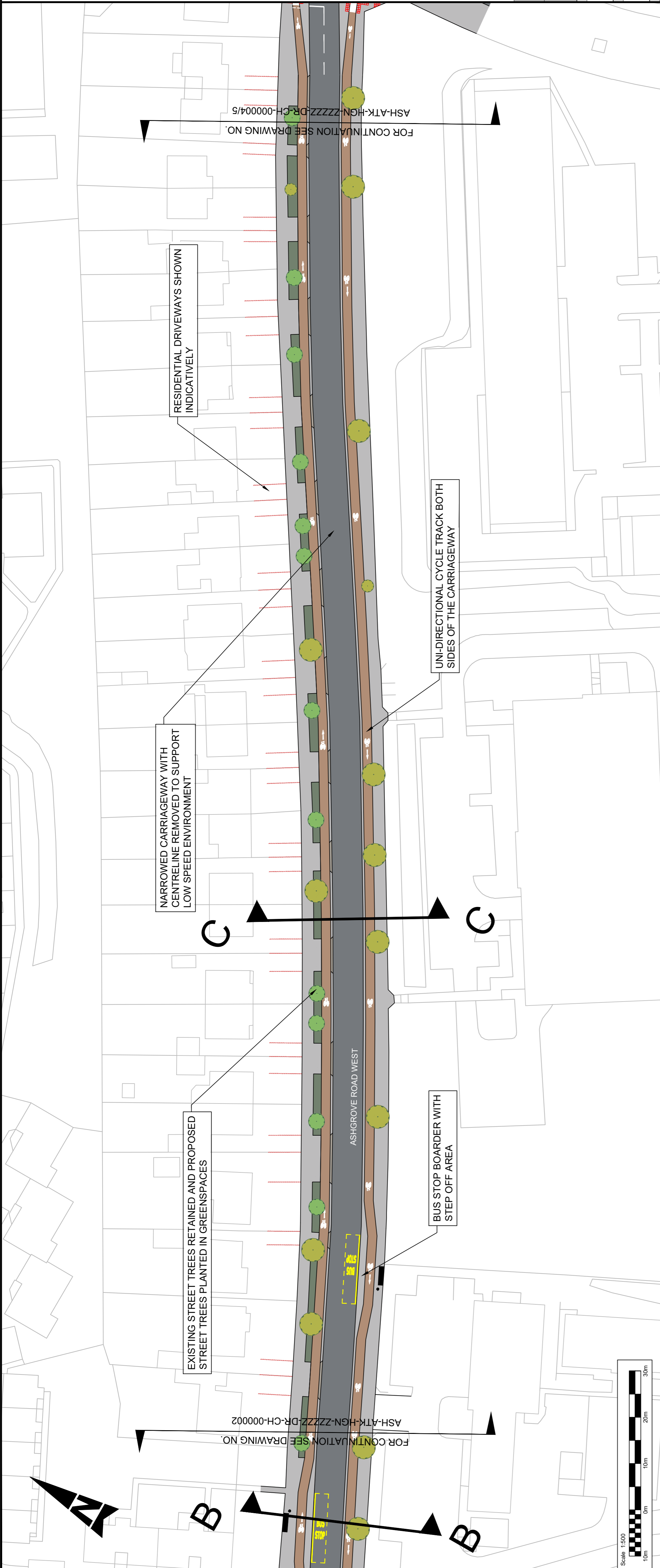
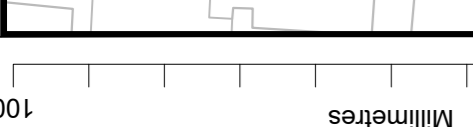
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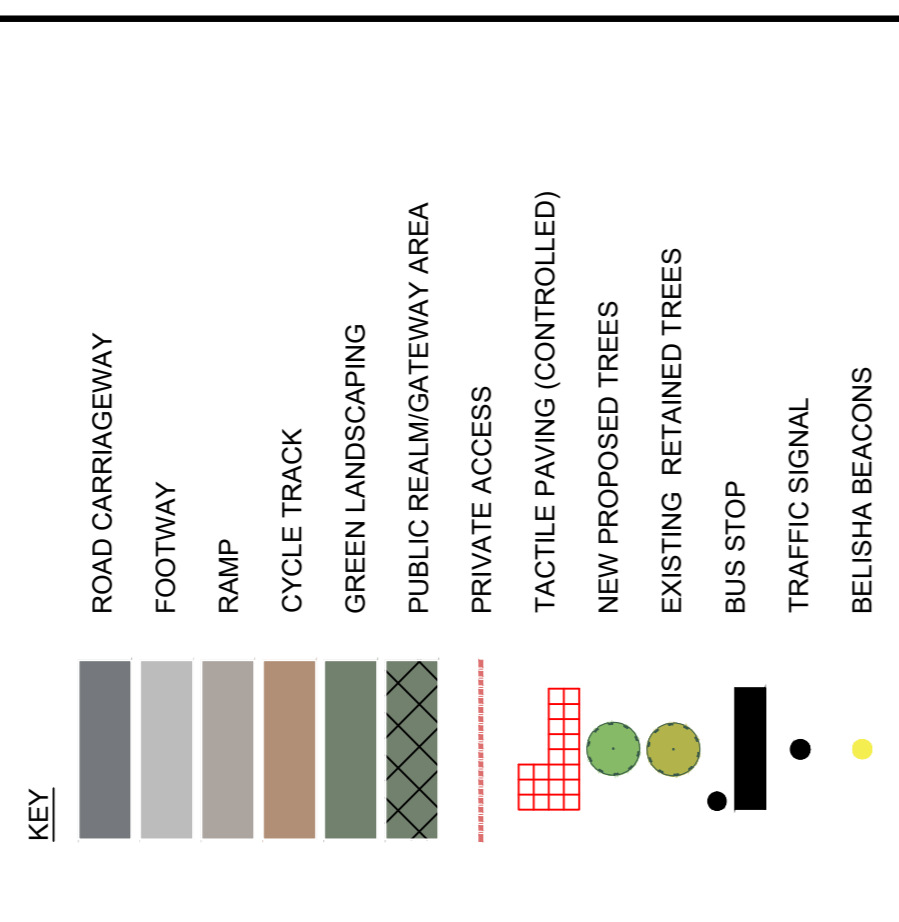
CONCEPT DESIGN

Project: ASH - ATK - HGN - DR - CH - 000002
Drawing Number: ZZZZZ
Project Name: ASHGROVE CONNECTS
Project Location: GENERAL ARRANGEMENT NORTH ANDERSON DRIVE TO CASTLETON DRIVE CONCEPT DESIGN SHEET 1 OF 10

Project No: 521238
Sheet: 1 of 10
Rev: P02



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 5. SITE VISITS TO ASSESS ACCESS AND EXISTING CONSTRAINTS ARE SHOWN AND NOTED.
 6. ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
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 8. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 9. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDINANCE SURVEY DATA.
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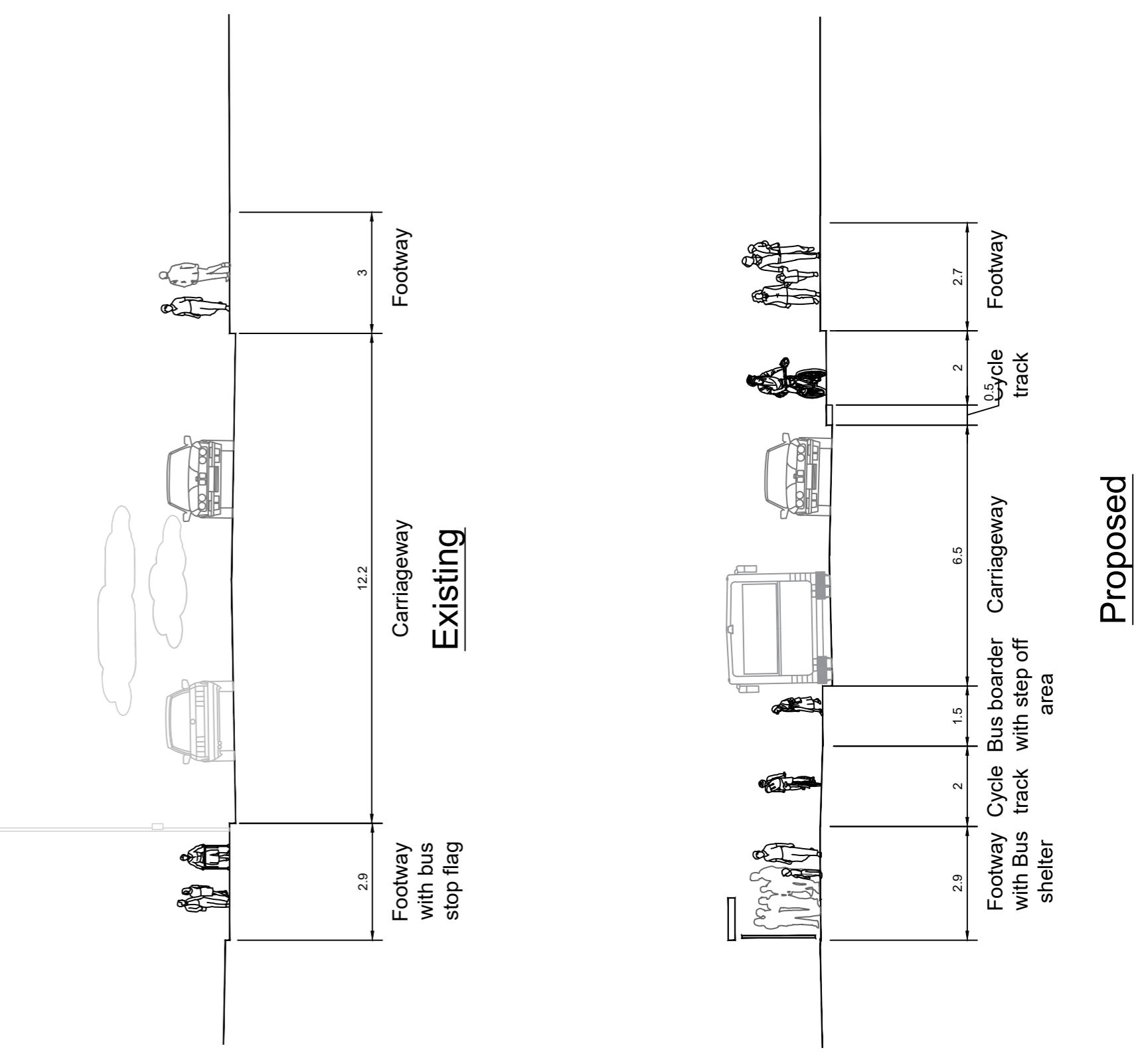


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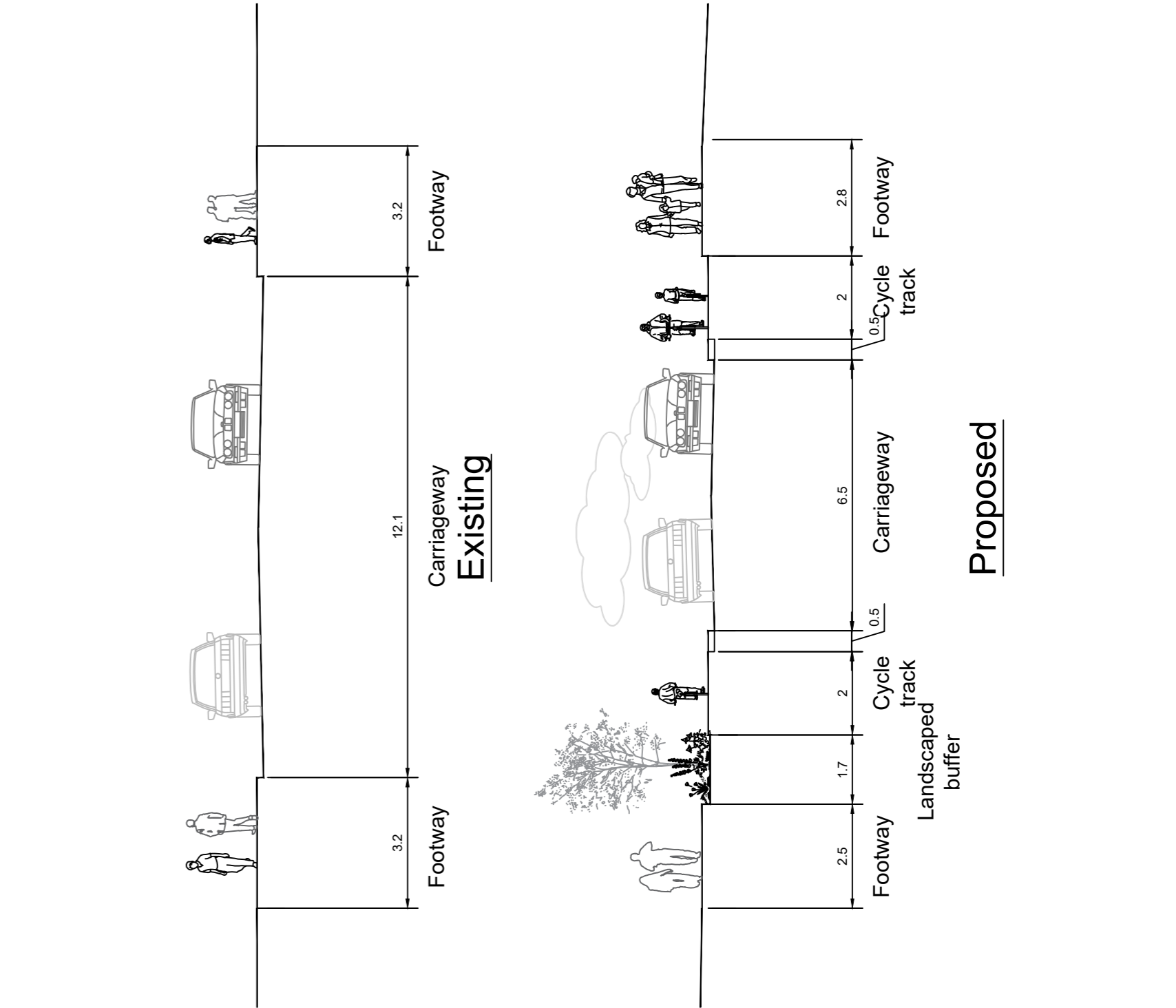
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Cross Section B-B



Cross Section C-C



Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE	Drawn	GM	DL	SS	MC		06/09/22
FIRST ISSUE	Drawn	GM	DL	RH	MC		26/08/22

CONCEPT DESIGN

S0

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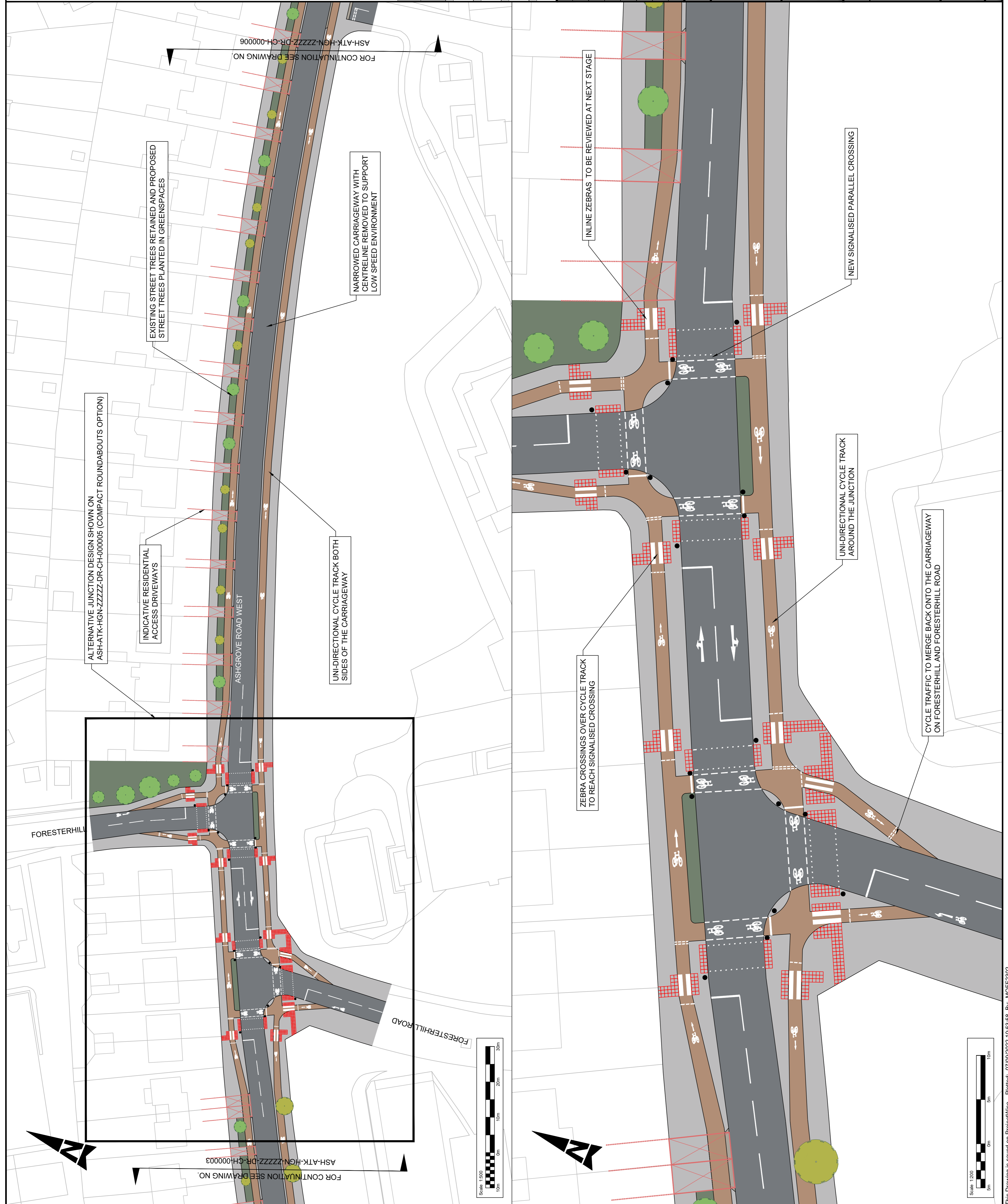
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ASHGROVE CONNECTS

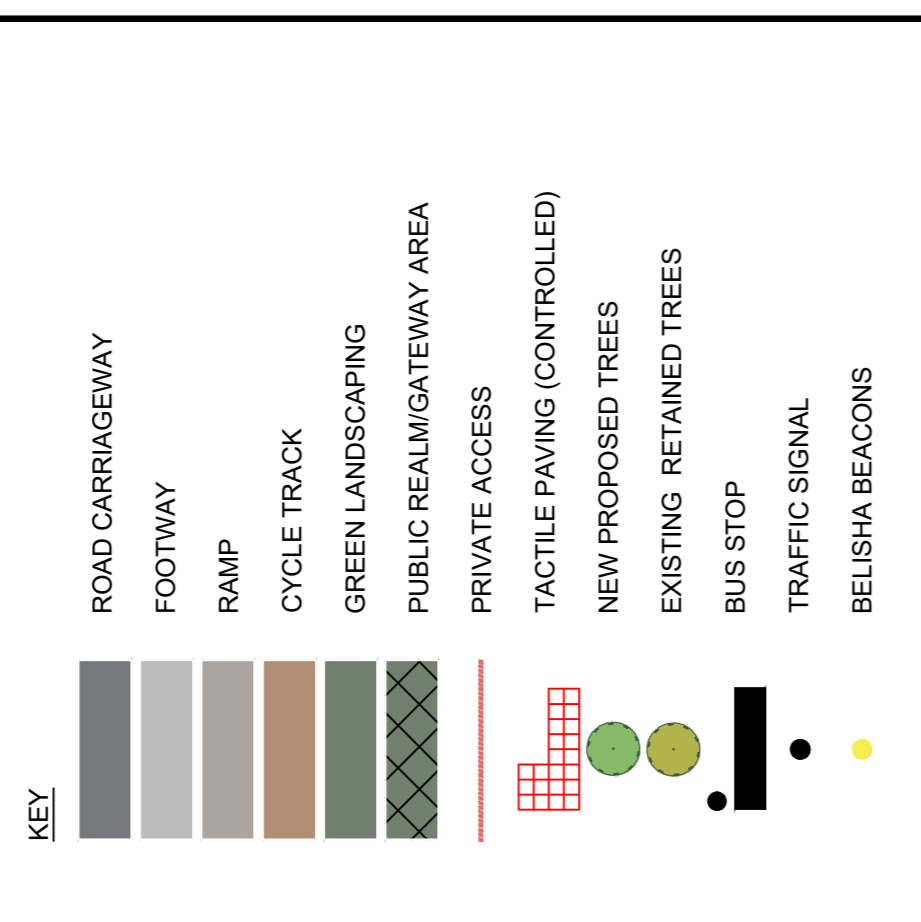
**GENERAL ARRANGEMENT
CASTLETON DRIVE TO FORESTERHILL
ROAD CONCEPT DESIGN
SHEET 2 OF 10**

Project: 5212138
Sheet: 2 of 10
Rev: P02

Location: A1
Scale: AS SHOWN
Project: 5212138
Sheet: 2 of 10
Rev: P02



- NOTES:**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 2. DO NOT SCALE FROM THIS DRAWING.
 3. CONCEPT DESIGN IS BASED ON ORDNANCE SURVEY MAPPING PROVIDED BY ABERDEEN CITY COUNCIL.
 4. THE DETAILS SHOWN IN THIS DRAWING WILL BE SUBJECT TO FURTHER INFORMATION INCLUDING LAND OWNERSHIP, TOPOGRAPHICAL SURVEY, DETAILED UTILITY INFORMATION AND THE TRAFFIC REGULATION ORDERS PROCESS.
 5. CONSTRAINTS ARE SHOWN IN RED AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 6. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 7. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 8. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA. DRAWINGS TO BE PRODUCED IN CONNECTION WITH ALL RELATED DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

- Construction: Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Maintenance / Cleaning: Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Use: Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Decommissioning / Demolition: Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

CONCEPT DESIGN

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ASHGROVE CONNECTS

**GENERAL ARRANGEMENT
FORESTERHILL JUNCTION
SIGNALISED OPTION CONCEPT DESIGN
SHEET 3 OF 10**

Project: 5212138
Sheet: 3 of 10
Rev: P02

Location: A1
Scale: AS SHOWN
Project: 5212138
Sheet: 3 of 10
Rev: P02



- NOTES:**
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 5. CONSTRAINTS ARE SHOWN IN RED AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN IN GREEN.
 6. ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING IN THE DESIGN.
 7. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 8. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 9. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
 10. DRAWINGS TO BE AHEAD IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.

KEY

[Grey Box]	ROAD CARRIAGEWAY
[Light Grey Box]	FOOTWAY
[Brown Box]	RAMP
[Green Box]	CYCLE TRACK
[Dark Green Box]	GREEN LANDSCAPING
[Red Box]	PUBLIC REALM/GATEWAY AREA
[Red Dashed Line]	PRIVATE ACCESS
[Red Grid]	TACTILE PAVING (CONTROLLED)
[Green Circle]	NEW PROPOSED TREES
[Green Circle]	EXISTING RETAINED TREES
[Black Square]	BUS STOP
[Black Square]	TRAFFIC SIGNAL
[Yellow Circle]	BELISHA BEACONS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction	Refer to DRA: ASH-ATK-GHS-ZZZZZZ-QA-ZM-000001
Maintenance / Cleaning	Refer to DRA: ASH-ATK-GHS-ZZZZZZ-QA-ZM-000001
Use	Refer to DRA: ASH-ATK-GHS-ZZZZZZ-QA-ZM-000001
Decommissioning / Demolition	Refer to DRA: ASH-ATK-GHS-ZZZZZZ-QA-ZM-000001

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE	Drawn	GM	DL	SS	SS	MC	08/09/22
FIRST ISSUE	Drawn	GM	DL	JL	JL	MC	31/08/22

CONCEPT DESIGN

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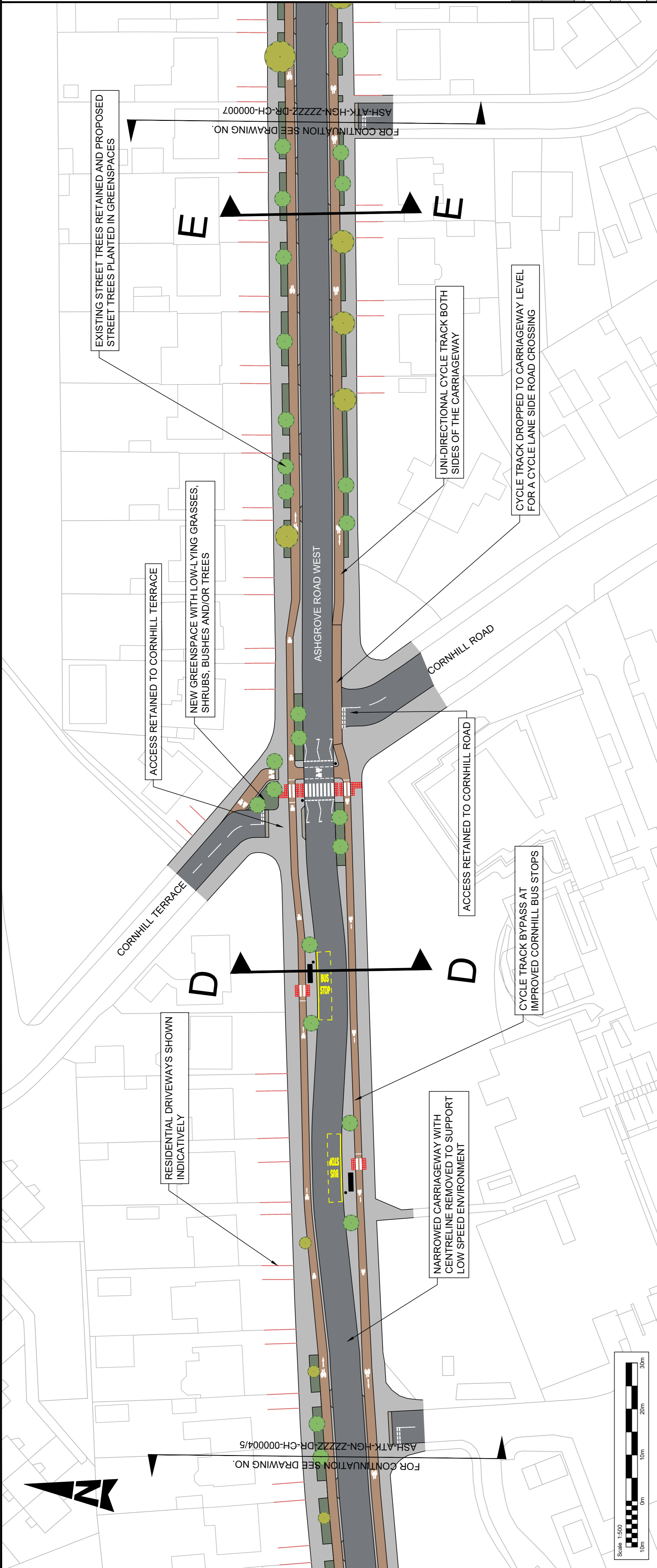
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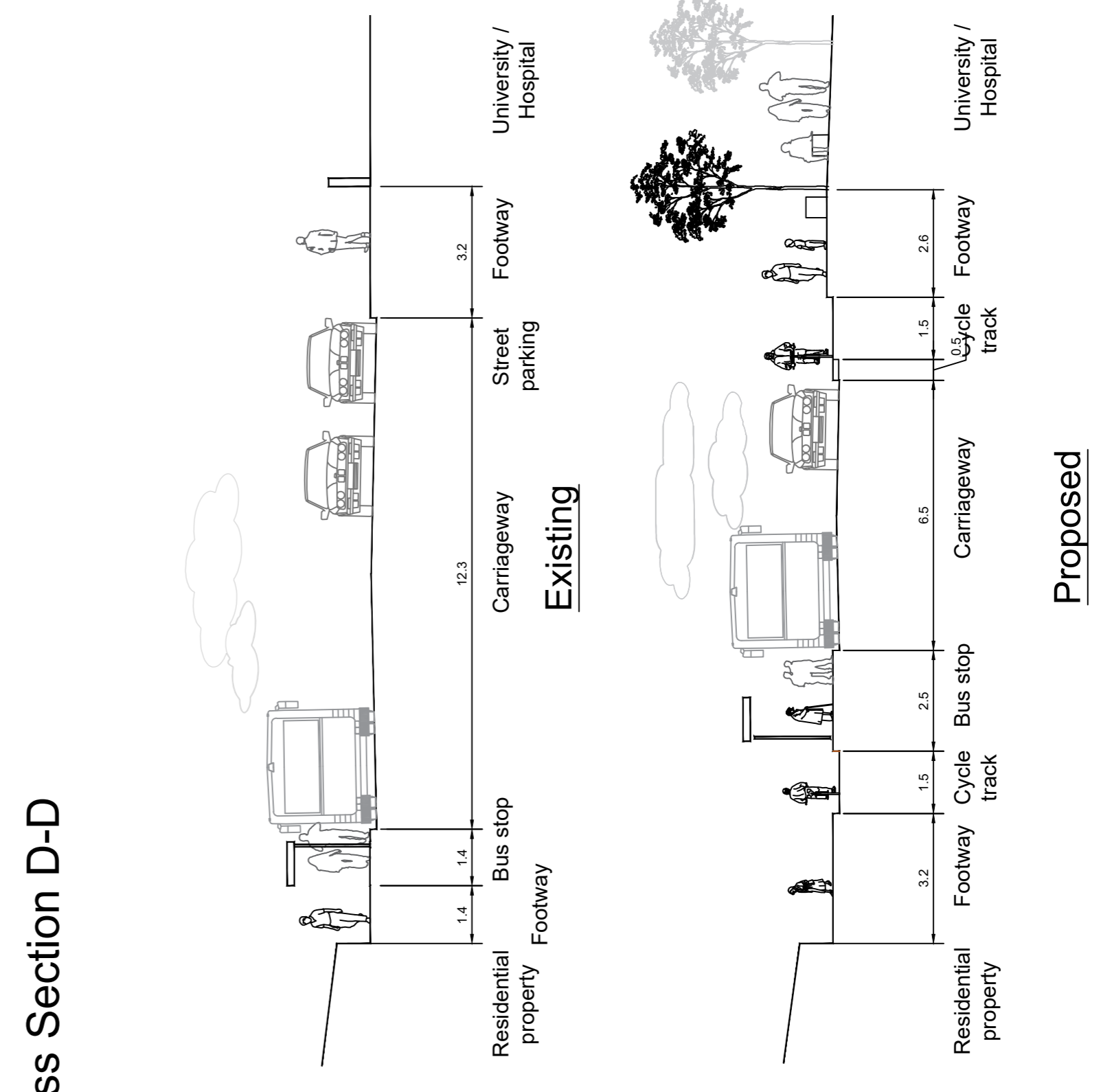
ASHGROVE CONNECTS

**GENERAL ARRANGEMENT
FORESTHILL JUNCTION
ROUNDABOUT OPTION CONCEPT DESIGN
SHEET 4 OF 10**

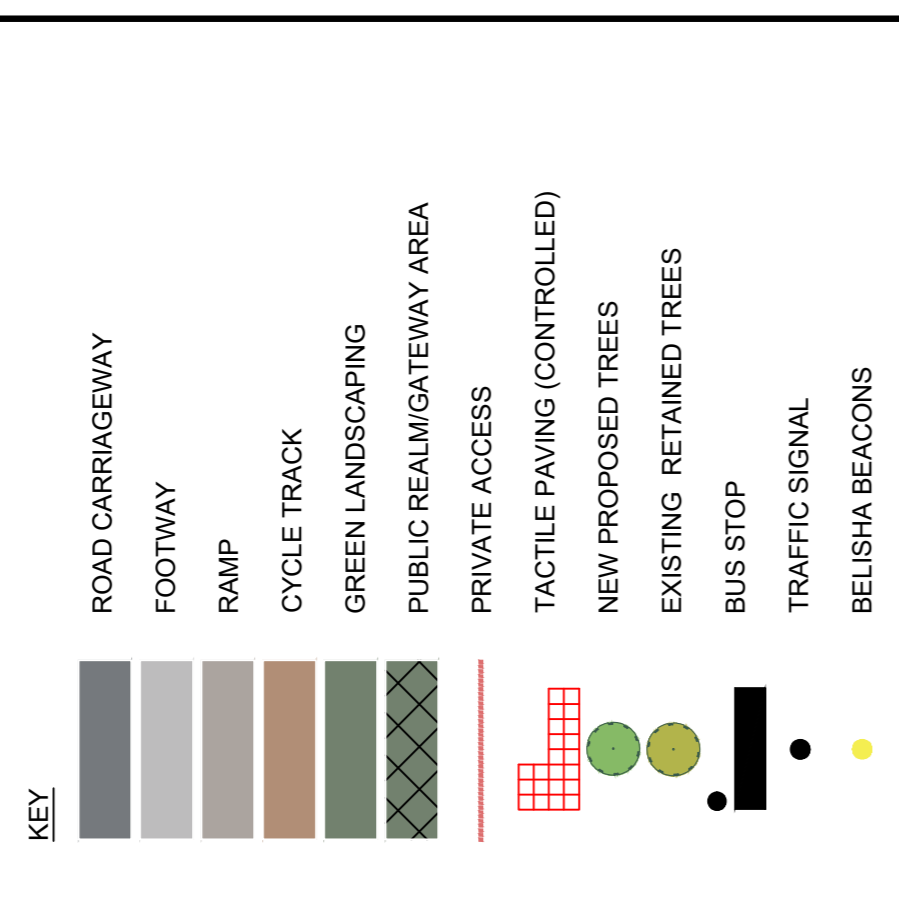
Project: ASH - ATK - HGN - DR - CH - 000005
Drawing Number: ZZZZZZ
Location: A1
Scale: AS SHOWN
Project No: 521238
Sheet: 4 of 10
Rev: P02



Cross Section D-D



- NOTES:**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
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 5. CONSTRAINTS ARE SHOWN AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
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 7. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 8. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA. DRAWINGS TO BE MADE IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

- Construction: Refer to DRA: ASH-ATK-GHS-ZZZZZ-0A-ZM-000001
- Maintenance / Cleaning: Refer to DRA: ASH-ATK-GHS-ZZZZZ-0A-ZM-000001
- Use: Refer to DRA: ASH-ATK-GHS-ZZZZZ-0A-ZM-000001
- Decommissioning / Demolition: Refer to DRA: ASH-ATK-GHS-ZZZZZ-0A-ZM-000001

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE	Drawn	GM	DL	SS	SS	MC	06/09/22
FIRST ISSUE	Drawn	GM	DL	RH	MC	MC	26/08/22

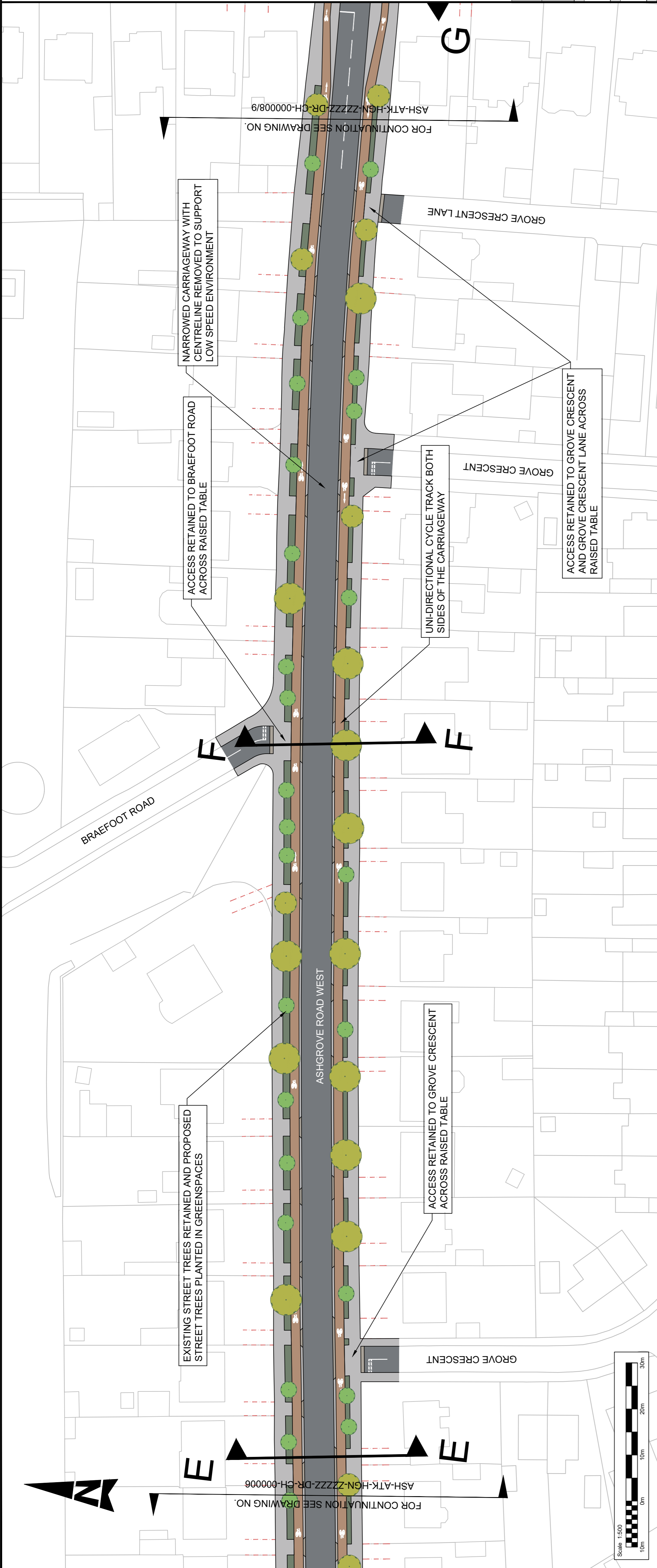
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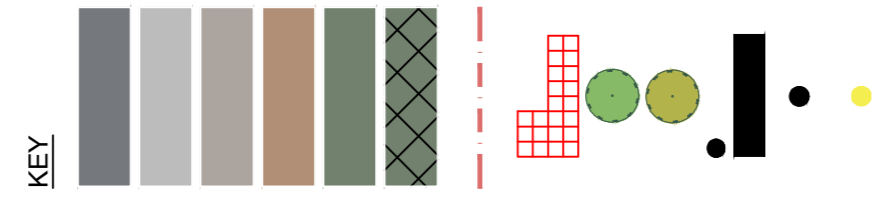
ASHGROVE CONNECTS

**GENERAL ARRANGEMENT
 CORNHILL JUNCTION
 CONCEPT DESIGN
 SHEET 5 OF 10**

Project	ASH	Volume	1	Revision	HGN -
Project	ZZZZZ	Revision	-	Revision	DR - CH - 000006
Location	A1	Scale	AS SHOWN	Project No.	5212138
Original No.	A1	Sheet	5 of 10	Rev.	P02



- NOTES:**
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 6. ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 7. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 8. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 9. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
 10. DRAWINGS TO BE FACED IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (reference shall also be made to the design hazard log):

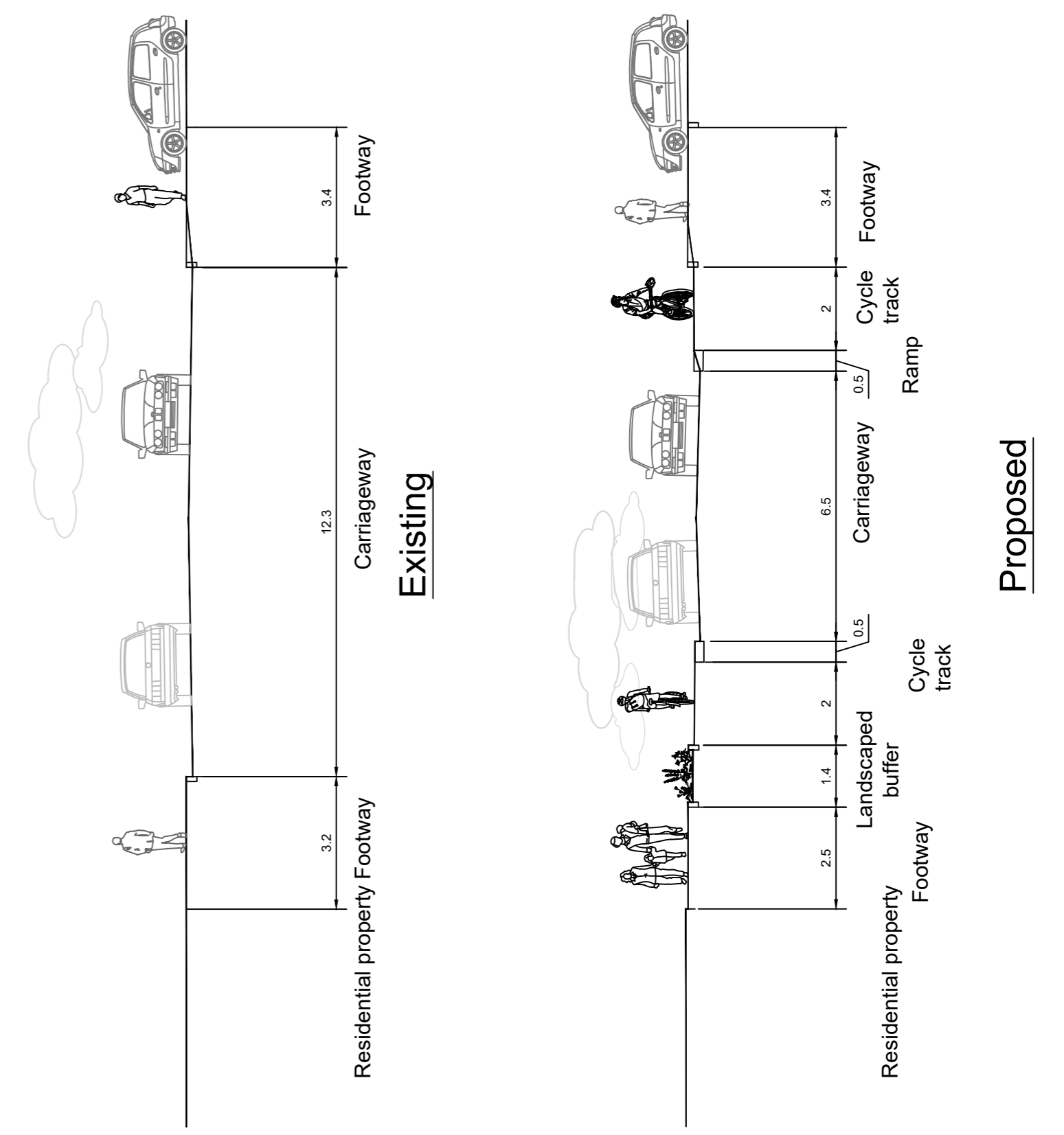
Construction
Refer to DRA: ASH-ATK-GHS-ZZZZ-0A-ZM-000001.

Maintenance / Cleaning
Refer to DRA: ASH-ATK-GHS-ZZZZ-0A-ZM-000001.

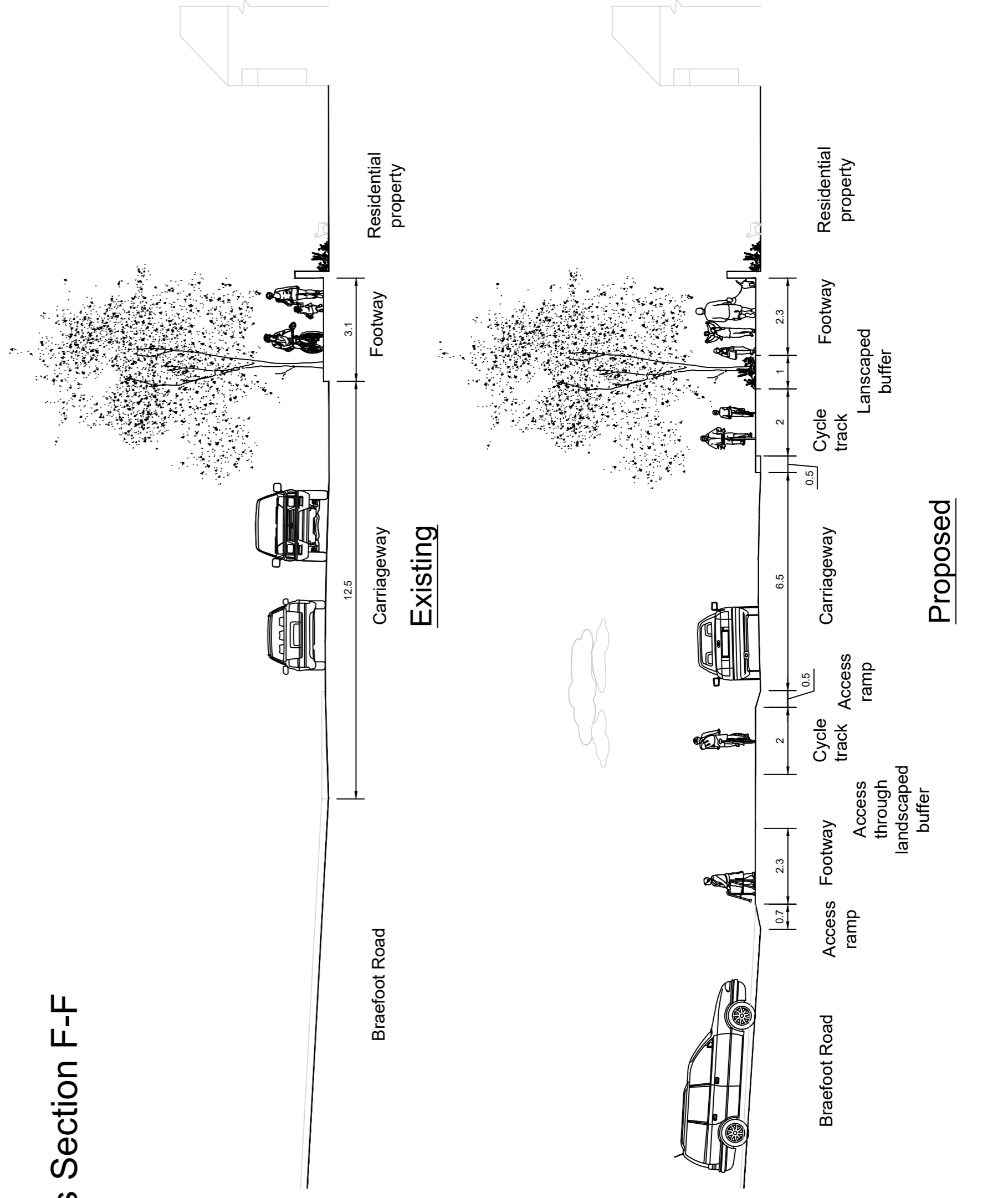
Use
Refer to DRA: ASH-ATK-GHS-ZZZZ-0A-ZM-000001.

Decommissioning / Demolition
Refer to DRA: ASH-ATK-GHS-ZZZZ-0A-ZM-000001.

Cross Section E-E



Cross Section F-F



Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE	Drawn	GM	DL	SS	SS	IMC	07/09/22
FIRST ISSUE	Drawn	GM	DL	RH	IMC	IMC	28/08/22

CONCEPT DESIGN

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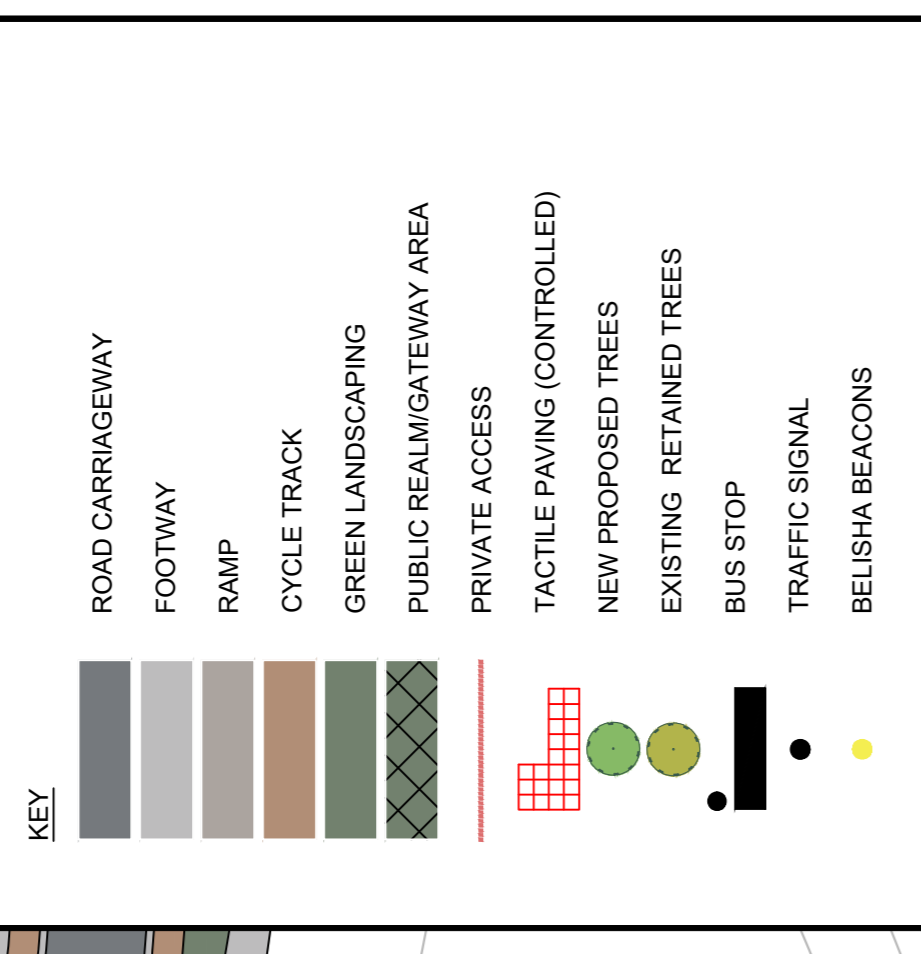
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ASHGROVE CONNECTS

**GENERAL ARRANGEMENT
GROVE CRESCENT TO WESTBURN
DRIVE CONCEPT DESIGN
SHEET 6 OF 10**

Project: ASH - ATK - HGN - DR - CH - 000007
Drawing Number: ZZZZZ
Location: A1
Scale: AS SHOWN
Project No: 521238
Sheet: 6 of 10
Rev: P02

- NOTES:**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 2. DO NOT SCALE FROM THIS DRAWING.
 3. CONCEPT DESIGN IS BASED ON ORDNANCE SURVEY MAPPING PROVIDED BY ABERDEEN CITY COUNCIL.
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 5. CONSTRAINTS ARE SHOWN IN RED AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 6. ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 7. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 8. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 9. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
 10. DRAWINGS TO BE MADE IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

- Construction
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Maintenance / Cleaning
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Use
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Decommissioning / Demolition
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
SECOND ISSUE							
Issue Date	06/07/22	Checked	DL	Reviewed	SS	Authorised	MC
FIRST ISSUE							
Issue Date	26/08/22	Checked	GM	Reviewed	RH	Authorised	MC

CONCEPT DESIGN

S0

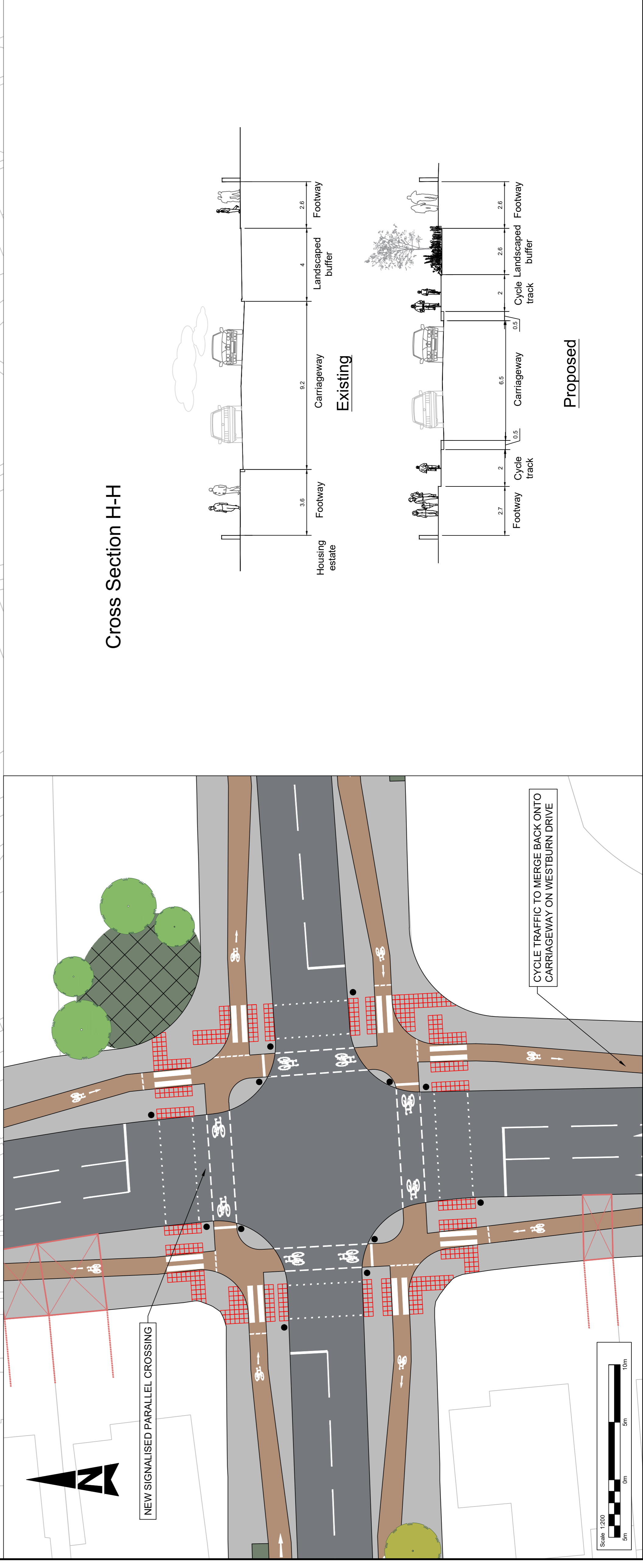
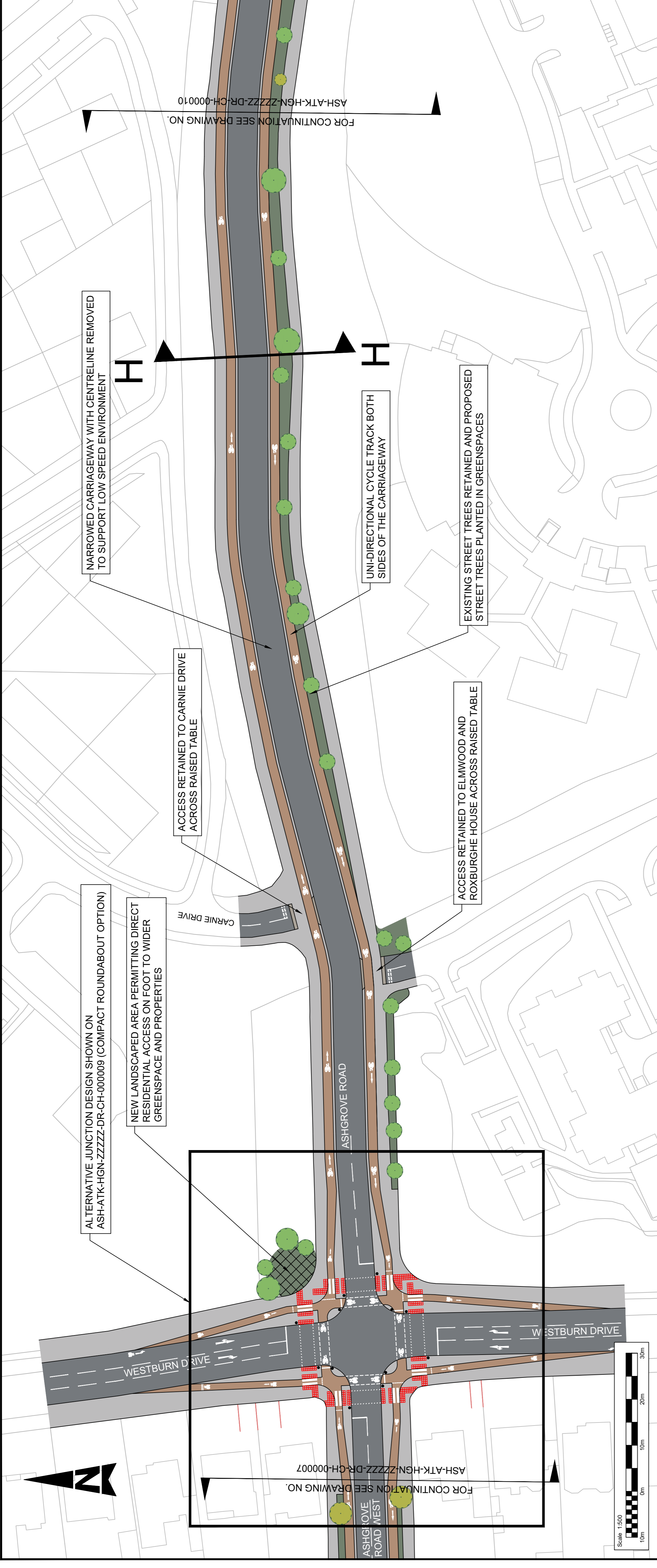
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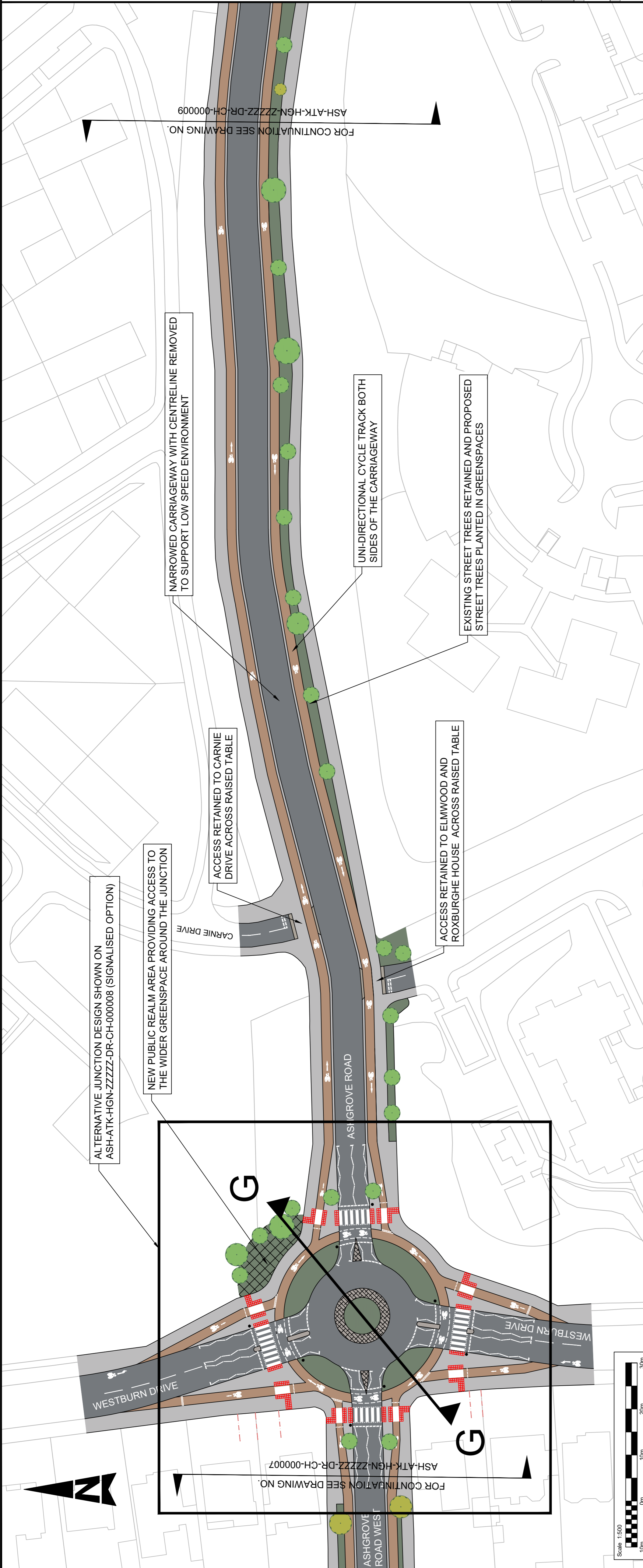
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ASHGROVE CONNECTS

GENERAL ARRANGEMENT
WESTBURN DRIVE JUNCTION
SIGNALISED OPTION CONCEPT DESIGN
SHEET 7 OF 10

Project: 521238
Sheet: 7 of 10
Rev: P02





- NOTES:**
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 2. DO NOT SCALE FROM THIS DRAWING.
 3. CONCEPT DESIGN IS BASED ON ORDNANCE SURVEY MAPPING PROVIDED BY ABERDEEN CITY COUNCIL.
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 6. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 7. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 8. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
 9. DRAWINGS TO BE USED IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.

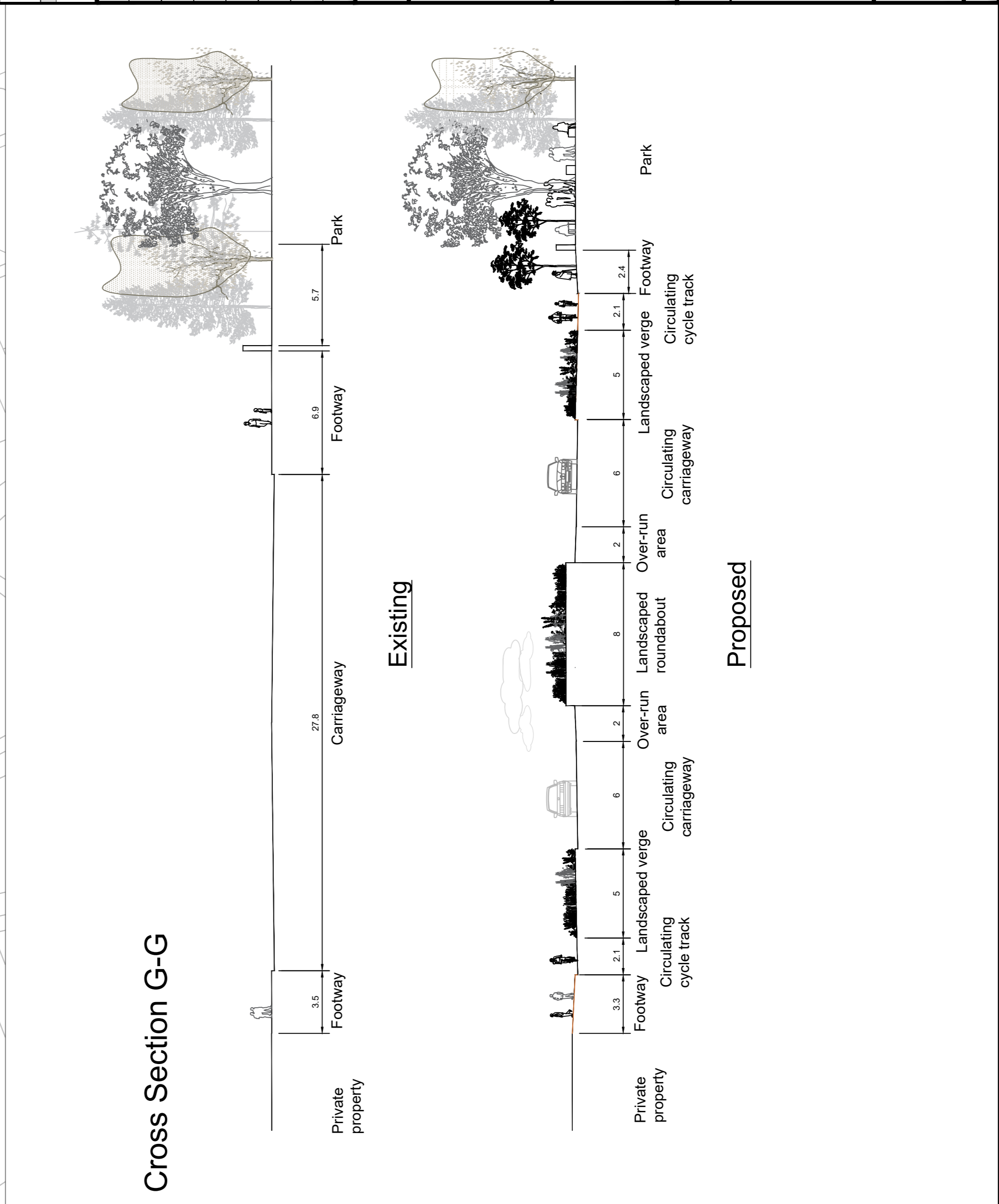
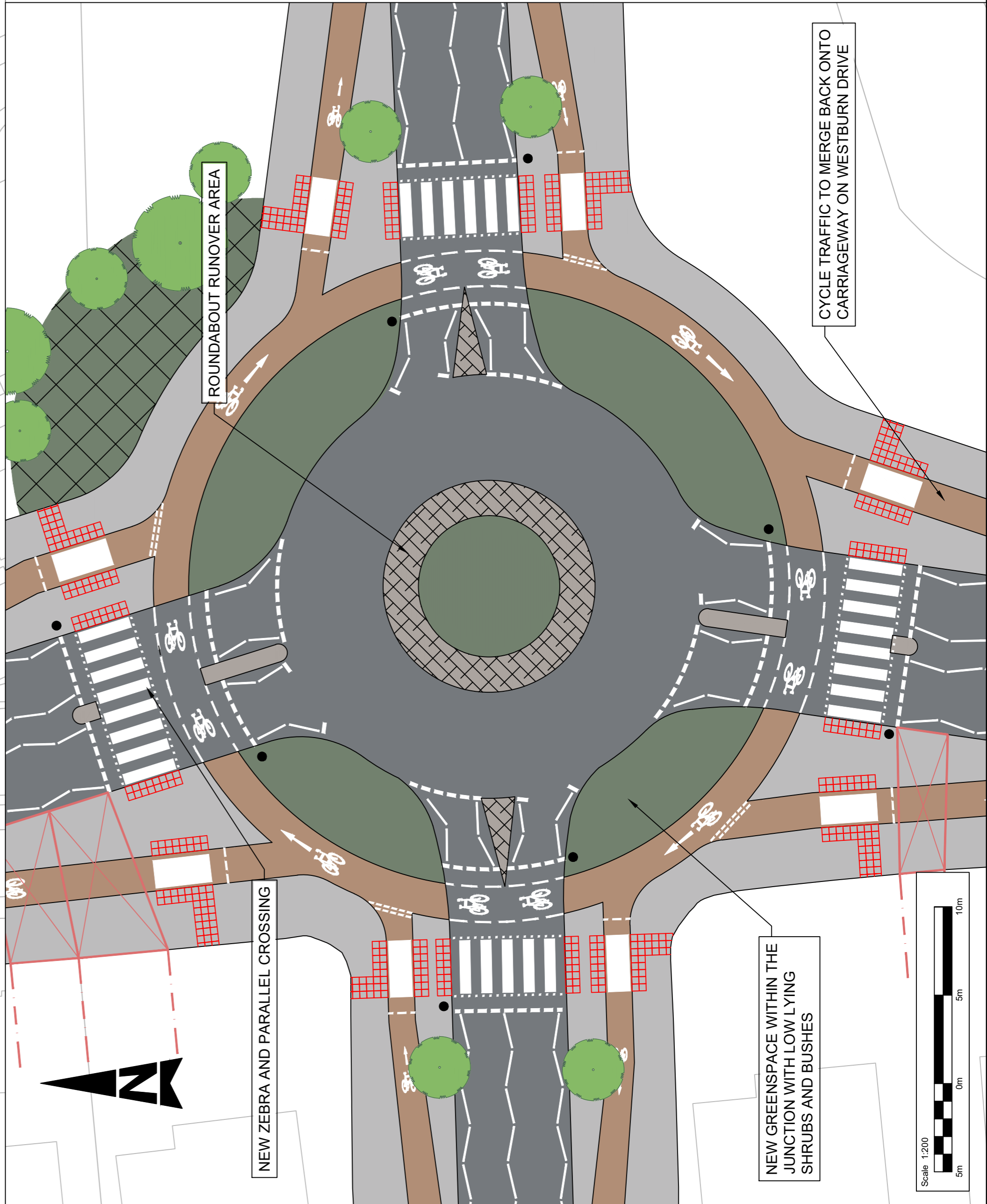
KEY



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

- Construction
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Maintenance / Cleaning
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Use
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001
- Decommissioning / Demolition
- Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001



Cross Section G-G

Existing

Proposed

CONCEPT DESIGN

S0

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ASH - ATK - HGN - ZZZZZ
Project Name

ASHGROVE CONNECTS
Project Title

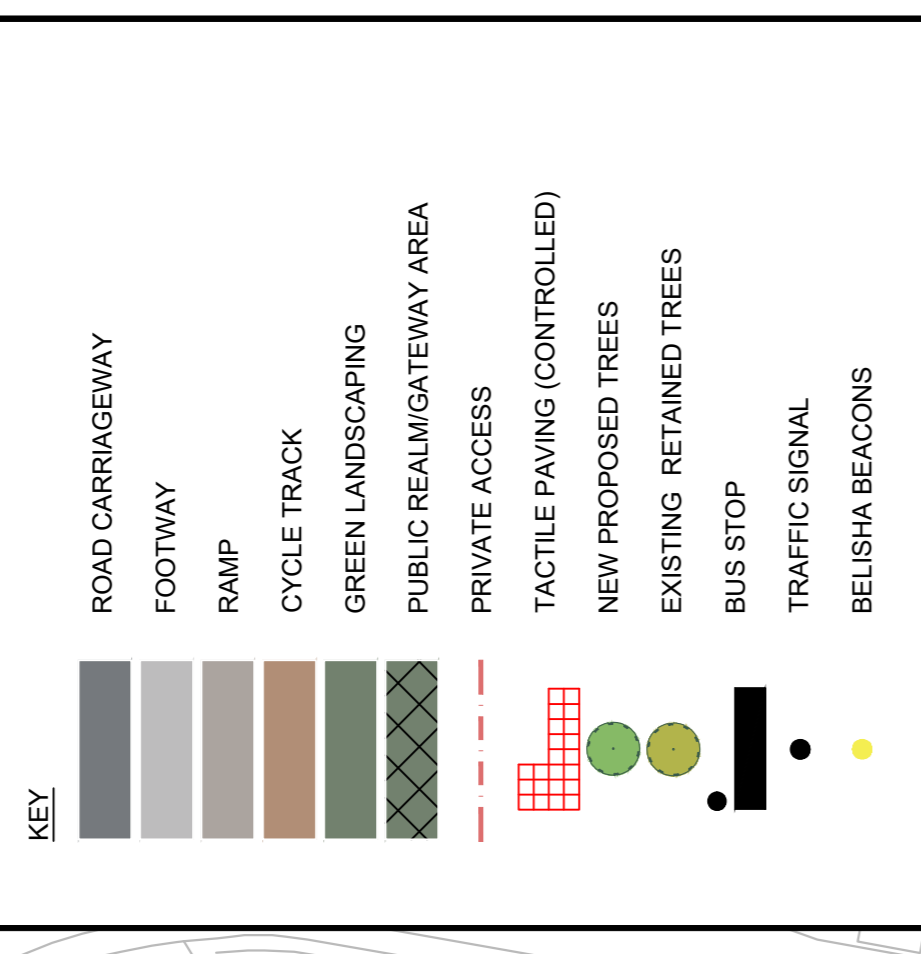
**GENERAL ARRANGEMENT
WESTBURN DRIVE JUNCTION
ROUNDABOUT OPTION CONCEPT DESIGN
SHEET 8 OF 10**

Project Number: 521238
Project Name: ASH - ATK - HGN - ZZZZZ
Project Location: ASH - ATK - HGN - ZZZZZ
Project Issue: 07/09/22
Project Date: 28/08/22

Volume: 1
Issue: -
Type: -
Date: -
Number: -

Original Issue: A1
Scale: AS SHOWN
Project No: 521238
Sheet: 8 of 10
Rev: P02

- NOTES:**
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 3. CONCEPT DESIGN IS BASED ON ORDNANCE SURVEY MAPPING PROVIDED BY ABERDEEN CITY COUNCIL.
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 5. CONSTRAINTS ARE SHOWN IN RED AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 6. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 7. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 8. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
 9. DRAWINGS TO BE FACED IN JUNCTION WITH ALL RELEVANT DRAWINGS AND DOCUMENTS ASSOCIATED WITH THIS PROJECT.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

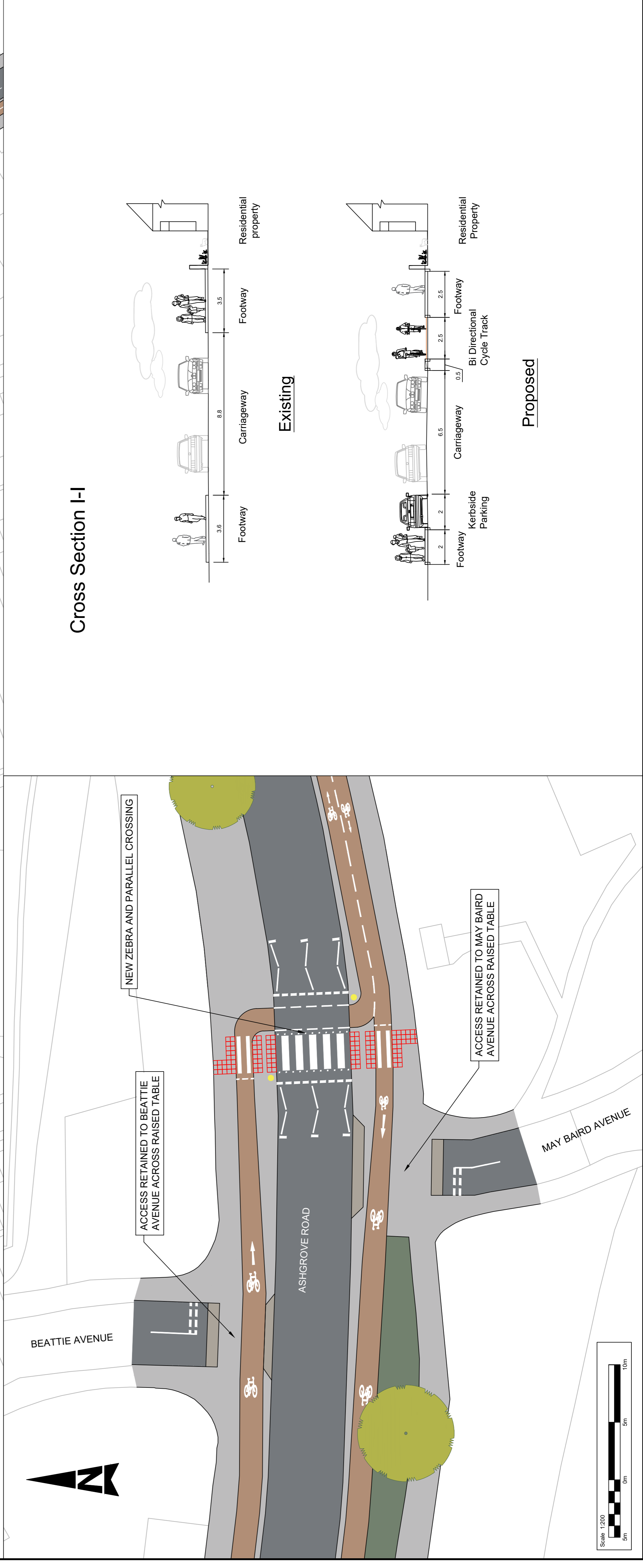
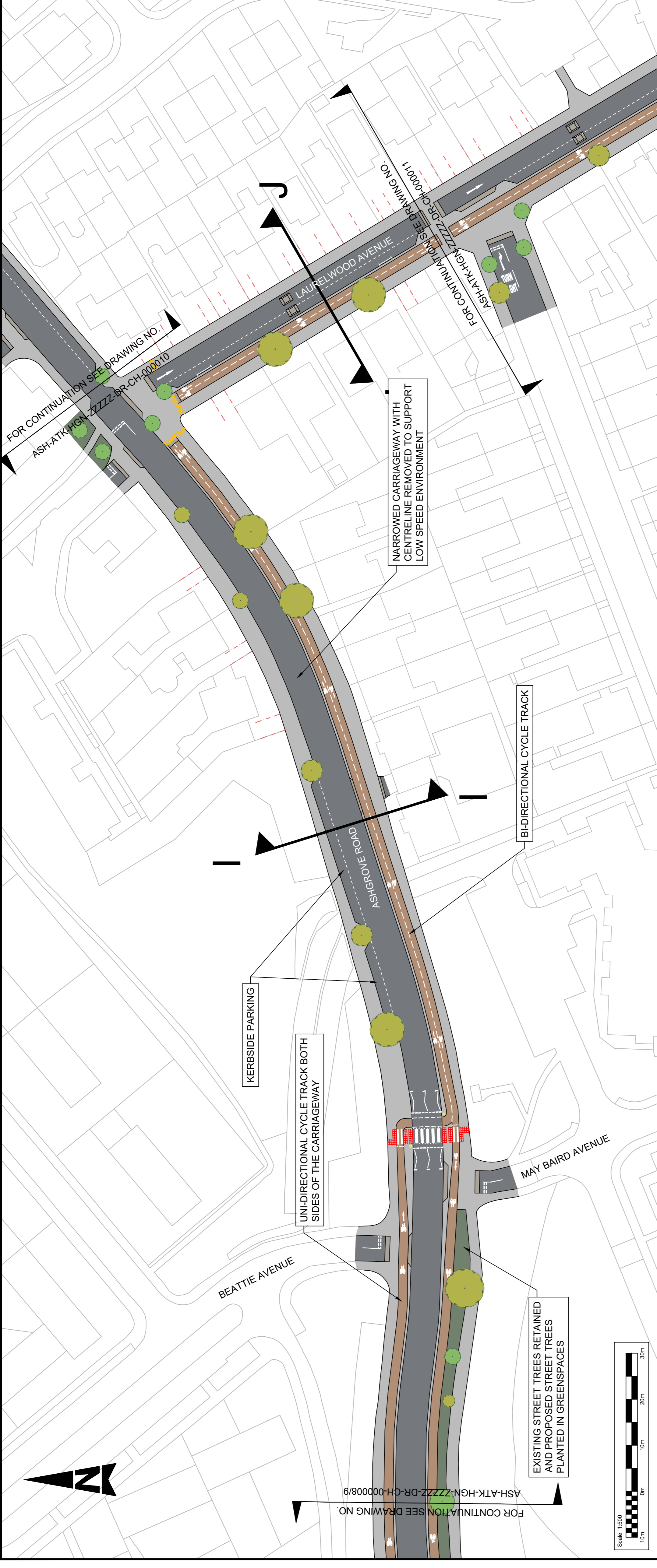
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Maintenance / Cleaning
Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Use
Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Decommissioning / Demolition
Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001



Cross Section I-I

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date

CONCEPT DESIGN

STATUS: S0

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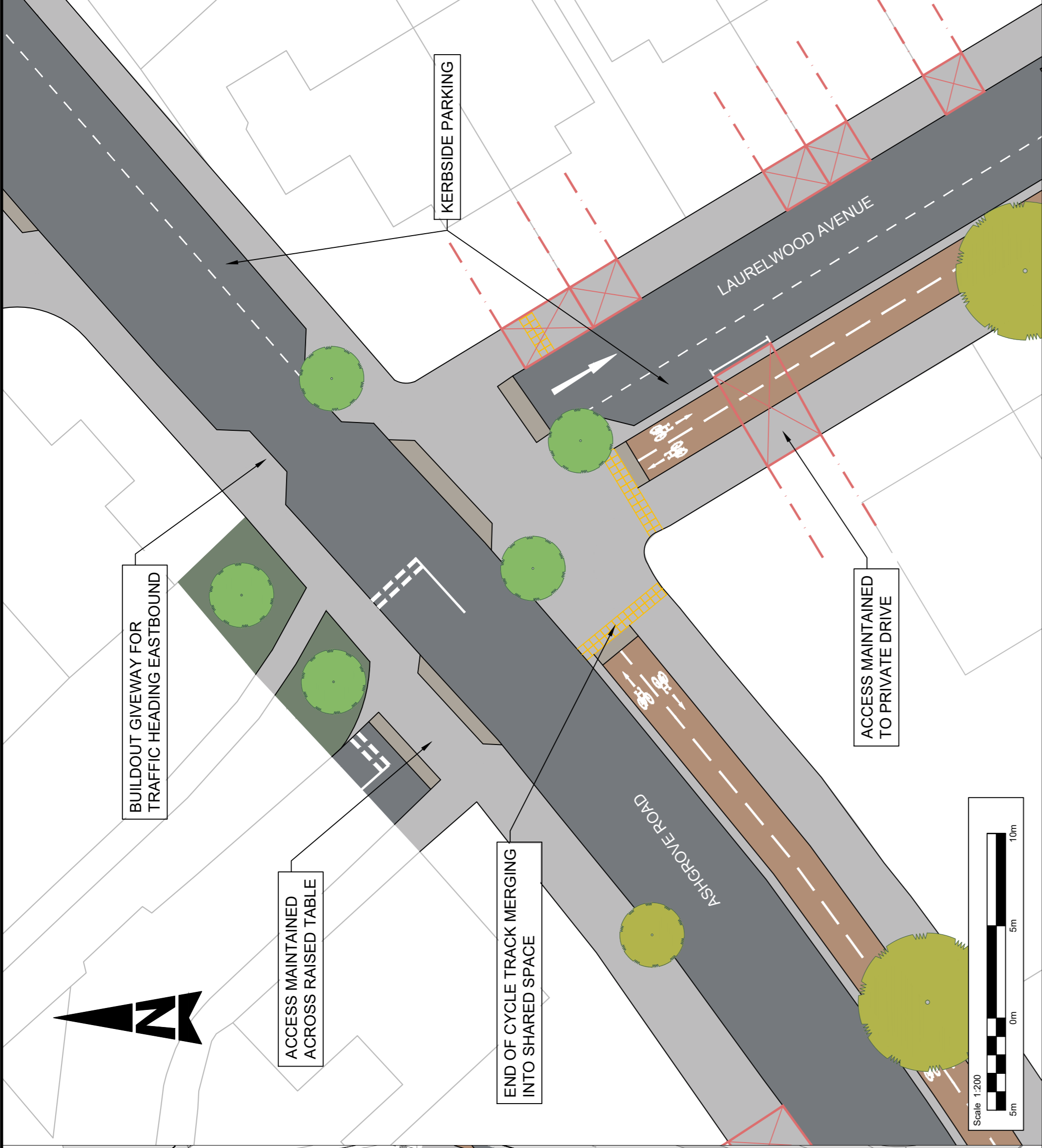
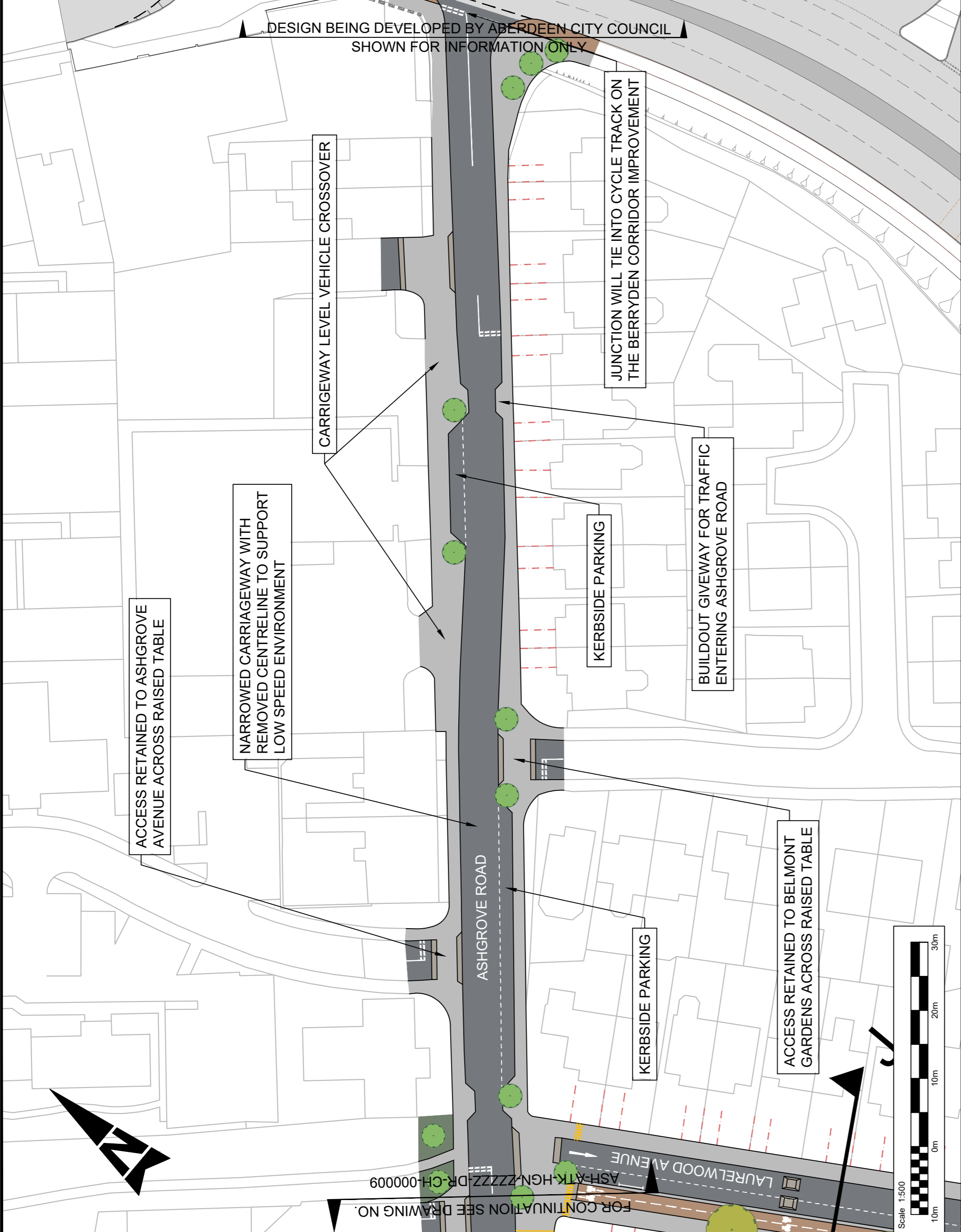
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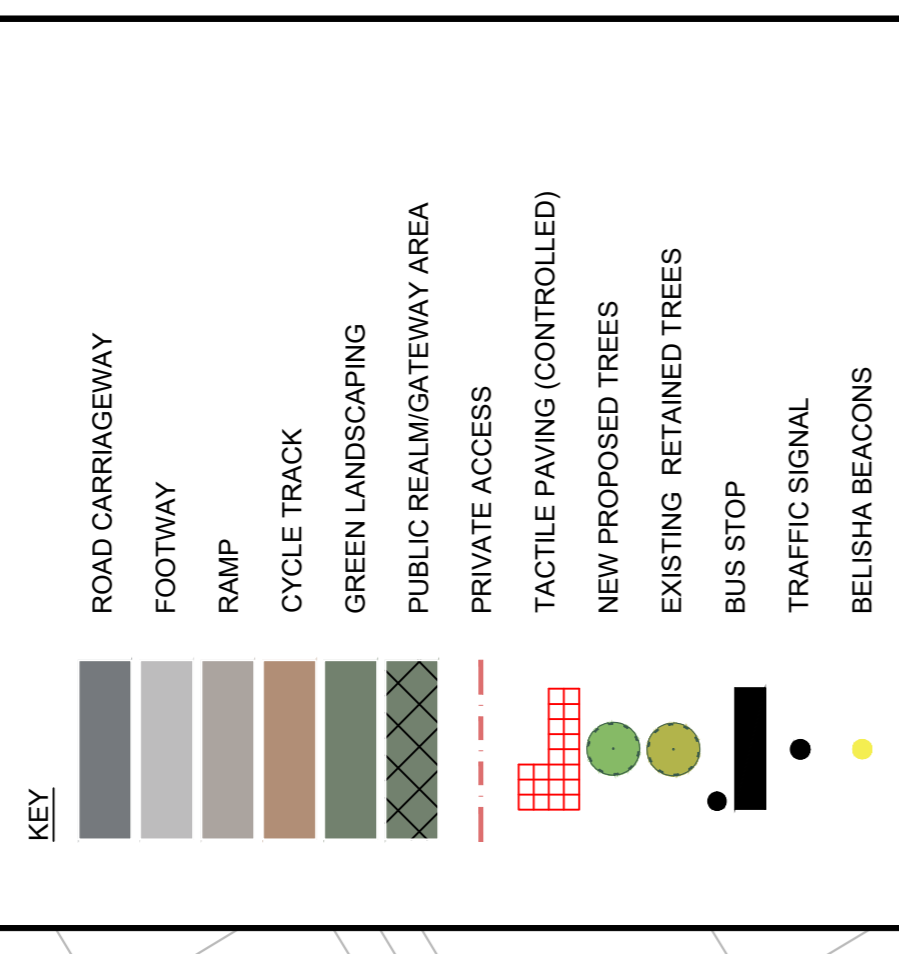
GENERAL ARRANGEMENT
MAY BAIRD AVENUE TO LAURELWOOD
AVENUE CONCEPT DESIGN
SHEET 9 OF 10

Project: 521238
Sheet: 9 of 10
Rev: P02

Location: A1
Scale: AS SHOWN
Project No: 521238
Sheet: 9 of 10
Rev: P02



- NOTES:**
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 4. CONSENTS ARE SHOWN FOR THE ACCESS AND EXISTING ROAD MARKINGS, TRAFFIC SIGNALS AND TACTILE PAVING ARE SHOWN INDICATIVELY.
 5. STREET LIGHTING AND DRAINAGE HAVE NOT BEEN INCLUDED IN THE DESIGN.
 6. EXTENT OF SIDE STREET DEVELOPMENT IS SHOWN INDICATIVELY.
 7. CONCEPT DESIGN CROSS SECTIONS ARE INDICATIVE AND BASED ON ORDNANCE SURVEY DATA.
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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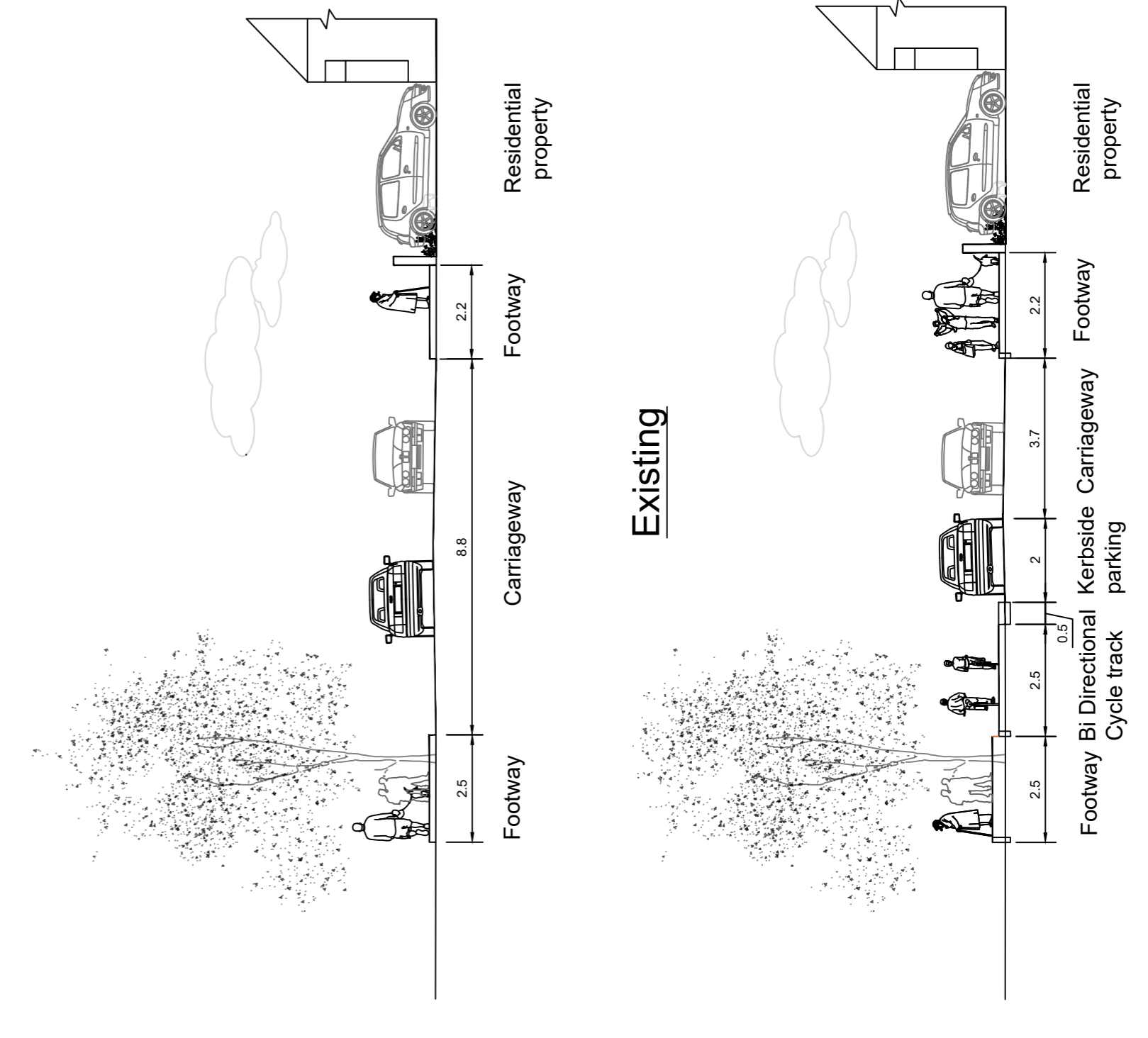
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Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Maintenance / Cleaning:
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Use:
Refer to DRA: ASH-ATK-GHS-ZZZZZ-QA-ZM-000001

Decommissioning / Demolition:
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CONCEPT DESIGN

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Project: 521238

Sheet: 10 of 10

Rev: P02

Appendix E

Berryden Corridor Active Travel Connections - Skene Square to City Centre Route Option Assessment Report

	Title:	Berryden Corridor Active Travel Connections - Skene Square to City Centre Route Option Assessment Report
	Project:	Berryden Corridor Improvement +
	Version:	1
	Date:	9 September 2022
	Assessors:	Katherine Duncan, Engineer, Roads Projects Ross Elrick, Engineer, Roads Projects
	Approved:	Alan McKay, Team Leader, Roads Projects

1. **Background**

- 1.1. As part of the Berryden Corridor Improvement Project (BCI) segregated uni-directional cycle infrastructure will be provided along the length of the Corridor. The BCI Project ties into the existing dual carriageway section at Skene Square. There is currently no dedicated cycle infrastructure from the junction of Skene Square with Rosemount Place/ Maberly Street to the Woolmanhill roundabout and onward to the city centre. Cyclists travelling to/ from the city centre utilising the Berryden Corridor would therefore need to cycle on a dual carriageway with a 30mph speed limit. It has been identified through stakeholder consultation on the BCI that improving infrastructure for cycle traffic over this section is key to encouraging cycle use along the Berryden Corridor when complete. Once within the city centre, streets are reduced to a 20mph speed limit, with lower traffic volumes which tend to be more attractive to active travel users.
- 1.2. In order to tie-in to the uni-directional cycle infrastructure on the BCI Project, north and southbound routes coalescing at the Skene Square/ Rosemount Place junction have been identified and an option appraisal carried out.

2. **Option Appraisal**

The obvious and direct route to extend the BCI infrastructure to/ from the city centre is along Skene Square and Gilcomston Steps to Woolmanhill roundabout (Appendix 3). There are however a number of constraints which would make implementing segregated cycle tracks alongside the existing footways difficult.

The carriageways along Gilcomston Steps and Skene Street are (at different levels) separated by a retaining wall over a length of 140m. This restricts the width available to implement a fully segregated cycle track as redistribution of road space within the roads cross section would involve significant engineering challenges and cost. In addition, along the southern portion of the west side of the corridor, there are residential and retail premises creating pinch points on the existing footway at the Gilcomston Bar and Woolmanhill Hospital. The pinch point at Woolmanhill Hospital is particularly narrow and can only accommodate one pedestrian at a time. Furthermore, the current adjacent northbound carriageway is narrower than standard. It is therefore not feasible to consider

significant carriageway realignment or road space reallocation to install a cycle track nor would it be safe to implement a shared footway within this area.

Other routes were therefore also considered on roads adjacent to the Skene Square and Gilcomston Steps Corridor. An option appraisal has been undertaken on five options with consideration given to the most coherent routes in both northbound and southbound directions. The options were determined as:

1. Do nothing
2. Spa Street/ Skene Square (Northbound)
3. Skene Square/ Woolmanhill roundabout (Southbound)
4. Charlotte Street/ Maberly Street (Northbound)
5. Maberly Street/ Charlotte Street (Southbound)

The option appraisal was carried out using two methods of analysis which consisted of:

- A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis, (Appendix 1 of this report).
- A Red-Amber-Green (RAG) scoring system which assessed each of the options against 6 Core Design Principles, set out in Cycling by Design (2021) (Appendix 2 of this report).

The RAG rating definitions used were:

- Red – Does not achieve Design Principle
- Amber – Partially achieves Design Principle
- Green – Achieves Design Principle

A red rating against any single objective resulted in an option being discarded.

These SWOT and RAG analysis tools allowed the options to be narrowed down and a preferred option to be selected.

Each of the individual routes that make up the options have been considered separately, with their combinations considered within the SWOT and RAG assessments.

2.1. Do-nothing

On the west side of Gilcomston Steps and Skene Square there are residential and retail premises and on the east side the Aberdeen to Inverness railway line which is bound by a retaining wall. The carriageways are at different levels, separated by a retaining wall over a length of 140m. Along the corridor there are currently footways on either side of the carriageway. Signal-controlled pedestrian facilities are provided at the junction with Gilcomston Steps and Woolmanhill roundabout and at the junction of Skene Square with Rosemount Place/ Maberly Street. There is currently no dedicated cycle infrastructure from

Woolmanhill roundabout to the junction of Skene Square with Rosemount Place/ Maberly Street. Cyclists travelling to/ from the city centre utilising the Berryden Corridor are therefore required to cycle on a dual carriageway with a 30mph speed limit.

In the RAG analysis the Do-nothing option scored the lowest of all 5 options with 4 out of the 6 Core Design Principles shown in red. For directness it achieved the highest score, as it continues the line of the Berryden Corridor offering the most direct route to the city centre for cyclists. The design principle for safety was not met as cyclists would generally feel less safe cycling on-carriageway than on a segregated facility. Skene Square and Gilcomston Steps would not continue infrastructure consistent with from the BCI project. Cyclists may also choose to cycle on footways which are currently too narrow to be a shared footway and could make pedestrians vulnerable to a potential collision with cycle traffic.

In terms of relative value for money, there would be no change to the existing infrastructure, therefore no capital costs would be incurred.

If no cycle track is to be provided, the active travel infrastructure on the Berryden Corridor could be under-utilised. This reduces the likelihood of modal shift from car to cycling along the Berryden Corridor and could weaken the Councils ability to meet active travel targets, set out in the Active Travel Action Plan and net zero ambitions set out in the Council Climate Change Plan 2021-2025.

2.2. Northbound – Spa Street & Skene Square

Spa Street has a low level of through traffic which predominantly consists of residential, local business and Denburn carpark patrons. The section of Spa Street from Gilcomston Park to Raeburn Place has only sufficient width for a single lane of one-way traffic with on-street parking bays on both sides.

If a segregated cycle track were to be implemented on Spa Street, around ten parking spaces would have to be removed. Removing these parking bays could result in an increase in traffic speed with the traffic lane width increasing and losing the visual deterrent of parked cars. It could also leave the cyclists with an awkward manoeuvre at the end of the cycle track to join the shared footway at Gilcomston Steps.

As Spa Street is predominantly residential, through traffic could be discouraged further through using street design measures to create a quiet street. Traffic management measures could be introduced to encourage slower traffic speeds. The number of parking spaces lost could be minimised significantly to around a loss of one or two spaces.

The Spa Street route would connect to Gilcomston Steps at the northern end of the Woolmanhill Hospital site. To accommodate this, the area around the existing bus shelter would require to be altered by removing the bus layby,

maximising the available area and could potentially reduce the conflict between pedestrians/ cyclists and those boarding/ alighting buses.

The existing bus layby is not large enough to adequately serve current bus frequency and does not meet current accessibility requirements. Providing an on-carriageway bus stop and consolidating this area by moving the bus shelter to the edge of carriageway would also assist in alleviating conflict between pedestrian and cycle movements.

From the current bus stop area at Gilcomston Steps, a shared footway would be implemented up to the junction with Baker Street. On the northside of the junction with Baker Street, a short section of shared footway would be required to connect in the cycle infrastructure followed by segregated cycle infrastructure to tie-in to the northbound provision on the BCI.

The segregated cycle track provision on Skene Square would be at the detriment of approximately twelve parking spaces. It is possible that four spaces could be retained which could accommodate residents and customers of the retail premises. The positioning of the communal bins would be required to be consolidated to give a more consistent cycle facility, although cyclists could be inconvenienced when bins are being emptied.

Although this route would take cyclists away from Gilcomston Steps, it provides good access from the central city centre area and could be a continuation of a proposed route within the A944 multi-modal corridor study.

In the RAG analysis the route, for directness it achieved the second highest score, as it only diverts from the line of the Berryden Corridor around the Woolmanhill Hospital. The design principle for safety was not met as cyclists would generally feel less safe cycling on-carriageway than on a segregated facility, however with the street that will be utilised, and additional traffic calming, would provide a safer route. For coherence and comfort, it partially meets the design principles but, the route involves three different levels of provision and involves cycling on carriageway and a shared footway.

In terms of relative value for money, there would be a medium initial cost as there would be traffic calming within Spa Street, alterations to the existing bus layby area and alterations to the existing footway on Skene Square to make it suitable for a segregated cycle track and footway.

These changes could encourage modal shift from car to cycling for those traveling from the west to the north of the city.

This option is shown in Appendix 4 of this report.

2.3. Southbound – Skene Square to Woolmanhill Roundabout

There are a number of constraints which could make implementing a segregated cycle track alongside the existing footway difficult. On the east side, the road is bound by the Aberdeen to Inverness railway line, which also results in there being no accesses along this section. With the carriageway on the west side, there could be expansion to the width of the footway. However, there would not be sufficient width available for a segregated cycle track, whilst maintaining an appropriate carriageway width.

The footway could be widened to the minimum width for a shared footway. However, with low visibility along a section of the path and as it would be for downhill travel, any conflict between pedestrians and cyclists would be at a higher speed. Therefore, to provide active travel facility using the current footway, pedestrians would be required to use an alternative route as this route option would see the footway on the east side Skene Square/ Gilcomston Steps carriageway be changed to a dedicated cycle track.

At the south of the path into John Street, the existing footpath would be too narrow for a shared facility and there would not be sufficient area to expand without the removal of mature trees. To enable cyclists to continue, the roundabout at Woolmanhill halls of residence and the surrounding area, would be required to be converted into a turning head.

In the RAG analysis the Skene Square/ Woolmanhill roundabout route achieves the highest score for directness and coherence, as it continues the line of the Berryden Corridor offering the most direct route to the city centre for cyclists and continues the provision offered on the BCI. The scoring for safety and comfort are high, but the route would still require cycling downhill, which could increase speed and using the carriageway at the south of the route to continue their journey, although even on a relatively quiet street. The route also scores highly for attractiveness but would still involve cycling next to a dual carriageway.

In terms of relative value for money, there would be a medium short-term cost as there would be a resurfacing required to the existing footpath, relocating of the existing traffic signals and alterations to the roundabout at Woolmanhill halls of residence roundabout. There would be opportunity, with further intervention adjacent to the Woolmanhill roundabout, to link the provision to Blackfriars Street and further to National Cycle Route 1 on Rosemount Viaduct/ Schoolhill.

These changes could encourage modal shift from car to cycling for those traveling from the north to the east of the city.

This option is shown in Appendix 5 of this report.

2.4. Northbound & Southbound – Maberly Street & Charlotte Street

Maberly Street is a majority residential street, with the former Broadford Works being the majority of the land to the north of the street. Ann Street is a one-way

northbound street serving commercial properties, accessed from a junction on the north side of Maberly Street. Charlotte Street is a majority residential street, with a small number of commercial properties. The area is on the edge of the George Street Intervention Area.

The Maberly Street/ Charlotte Street route was initially considered as a southbound option only. With a segregated cycle lane, heading east, on Maberly Street. With the development of this route, it was believed that it would be best to offer a cycling facility in both directions within the area.

As Maberly Street and Charlotte Street are mostly residential streets, there would be an opportunity using street design measures, shown within Cycling by Design, for mixed traffic streets to create quiet streets. Using traffic calming features that should encourage slower traffic speeds and discourage through traffic.

For the southbound route, cyclists will be required to turn right from Maberly Street onto Charlotte Street. To assist with this, features such as cycle bypass islands, could be introduced. To accommodate these changes, approximately nine parking spaces on Maberly Street would be required to be removed.

Charlotte Street could be changed from a two-way to one-way street for traffic travelling north. A contra-flow cycle lane would be provided for cyclists travelling south. The carriageway surface on Charlotte Street is granite sett, which can be uncomfortable for cycle users and pedestrians. A bituminous surface would be required to provide the southbound cycletrack. For northbound travel, the entire width would require replacing the sett paving with bituminous construction. The loss of the sett pavement and increased construction costs should therefore be noted.

To accommodate the segregated cycle lane, approximately twenty parking spaces on Charlotte Street could be required to be removed and relocation of the communal waste bins, currently adjacent to the parking spaces. Some mitigation could be carried out, by converting some of the 'Pay & Display' parking on Charlotte Street, and its immediately surroundings, into Permit Holders parking.

The segregated cycle track would end at the junction John Street, however there is an existing Bus / Cycle Lane that continues along Charlotte Street, ending at St Andrew Street.

In the RAG analysis the northbound and southbound options both partially achieve the design principle for directness, as they both divert away from the line of the Berryden Corridor but can be connected to the same end destination through existing provision. The design principle for safety was not fully met as cyclists would generally feel less safe cycling on-carriageway than on a segregated facility, however for both directions there have been traffic calming identified for these areas. They would also not be fully met for the principles for coherence and comfort, as the change in provision, for both directions, at the

Skene Square junction would involve more complex manoeuvres to stay on the active travel provision.

In terms of relative value for money, there would be a high short-term cost as there would be a new road construction to the carriageway on Charlotte Street, from John Street to Maberly Street, as well as the construction of the cycle track, alterations to the existing footways and other associated costs.

These changes could encourage modal shift from car to cycling for those traveling from/ to the north to/ from the east of the city.

This option is shown in Appendix 6 of this report.

3. Preferred Option

Following the option appraisal, it is recommended that the Spa Street/ Skene Square option (Appendix 4) is the preferred choice for the northbound route, and Skene Square/ Woolmanhill roundabout is the preferred choice for the southbound route (Appendix 5).

These options would be giving the most direct routes to/ from the proposed segregated cycle facilities on BCI, and both having further infrastructure/ routes that with further work could be linked to. They would also be building on existing infrastructure for their duration.

They provide the best connectivity to/ from the segregated cycle facilities on BCI, as any route to/ from Maberly Street would involve moving from/ to on-carriageway provision. Spa Street/ Skene Square route has its transition to off-carriageway at Gilcomston Steps, in a much lower trafficked area.

Skene Square/ Woolmanhill roundabout could also have a transition onto the carriageway at the Woolmanhill halls of residence roundabout which, again, is in a much lower trafficked area than the junction at Skene Square/ Rosemount Place. These routes would also bring a less abrupt ending to the active travel provision from the Berryden Corridor.

Both the northbound route options, as well as southbound via Maberly Street/ Charlotte Street would require cyclists to be on-carriageway for a duration of their journey. But with Spa Street already being a low trafficked street, and much less susceptible to through traffic, it is felt that it would be more comfortable to use for more users.

With the Aberdeen City Centre Masterplan (CCMP) identifying this area around the Woolmanhill Hospital and Denburn car park for potential development, there could be further opportunities to expand the active travel provision within the area in the future.

Although it is recommended that the active travel provisions are proceeded with elsewhere, the proposals for Charlotte Street are on the edge of the area

identified for the George Street Intervention. Therefore, there could be opportunity to improve the proposals for this area in the future.

Consultation for the proposed extension of the active travel provision will be undertaken as part of BCI project statutory processes.

4. Policy Review

The following policies and plans have been considered when developing and assessing the options within the study.

The **Local Outcome Improvement Plan** 2016 – 2026 (Community Planning Aberdeen) updated 7 July 2021 (the “LOIP”) sets out a 10 year plan for realising the vision of Aberdeen as 'a place where all people can prosper'. Within the LOIP a number of Stretch Outcomes are identified which are underpinned by Key Drivers.

For ‘Prosperous Economy Stretch Outcomes’, these proposals support the delivery of Stretch Outcomes 1 to 3 as a good transport network and infrastructure provision means anyone regardless of their social status/ economic means can choose a sustainable mode of travel for commuting. A reliable transport network supports economic growth and movement.

For ‘Prosperous People Stretch Outcomes’, these proposals support Stretch Outcomes 5 and 11, in that they seek to improve and increase opportunities for people to walk or cycle for everyday journeys, bringing personal health benefits through increased physical activity and reducing harmful emissions from road transport.

For ‘Prosperous Place Stretch Outcomes’, these proposals support the delivery of Stretch Outcomes 13 and 14 through step change improvements to active travel infrastructure along the route. Further expansion and connection of such facilities on the surrounding network can also be enabled.

- Stretch Outcome 13 - Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate)
- Stretch Outcome 14 - Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.

The **Aberdeen City Council Local Transport Strategy** (the “LTS”) for the period 2016 to 2021 sets out the policies and interventions adopted by the Council to guide planning and improvement of the local transport network. The LTS vision is to develop “a sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment”.

The LTS sets an objective to support improvements to the road network and states that the Council will support the principle that “priority investment should be determined in order to reflect all day demand relative to capacity”.

The Berryden Corridor is specifically identified as being “a strategic route used both by traffic accessing or travelling through the city centre and as a direct access route to a number of large retail developments along the corridor itself”, thus highlighting the need for the proposals.

The **Nestrans Regional Transport Strategy** (2020 – 2040), has a proposed vision for 2040 is to provide a “safer, cleaner, more inclusive and accessible transport system in the north east, which contributes to healthier, more prosperous and fairer communities”. The BCI Project will support these objectives, which are also supported by the LTS.

The Aberdeen Local Development Plan (the “LDP”) adopted in 2017, allocates land and promotes planning policies to enable the growth of Aberdeen over the plan period and to “ensure that all communities have access to a comprehensive and effective transport network”. Good transport connections are seen as “essential to the economic prosperity of Aberdeen and the quality of life of people living and working in the city”.

The proposed land lies within areas zoned for various land uses identified in the LDP, including: Residential Areas (Policy H1), Mixed Use Area (Policy H2) and Opportunity Sites; OP81 (Mixed Use Area (Policy H2) and Urban Green Space (Policy NE3)).

Aberdeen City Centre Masterplan and Delivery Programme which was published in June 2015 outlines a 20-year development strategy for Aberdeen City Centre. A range of projects are identified to facilitate and support future economic growth with the intention that such growth will secure more benefits and opportunities for the communities of Aberdeen City and Shire. The Berryden Corridor Improvement is a committed project that supports the delivery of the CCMP by accommodating traffic routeing changes, resulting from reduced city centre permeability. The CCMP also encourages modal shift.

Aberdeen City – Central Locality Plan (2021-26) links to the re-refresh of the City’s Local Outcome Improvement Plan (LOIP). Within the ‘Place’ section of the plan, the central priority is to “Maximise use of spaces in communities to create opportunities for people to connect and increase physical activity”. With two of the aims being to “Increase % of people who cycle as one mode of travel by 2% by 2023” and “Increase % of people who walk as one mode of travel by 10% by 2023”, which will be supported by the proposals.

It is clear the preferred option will supported the wider objectives and outcomes at local and regional level.

Appendix 1

Option	Strength	Weakness	Opportunity	Threat	Relative Value for Money
1: Do Nothing	<p>Low Cost / Low Risk</p> <p>No capital costs.</p> <p>No change to existing access arrangements to local properties, businesses, services.</p>	<p>No improvement in connectivity for cycle traffic accessing the city centre from the north of the city.</p> <p>No safety improvements to any road users, particularly cyclists.</p>	<p>No interference with existing infrastructure and/ stakeholder operations.</p> <p>The area and route would remain adaptable to future improvements and changes.</p>	<p>Active Travel Action Plan aims, and objectives not met.</p> <p>Cyclists may not feel safe and therefore not use this mode of transport or cycle on footways leaving pedestrians vulnerable as footways not to appropriate standard for shared use.</p>	<p>Low initial cost.</p> <p>Reduces likelihood of modal shift from car to cycling.</p>
2: Spa Street & Skene Square (Northbound)	<p>Medium cost / Medium risk</p> <p>No major changes required for the majority of the length of Spa Street.</p> <p>Creation of wider area at Gilcomston Steps bus stop, and removal of ineffective bus layby.</p> <p>Segregated cycle facility on Skene Square, linking up with Berryden Corridor facility.</p>	<p>Off-carriageway cycle provision not provided on Spa Street.</p> <p>Loss of parking spaces on Skene Square.</p>	<p>Traffic calming likely to reduce traffic speed.</p> <p>Bus stop layby being removed will enable better access and egress for passengers.</p> <p>Could be continuation from Carden Place / Skene Street.</p>	<p>Right turn ban from Rosemount Viaduct may require changes to junction.</p> <p>Location of communal bins could cause conflict whilst being emptied. Whilst dropped kerbs for bins may encourage parking within the cycle lane.</p> <p>Conflict between pedestrians and cyclists likely.</p> <p>Shared use path facilities do not represent an improvement in facilities for more confident cyclists who currently feel comfortable to use the road.</p> <p>Route would not be suitable for users that would be uncomfortable cycling on the carriageway.</p>	<p>Medium initial cost.</p> <p>Could encourage modal shift from car to cycling for those traveling from the west of the city.</p>
3: Skene Square & Woolmanhill (Southbound)	<p>Medium cost / Medium risk</p> <p>Segregated cycle facility on Skene Square, linking up with Berryden Corridor facility.</p>	<p>On the east side the existing footway is only wide enough to accommodate either pedestrians or cyclists.</p> <p>Shared footway is not feasible as cyclists likely to be travelling downhill at speed.</p> <p>The site is constrained by the railway line on the east side.</p>	<p>Improvement to area at entrance to Woolmanhill halls of residence.</p> <p>Could connect to National Cycle Route Network 1 with minimal further work.</p>	<p>If cycle track is implemented pedestrians would have to find an alternative route.</p>	<p>Medium initial cost.</p> <p>Could encourage modal shift from car to cycle for those wanting to travel from the north to the east of the city.</p>

Option	Strength	Weakness	Opportunity	Threat	Relative Value for Money
4: Charlotte Street & Maberly Street (Northbound)	Widened footways on Maberly St and Charlotte St.	High cost / Medium risk Off-carriageway cycle provision not provided on Maberly Street or northbound on Charlotte Street. Charlotte Street would require to be resurfaced to remove setts. Loss of parking spaces on Maberly Street and Charlotte Street.	Would require cyclists to perform a right turn from Maberly Street onto Skene Square. Would discourage through traffic from using Maberly Street and Charlotte Street. Traffic calming likely to reduce traffic speed. Could connect to National Cycle Route Network 1 with minimal further work and connect with Union Street via low trafficked streets.	Route would not be suitable for users that would be uncomfortable cycling on the carriageway.	High initial cost. Could encourage modal shift from car to cycling for those traveling to the east of the city.
5: Maberly Street & Charlotte Street (Southbound)	Off-carriageway cycle provision for cyclist travelling southbound on Charlotte Street. Widened footways on Maberly St and Charlotte St.	High cost / Medium risk Off-carriageway cycle provision not provided on Maberly Street. Charlotte Street would require to be resurfaced to remove setts. Loss of parking spaces on Maberly Street and Charlotte Street.	Would require cyclists to perform a right turn from Maberly Street onto Charlotte Street. Would discourage through traffic from using Maberly Street and Charlotte Street. Traffic calming likely to reduce traffic speed. Could connect to National Cycle Route Network 1 with minimal further work and connect with Union Street via low trafficked streets.	Route not a continuation of the Berryden Corridor taking cyclists to the east of the city centre. Route would not be suitable for users that would be uncomfortable cycling on the carriageway.	High initial cost. Could encourage modal shift from car to cycling for those traveling to the east of the city.

Appendix 2

The RAG rating system was used to score each of the 5 options against the Core Design Principles. The scale is defined as:

Does not achieve Design Principle		Partially achieves Design Principle		Achieves Design Principle
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	Core Design Principles					
Option	Safety	Coherence	Directness	Comfort	Attractiveness	Adaptability
1: Do Nothing (On-carriageway cycling)						
2: Spa Street & Skene Square (Northbound)						
3: Skene Square & Woolmanhill (Southbound)						
4: Charlotte Street & Maberly Street (Northbound)						
5: Maberly Street & Charlotte Street (Southbound)						

In accordance with the Core Design Principles set out in Cycling by Design (2021), The options were rated to determine how they performed against each other.

The Core Design Principles used are:

Safety: Designs should minimise the potential for actual and perceived accident risk. Perceived risk is a key barrier to cycle use. Users should feel safe as well as be safe at all stages of their journey, including parking at their origin and destination. It is important to provide consistency of design and avoid ambiguity.

Coherence: Cycling infrastructure should form a coherent network which links origins and destinations. This allows the cycle network to link communities, facilities and integrate with other modes of travel. Routes should be continuous from an origin to a destination, easy to navigate, well signed, intuitive and of a consistently high quality.

Directness: Cycle users should be offered the most direct route based on existing and latent trip desire lines, minimising detours and delays. Directness has both geographical and time elements, with delays at junctions and crossings, as well as physical detours, affecting it.

Comfort: Cycle user comfort is critical to journey experience and making cycling an everyday choice for users. Routes should minimise mental and physical stress and effort, be convenient and avoid complex manoeuvres. Smooth, uninterrupted surfaces with gentle gradients and secure, sheltered cycle parking will enhance comfort. Cycling infrastructure should be well-maintained to ensure its continued comfort and appeal.

Attractiveness: Infrastructure should be designed in harmony with its surroundings in such a way that the whole experience makes cycling an attractive option. A route should complement and enhance the area through which it passes. Lighting, personal security, aesthetics, environmental quality and noise are important considerations.

Adaptability: Cycling infrastructure should be able to evolve and improve as cycle demands change. Meeting the preceding design principles in a way that allows infrastructure to adapt to changing user needs will form a critical component of cycle networks. Trialling of potential measures using more flexible infrastructure will assist in meeting this aim.









Footway & unidirectional northbound cycletrack

Junction narrowed and raised priority junction created

Bus layby removed and bus stop shelter repositioned to create wider shared area and enable improved bus access / egress for bus passengers

NOTE:

-  Footway
-  Cycletrack
-  Shared Cycletrack
-  Continuous Footway
-  On-Street Parking
-  Bin Storage

Rev.	Description



ABERDEEN CITY COUNCIL

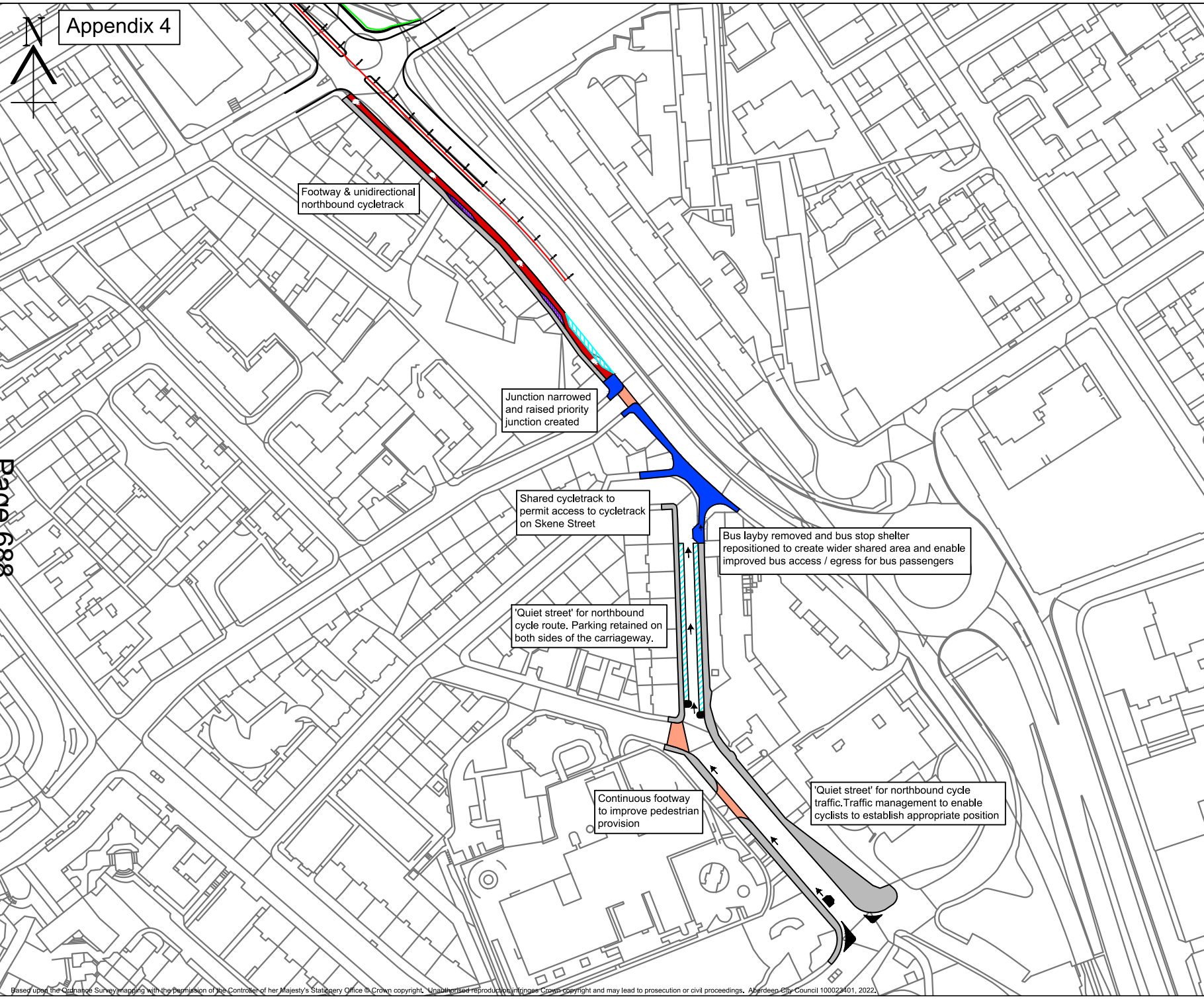
Capital | Resources
 Business Hub 4, Ground Floor North,
 Marischal College, Broad Street, Aberdeen
 AB10 1AB

Project:
 Berryden Corridor Improvement Project

Title:
 Initial Route

Drawn	Date	Checked	Date
RE	09/09/2022	KD	09/09/2022

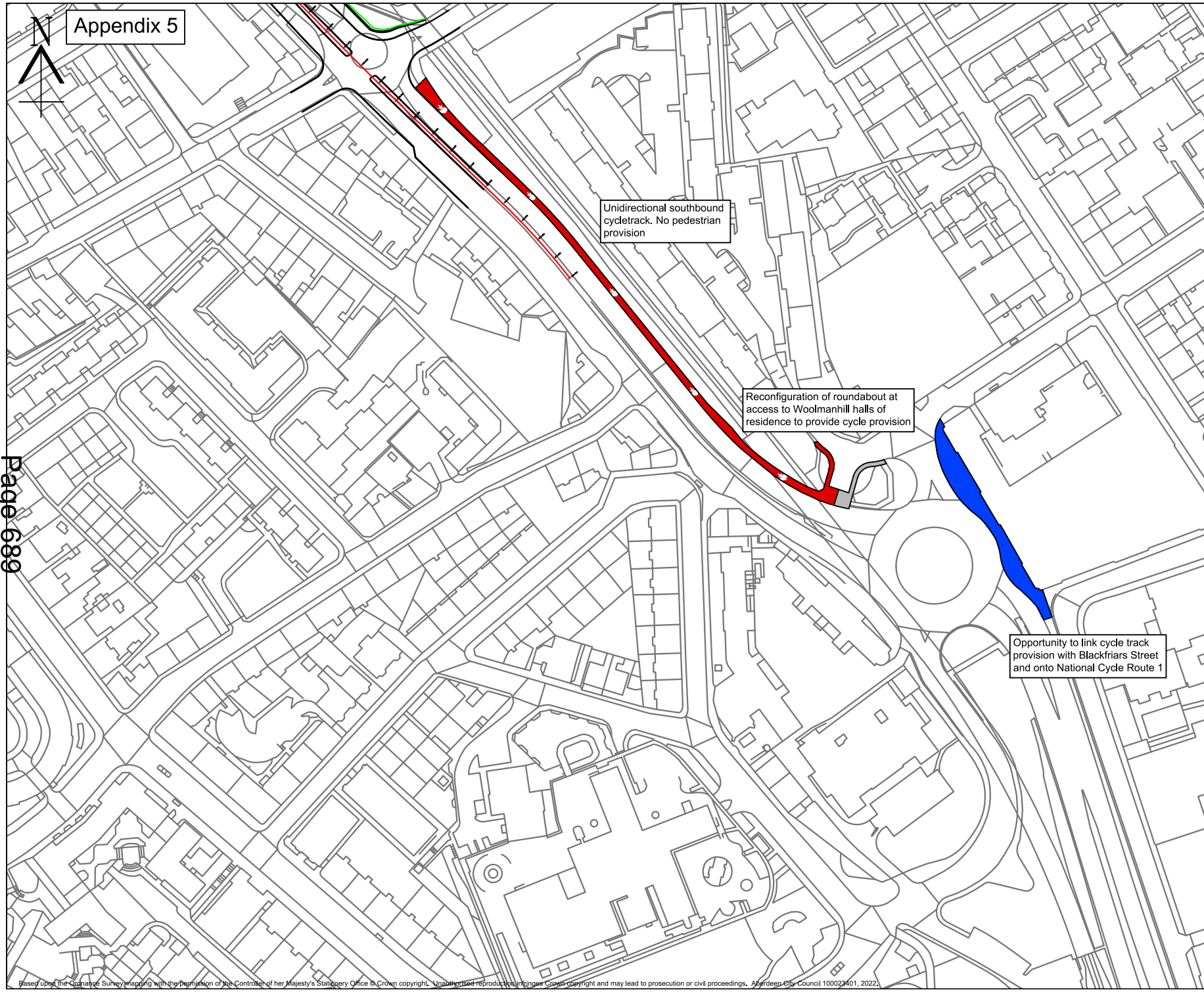
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 1:500
 Drawing No.



NOTE:

- Footway
- Cycletrack
- Shared Cycletrack
- Continuous Footway
- On-Street Parking
- Bin Storage

Rev.	Description		
Checked (init./date)	Drawn (init./date)		
 ABERDEEN CITY COUNCIL			
Capital Resources Business Hub 4, Ground Floor North, Marischal College, Broad Street, Aberdeen AB10 1AB			
Project: Berriden Corridor Improvement Project			
Title: Option 2: Spa Street/ Skene Square (Northbound)			
Drawn	Date	Checked	Date
RE	09/09/2022	KD	09/09/2022
Scale @ A4: 1:500			
Drawing No.			






Unidirectional southbound cycletrack. No pedestrian provision

Reconfiguration of roundabout at access to Woolmanhill halls of residence to provide cycle provision

Opportunity to link cycle track provision with Blackfriars Street and onto National Cycle Route 1

NOTE:

-  Footway
-  Cycletrack
-  Shared Cycletrack

Rev.	Description



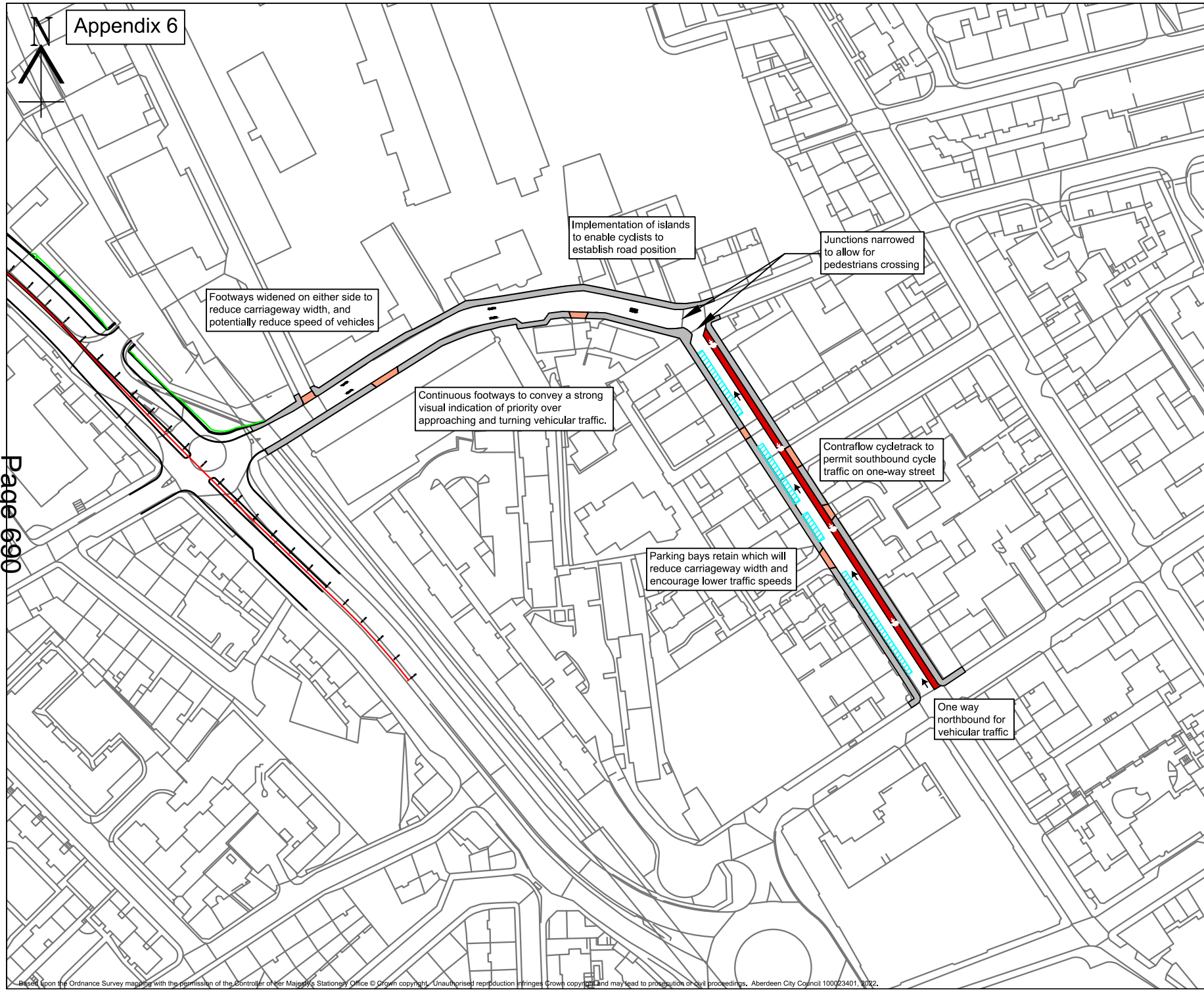
Capital | Resources
 Business Hub 4, Ground Floor North,
 Marischal College, Broad Street, Aberdeen
 AB10 1AB

Project: Berryden Corridor Improvement Project





Title: Option 3: Skene Square/ Woolmanhill (Southbound)

Drawn	Date	Checked	Date
RE	09/09/2022	KD	09/09/2022

Scale @ A4
 1:500
 Drawing No.



NOTE:

-  Footway
-  Cycletrack
-  Continuous Footway
-  On-Street Parking

Rev.	Description
Checked (init./date)	Drawn (init./date)



Capital | Resources
 Business Hub 4, Ground Floor North,
 Marischal College, Broad Street, Aberdeen
 AB10 1AB

Project:
 Berryden Corridor Improvement Project

Title:
 Option 4: Charlotte Street/ Maberly Street (Northbound)
 &
 Option 5: Maberly Street/ Charlotte Street (Southbound)

Drawn	Date	Checked	Date
RE	09/09/2022	KD	09/09/2022
Scale @ A4 1:500			
Drawing No.			

ABERDEEN CITY COUNCIL

COMMITTEE	City Growth & Resources Committee
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Aberdeen City's Affordable Housing Delivery Programme
REPORT NUMBER	COM/22/197
DIRECTOR	Gale Beattie
CHIEF OFFICER	David Dunne
REPORT AUTHOR	Mel Booth
TERMS OF REFERENCE	1.1.7

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to provide an update on the Aberdeen City affordable housing delivery programme and approve allocation of funding.

2. RECOMMENDATION(S)

That the Committee:

- 2.1 Approve the allocation of the Section 75 and Council Tax monies detailed at section 3.4 the report for the future delivery of affordable housing; and
- 2.2 Instruct the Chief Officer - Strategic Place Planning to recruit an additional Empty Homes Officer as detailed at section 3.5 of the report to build on the success achieved to date on bringing long-term empty private residential properties back into use.

3. CURRENT SITUATION

3.1 Affordable Housing Supply Programme

- 3.1.1 £20.658m was allocated to Aberdeen City Council in 2021/22 through the Scottish Government's affordable housing supply programme. Additional funding of £9.09m was made available throughout the course of the year bringing the total allocation to £29.748m. The additional funding was made available through the close working relationships the Housing Strategy Team has developed over many years with the Scottish Government and Registered Social Landlords. It allowed Aberdeen City Council to draw down funds which had not been utilised in other council areas and allowed the pace of affordable housing delivery to increase which released funds for future projects.

3.1.2 In 2021/22 there were 692 affordable housing completions which is the highest number of affordable homes delivered in Aberdeen through the affordable housing supply programme. As of 30 August 2022, 144 affordable housing completions have taken place across the city, with 653 units being projected for completion in 2022/23.

3.1.3 The table below shows the location, developer and type of affordable homes completed in 2020/21.

Location	Developer	Type	No. of units
Council Buy Backs	ACC	Social Rent	126
Eday Gardens	ACC	Mortgage to Rent	1
Wellheads, Dyce	ACC	Social Rent	216
Burnside	Grampian	Social Rent	43
Burnside	Grampian	Mid-Market Rent	58
Countesswells	Hillcrest	Social Rent	64
Countesswells	Hillcrest	Mid-Market Rent	24
St Machar	Hillcrest	Social Rent	103
St Machar	Hillcrest	Mid-Market Rent	35
Kingswells	Hillcrest	Social Rent	20
Royal Cornhill Hospital	Barratt Homes	Low-Cost Home Ownership	2
Total			692

3.2 Section 75 Agreements

3.2.1 Section 75 agreements are provided through Section 75 of the Town and Country Planning (Scotland) Act 1997 and are negotiated through the planning process. Housing developers may, on occasion, be required to make a financial contribution towards affordable housing rather than delivering affordable housing on the specific site to which the planning permission applies.

3.2.2 Such agreements to date have provided an income of £1,027,335 in 2021/22 as detailed at section 3.2.3. Further agreements are in place which have provided an income of £244,199 so far this year. These payments are linked to completions on site therefore it is difficult to accurately predict the total to be collected during 2022/23.

3.2.3 Section 75 Funding	£
Total Received (as at 31.3.22)	14,165,564
Grants previously paid to RSLs	3,613,801
Grants paid to ACC new build	9,524,428
Uncommitted Available Balance (at 31.3.22)	1,027,335

3.2.4 The funding comes with a requirement to be spent within five - seven years of receipt and must be held in an interest-bearing account. Aberdeen City Council has utilised all funds received up until March 2021. There is therefore no likelihood that any money would have to be repaid to developers, allowing Aberdeen City Council to disburse further grant up until March 2026.

3.3 Council Tax Discount on Second Homes and Long-term Empty Properties

3.3.1 The Council used its powers to reduce the Council Tax discount for these properties from 2005/06. This income can be used by local authorities to support revenue and capital expenditure related to a range of affordable housing activity including:

- Providing new build affordable housing through Registered Social Landlords or council house new build projects.
- Bringing empty properties back into affordable housing use.
- Land acquisition for affordable housing development.
- Purchasing off-the-shelf houses from private developers for affordable housing use.

3.3.2 Income received and paid to date is shown below.

	£
Income received	24,910,249
Paid to ACC	9,220,218
Paid to RSLs	2,478,643
Committed to ACC	10,541,417
Committed to RSLs	469,141
Empty Homes	150,608
Uncommitted Available Balance (at 31.3.22)	2,050,222

3.3.3 The Council Tax income on second homes and long-term empty properties provided an income of £2.102m in 2021/22. Based on current void rates in both the private and public sector, projected annual income is assumed to be around this figure, but shall be closely monitored every year and assumptions adjusted accordingly.

3.4 Allocation of Section 75 and Council Tax Funds

3.4.1 There is £3,077,557 which is to be allocated for the delivery of affordable housing. It is recommended that the funding is allocated to the council house new build programme.

3.5 Empty Homes

3.5.1 In October 2020, Committee agreed to fund the Empty Homes Officer post on a permanent basis using Council Tax Second Homes funds. The Empty Homes Officer works with owners of empty residential properties to bring them back into use. Since the post was created, 458 empty properties have been brought back into use.

3.5.2 Some of the highlights of the work carried out by the Empty Homes Service include:

- Continuing success with working with landlords and letting agents across the city to “match” people from Council housing waiting lists with owners/letting agents of empty private rented sector properties through the Council’s Matchmake to Rent Scheme. Aberdeen City Council is the only local authority in Scotland to utilise a matchmaker scheme in this way.
- National recognition when the service won the Best Empty Homes Service award in 2020 which recognises the team that has made an outstanding contribution to reducing the number of empty homes.
- Aberdeen City Council’s Empty Homes Officer was a finalist for the “outstanding individual award” at the Scottish Empty Homes Conference in 2022.
- Working with Aberdeen Cyrenians to bring empty homes back into use for people who may otherwise have been homeless, through their “Settled Homes for All” project which is the establishment of a social lettings’ agency.
- Working with genealogists to identify owners of residential and non-residential long term empty properties.
- Working with Police Scotland and Scottish Fire & Rescue Service to tackle long-term empty properties and attend partnership meetings to deal with long-term empty properties that are causing a blight on the community.

3.5.3 One of the tools available to encourage owners to bring their empty property back into use is the additional 100% Council Tax levy. An additional Council Tax levy may be charged to properties that have been empty for one year or more without being actively marketed for sale or rent and two years or more if being actively marketed. Analysis of the data in relation to the Empty Homes Officer’s caseload shows that the Council Tax levy was applied and backdated to long term empty properties to the sum of more than £460,000. In addition to this, there is an additional 100% Council Tax levy applied to each long-term empty property on an ongoing basis until the property is brought back into use.

3.5.4 If additional staffing resources were available, this sum could be much higher. Therefore, Committee is recommended to approve the use of Council Tax second homes monies to recruit a further Empty Homes Officer on a permanent basis to build on the success of the Empty Homes Service and allow resources to focus on long-term empty residential properties in the city centre which has the highest concentration of long-term empty homes in the city. This will also help support the aims of the City Centre Masterplan.

4. FINANCIAL IMPLICATIONS

4.1 Failure to allocate developer obligations funds within the prescribed timescale may mean they need to be repaid to the developer. The Housing Strategy Team closely monitors the contributions made through developer obligations to ensure the funds are fully disbursed for affordable housing.

4.2 The allocation of Section 75 funds and Council Tax Second Homes monies allows the council to increase the provision of affordable housing across the city. It will also allow for more empty homes to be brought back into use across the city.

5. LEGAL IMPLICATIONS

5.1 Failure to allocate funds appropriately may result in a breach of the terms of the corresponding Section 75 legal agreements.

6. ENVIRONMENTAL IMPLICATIONS

6.1 All new affordable homes must meet the Energy Efficiency Standard for Social Housing (EESH) which was introduced in 2014. As a result, homes in the social rented sector are now some of the most energy efficient in Scotland which has a positive impact on the environment.

6.2 Bringing empty homes back into use has a positive impact on carbon reduction. Creating homes from empty properties saves substantial amounts of material compared to building new homes. It also minimises the amount of land used for development and avoids wasting embedded carbon. Where the home is retrofitted to improve energy performance, it can also help to drive down the cost of heating and reduce the operational carbon emitted.

7. RISK

7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement.

Category	Risk	Low (L) Medium (M) High (H)	Mitigation
Strategic Risk	Failure to deliver affordable housing.	L	Council has an ambitious new build programme and RSL partners work with us to deliver affordable housing across the city.
Compliance	Provision of affordable housing ensures compliance with the council's duty to house homeless households. Failure to deliver may result in there being insufficient housing to meet the demand.	H	Approval of the recommendations would prevent this from occurring
Operational	Provision of affordable housing is a priority for residents of Aberdeen City Council. Failure to deliver may result in	H	Approval of the recommendations would prevent this from occurring.

	housing need and demand levels not being met.		
Financial	Failure to allocate fund through developer obligations may result in funds being paid back.	H	Approval of the recommendations would prevent this from occurring.
Reputational	Failure to fully utilise funds may harm the council's reputation when affordable housing is much needed across the city.	H	Approval of the recommendations would prevent this from occurring.
Environment / Climate	Failure to provide affordable housing which is built to current building regulations and has a reduced carbon footprint may result in increased carbon emissions from housing.	L	Approval of the recommendations would prevent this from occurring.

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
Impact of Report	
Aberdeen City Council Policy Statement	The proposals within this report support the delivery of the Policy Statement (Place 6) – Build 2,000 new Council homes and work with partners to provide more affordable homes ensuring future developments address the needs of a changing population.
Aberdeen City Local Outcome Improvement Plan	
Prosperous Economy Stretch Outcomes	The proposal within this report supports the delivery of LOIP Stretch Outcome 1 – 10% increase in employment across priority and volume growth sectors by 2026. The paper seeks approval for the allocation of funds which will help to deliver the LOIP Improvement Project Aim ‘to increase the number of people employed in growth sectors by 5% by 2021. The affordable housing programme represents significant investment in the city which contributes to a prosperous economy and relates to 1.1 of the LOIP.

Prosperous People Stretch Outcomes	The proposal within this report supports the delivery of Stretch Outcomes 11 - Healthy life expectancy (time lived in good health) is five years longer by 2026. The paper seeks approval for the allocation of funds which will help achieve the LOIP Improvement Project Aim "Supporting vulnerable and disadvantaged people, families, and groups."
Prosperous Place Stretch Outcomes	The proposals within this report support the delivery of LOIP Stretch Outcome 14 – Addressing climate change by reducing Aberdeen's carbon emissions by 42.5% by 2026 and adapting to the impacts of our changing climate. The paper seeks approval for the allocation of funds which will help to contribute to the delivery of new build housing which is energy efficient.
Regional and City Strategies	The proposals within this report support the City Region Deal, Aberdeen City Local Housing Strategy, and the Local Development Plan through the delivery of affordable housing.
UK and Scottish Legislative and Policy Programmes	The report sets detail in relation to affordable housing which fulfils the requirements placed upon the Council by the Housing (Scotland) Act 1987.

9. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	Full impact assessment not required.
Data Protection Impact Assessment	Not required

10. BACKGROUND PAPERS

10.1 Aberdeen City Empty Homes Policy, Operational Delivery Committee 16 September 2021.

10.2 Previous committee reports in relation to this are detailed below:
 CGR 18 September 2018
 CGR 26 September 2019
 CGR 28 October 2020
 CGR 25 August 2021

11. REPORT AUTHOR CONTACT DETAILS

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ABERDEEN CITY COUNCIL

COMMITTEE	City Growth & Resources Committee
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Aberdeen City's Strategic Housing Investment Plan 2023/24 – 2027/28
REPORT NUMBER	COM/22/198
DIRECTOR	Gale Beattie
CHIEF OFFICER	David Dunne
REPORT AUTHOR	Mel Booth
TERMS OF REFERENCE	1.1.7

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to seek approval of the Strategic Housing Investment Plan (SHIP) for the period 2023/24 – 2027/28 which is due to be submitted to the Scottish Government by 28 October 2022. The SHIP will be submitted to the Scottish Government subject to Committee approval.

2. RECOMMENDATION(S)

That the Committee:

- 2.1 Approve the SHIP and its submission to the Scottish Government.

3. CURRENT SITUATION

- 3.1 The core purpose of the SHIP is to set out strategic investment priorities for affordable housing over a 5-year period to achieve the outcomes set out in the Local Housing Strategy (LHS). The SHIP reinforces the local authority as the strategic housing authority and details how investment priorities will be delivered. The SHIP should:

- Set out the investment priorities for affordable housing
- Demonstrate how these will be delivered
- Identify the resources required to deliver these priorities
- Enable the involvement of key partners.

- 3.2 The SHIP is a realistic and practical plan that rolls forward projects identified in previous SHIPs and introduces new projects. It demonstrates how, when and where Aberdeen City Council and its partners intend to deliver new affordable homes across the city. It also illustrates how a variety of funding mechanisms are maximised to ensure the delivery of the projects.

- 3.3 All local authorities are required to submit their SHIP on an annual basis. The SHIP can be updated as and when required and Committee have previously received reports seeking agreement to add sites into the SHIP which reflects continuous discussions with RSLs and developers to identify opportunities for the delivery of affordable housing. After submission of the SHIP, new opportunities will be reported to Committee as and when they arise to ensure the maximisation of the delivery of affordable housing from all available resources.
- 3.4 Aberdeen City Council, with the involvement of its key partners via the SHIP Working Group has prepared this SHIP submission. The SHIP illustrates how the Council and its RSL partners will seek to deliver the city's affordable housing investment needs and priorities identified in the Aberdeen City Local Housing Strategy 2018-2023 over a rolling 5-year planning programme. The SHIP Working Group is the Council's key working group that is responsible for development of the SHIP and the ongoing review of new and current projects through collaboration with Scottish Government via quarterly meetings.
- 3.5 The SHIP has been drafted in accordance with the Resource Planning Assumptions as provided by the Scottish Government. Overall, the SHIP shows the potential to deliver 3,287 units in the next 5 years by the Council and its RSL partners.
- 3.6 There is more certainty about projects and delivery numbers for the initial three years with the final two years showing lower numbers. This will change as new projects are developed and 'windfall' opportunities arise.
- 3.7 There are projects within the current SHIP with the potential to spend £30,823,000 Scottish Government grant in 2023/24. However, the Scottish Government grant expenditure is limited to the allocated grant, but guidance suggests that a minimum slippage factor of 25% be applied on an annual basis. Affordable Housing Supply Programme resource planning assumptions have been issued up to 2025/26 and are detailed at 4.3.
- 3.8 Council house new build programme
- 3.8.1 Aberdeen City Council has made a commitment to provide an additional 2,000 council homes for social rent. Funding has been identified through the allocation of Section 75 Agreements and Council Tax funds to contribute to this with £29,286,063 being allocated to all the council new build homes to date.
- 3.8.2 In 2021/22, a further £10.271m was allocated to developments at Craighill, Kincorth, Kaimhill and Tillydrone, and £4.110m to the council buy back scheme through the Affordable Housing Supply Programme.
- 3.8.3 All of the council's new build homes for social rent are to be built to the Council's "gold standard" and are to incorporate dementia friendly design, with a minimum 15% being delivered as fully wheelchair accessible.

3.9 Affordable Housing Delivery 2021/22

3.9.1 The table below shows the location, developer and type of affordable homes completed in 2021/22.

Location	Developer	Type	No. of units
Council Buy Backs	ACC	Social Rent	126
Eday Gardens	ACC	Mortgage to Rent	1
Wellheads, Dyce	ACC	Social Rent	216
Burnside	Grampian	Social Rent	43
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St Machar	Hillcrest	Mid-Market Rent	35
Kingswells	Hillcrest	Social Rent	20
Royal Cornhill Hospital	Barratt Homes	Low-Cost Home Ownership	2
Total			692

4. FINANCIAL IMPLICATIONS

4.1 There are no direct financial implications arising from the recommendations of this report. Given the extent of the affordable housing projects seeking grant funding over the next five years, all Scottish Government grant will be utilised, and any potential underspends from other local authorities will be sought from Scottish Government.

4.2 Any proposal for grant funding to a Registered Social Landlord (RSL) requires to be considered against the State Aid rules. Such grants come within the ambit of the Services of General Economic Interest block exemption which permits funding to Registered Social Landlords in social housing, however the service consults with Legal Services on individual cases where necessary.

4.3 Through the Affordable Housing Supply Programme, the Scottish Government has confirmed the Resource Planning Assumptions up to 2025/26. However, for planning purposes, the 2025/26 RPA has been used as the basis of funding for the final two years of this SHIP period.

Year	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Allocation(m)	£15.981	£16.037	£16.302	£16.302	£16.302	£80.924

5. LEGAL IMPLICATIONS

5.1 There are no direct legal implications arising from the recommendations of this report.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 All new affordable homes must meet the Energy Efficiency Standard for Social Housing (ESSH) which was introduced in 2014. As a result, homes in the social rented sector are now some of the most energy efficient in Scotland which has a positive impact on the environment.

7. RISK

- 7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement.

Category	Risk	Low (L) Medium (M) High (H)	Mitigation
Strategic Risk	Failure to deliver affordable housing.	L	Council has an ambitious new build programme and RSL partners work with us to deliver affordable housing across the city.
Compliance	Provision of affordable housing ensures compliance with the council's duty to house homeless households. Failure to deliver may result in there being insufficient housing to meet the demand.	M	Approval of the recommendations would prevent this from occurring
Operational	Provision of affordable housing is a priority for residents of Aberdeen City Council. Failure to deliver may result in housing need and demand levels not being met. The delivery of affordable housing identified in the SHIP will significantly increase the supply of affordable housing in the city. In addition to providing new homes, it will provide significant employment opportunities during the construction of the houses.	L	Ensure the provision of affordable housing continues across the city via the council and RSL partners.
Financial	Failure to allocate fund through developer obligations may result in funds being paid back.	L	Ensure robust procedures are in place to monitor developer obligations.
Reputational	The SHIP identifies significant opportunities for the delivery of affordable housing. The delivery of these sites require	L	The relationships are already well developed to deliver the positive outcomes. There is a low risk that some projects

	partnership working across the public and private sector. Failure to fully utilise funds may harm the council's reputation when affordable housing is much needed across the city.		may not progress as quickly as envisaged. That said there are other opportunities which will ensure all grant is spent and the affordable housing delivered.
Environment / Climate	Failure to provide affordable housing which is built to current building regulations and has a reduced carbon footprint may result in increased carbon emissions from housing.	L	Ensure the provision of affordable housing continues across the city.

8. OUTCOMES

COUNCIL DELIVERY PLAN	
	Impact of Report
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Regional and City Strategies	The proposals within this report support the City Region Deal, Aberdeen City Local Housing Strategy, and the Strategic Development Plan through the delivery of affordable housing.
UK and Scottish Legislative and Policy Programmes	The report sets detail in relation to affordable housing which fulfils the requirements placed upon the Council by the Housing (Scotland) Act 1987.

9. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	Full impact assessment not required.
Data Protection Impact Assessment	Not required.

10. BACKGROUND PAPERS

10.1 Previous committee reports in relation to this are detailed below:

CHI 01 November 2016
 CHI 24 May 2017
 CGR 18 September 2018
 CGR 26 September 2019
 CGR 28 October 2020
 CGR 03 November 2021

11. APPENDICES

11.1 Appendix 1 – Strategic Housing Investment Plan 2022/23– 2026/27
 Appendix 2 – Strategic Housing Investment Plan 2022/23– 2026/27 Tables

12. REPORT AUTHOR CONTACT DETAILS

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**Strategic Housing
Investment Plan
2023/24– 2027/28**

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2. Strategic Context
3. Aberdeen City SHIP 2023-2028
4. Prioritisation
5. Consultation
6. Resources
7. Wheelchair Accessible Housing
8. SHIP Summary
9. Council Approval of SHIP

1. Introduction

1.1 The core purpose of the Strategic Housing Investment Plan (SHIP) is to set out strategic investment priorities for affordable housing over a 5-year period to achieve the outcomes set out in the Local Housing Strategy (LHS). The SHIP reinforces the local authority as the strategic housing authority and details how investment priorities will be delivered. The SHIP should:

- Set out the investment priorities for affordable housing
- Demonstrate how these will be delivered
- Identify the resources required to deliver these priorities
- Enable the involvement of key partners.

1.2 The SHIP is a realistic and practical operational plan that rolls forward projects identified in previous SHIPs and introduces new projects. It demonstrates how, when and where the Council and its partners intend to deliver new affordable homes across the city. It also illustrates how a variety of funding mechanisms are maximised to ensure the delivery of the projects.

1.3 In 2021/22 there were 692 affordable housing completions which is the highest number of affordable homes delivered in Aberdeen through the Affordable Housing Supply Programme. As of 30 August 2022, 144 affordable housing completions have taken place across the city, with 653 units being projected for completion in 2022/23. The table below shows the location, developer and type of affordable homes completed in 2021/22.

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Royal Cornhill Hospital	Barratt Homes	Low-Cost Home Ownership	2
Total			692

2. Strategic Context

2.1.1 Local Housing Strategy

2.1.2 The Aberdeen City Local Housing Strategy (LHS) 2018-2023 provides the strategic direction to respond to housing need and demand and informs the future investment in housing and housing related services across the city. The LHS identifies an affordable housing target of 342 homes per year in 2018/19 and 2019/20 and 385 per year in 2020/21, 2021/22 and 2022/23. Work will start on the updated LHS in 2022/23.

2.1.3 In developing the LHS, the Council worked in collaboration with a wide range of partners and stakeholders with an interest in housing to develop a shared vision for housing across the city. Housing plays a vital role in meeting the needs of local people and contributes to a prosperous economy.

2.1.4 The LHS sets out a framework of actions and investment with partnership working to deliver the strategic outcomes and is underpinned by the Housing Need and Demand Assessment 2017 and reflects the Aberdeen City and Shire Strategic Development Plan and the Aberdeen Local Development Plan.

2.1.5 The housing priorities identified in the LHS 2018 - 2023:

- There is an adequate supply of housing across all tenures and homes are the right size, type, and location that people want to live in with access to suitable services and facilities.
- Homelessness is prevented and alleviated.
- People are supported to live, as far as is reasonably practicable, independently at home or in a homely setting in their community.
- Consumer knowledge, management standards and property condition are improved in the private rented sector.
- Fuel poverty is reduced which contributes to meeting climate change targets.
- The quality of housing of all tenures is improved across the city.

2.1.6 The SHIP is aligned with the priorities in the LHS, and the investment priorities are consistent with the strategic priorities. The delivery of affordable housing through the SHIP contributes to all but the one of the strategic priorities identified in the LHS; consumer knowledge, management standards and property condition are improved in the private rented sector.

2.2 Empty Homes

- 2.2.1 A full-time Empty Homes Officer has been in post since November 2018 to reflect the changing requirements of empty homes across the city and to ensure empty homes are brought back into use.
- 2.2.2 The Empty Homes Officer works with owners to bring empty properties back into use. Since the post was created, 458 empty properties have been brought back into use. Work is ongoing with landlords and letting agents across the city to “match” people from housing waiting lists with owners/letting agents of empty Private Rented Sector properties through the council’s Matchmake to Rent Scheme.
- 2.2.3 The Council utilises the Council Tax (Variation for Unoccupied Dwellings) (Scotland) Amendments Regulations 2016 which allow local authorities to charge increased Council Tax on certain homes that have been empty for one year or more. The power contained in the Regulations is intended as an additional tool to help local authorities encourage owners to bring empty properties back into use, both to increase the supply of housing for those who need homes and to reduce the blight on communities caused by houses being left empty and allowed to fall into disrepair.

2.3 Gypsy/Travellers

- 2.3.1 The lack of suitable secure accommodation underpins many of the inequalities that may be experienced. It often leads to Gypsy/Travellers using public and private land to set up unauthorised encampments which sometimes creates tensions between Gypsy/Travellers and the settled community. Establishing new permanent and transit sites can help alleviate some of the problems that Gypsy/Travellers face.
- 2.3.2 In order to address this, the Local Development Plan 2017 has identified sites as part of the 25% affordable housing contribution offering opportunities to the north, west and south of the city. Grandhome, Newhills, and Loirston are considered most appropriate for on-site provision of smaller transit sites with a net area of approximately 0.5 hectares providing six pitches on each site. Provision at the remaining locations will take the form of a commuted sum (equivalent to 15 affordable units) as set out in the Local Development Plan Supplementary Guidance.
- 2.3.3 The Council has one permanent Gypsy/Traveller site at Clinterty. £3,234,630 has been identified through council funds and £3,244,691 will be provided through the Scottish Government’s Gypsy/Traveller Accommodation Fund to carry out capital works to this site. The site is due to be demolished and rebuilt to ensure it meets current and future needs of Gypsy/Travellers.

2.4 Rapid Rehousing Transition Plan (RRTP)

2.4.1 The strategic housing priorities in this SHIP are aligned and consistent with the priorities detailed in the LHS and the Council's RRTP.

2.4.2 The RRTP is also embedded in the Aberdeen City Health and Social Care Partnership's Strategic Plan.

2.5 Child Poverty Action Plan

2.5.1 The Local Outcome Improvement Plan 2016-26 has been adopted as the local Child Poverty Action Plan for the years 2019-22. The SHIP links with the Child Poverty Action Plan and recognises that investment in the provision of affordable housing can reduce the costs of living which can directly impact on child poverty.

2.6 Buy-Back Policy

2.6.1 Aberdeen City Council will, under certain circumstances, purchase ex-council properties sold under the Right to Buy legislation, subject to certain criteria. Each application is judged on an individual case by case basis. All types, sizes and location of property are considered including multi storey, adapted and sheltered properties.

2.6.2 There are several reasons why the council might buy back a property, these are:

- An identified strategic need for this type and size of property; and
- Purchasing the property would demonstrate good asset management and represent value for money for the council.
- Properties are in areas designated for regeneration or demolition.
- The owner meets the criteria within the Scottish Government's Home Support Fund (Mortgage to Rent Scheme).
- Ownership consolidation where re-acquisition returns the block to full or majority Council ownership.
- Specialist accommodation such as fully wheelchair adapted properties or designated as amenity housing.

2.6.3 232 properties have been purchased through the buy-back scheme up to 31 March 2022.

2.7 City Centre Masterplan

- 2.7.1 The long-term ambition is to make the city centre in Aberdeen a more attractive place to live in; a healthy place where people want to live, work, and socialise. The aim is to create a city centre that takes advantage of under-utilised space and brings vitality by creating the conditions for a change in, or new uses for buildings.
- 2.7.2 Significant investment is taking place in the city centre as part of the City Centre Masterplan. Encouraging city centre living is a key part of this and actions have been taken to stimulate development. Since the interventions have taken place, 736 units have been approved with a further 288 applications pending a decision. Prior to the interventions, 37 units (1 application) was submitted between January - September 2018, 18 units (2 applications) during 2017, and 42 units (1 application) was submitted during 2016. The data therefore suggests that there has been a direct increase in the number of units submitted and consented within the city centre since the introduction of the interventions which has resulted in existing buildings being converted into residential use in the city centre.

2.8 Housing Need and Demand Assessment

- 2.8.1 The update of the Housing Need and Demand Assessment (HNDA) is underway. HNDA 3 will identify any additional requirements for larger family homes. Any identified requirements for larger family homes will be incorporated into the affordable housing developments as part of the SHIP process.

3. Aberdeen City SHIP 2023 – 2028

- 3.1 The Aberdeen City Affordable Housing Programme details a range of affordable housing projects including RSL and Council Social Rent. It also includes RSL mid-market rent, and LAR Housing Trust mid-market rent as well as Low-Cost Home Ownership (LCHO) which are properties that housing developers will deliver directly.
- 3.2 In order to monitor the deliverability of projects, the council meets on a regular basis with the Scottish Government and/or RSLs to ensure projects are progressing and to try to resolve any development constraints that arise which are slowing down or preventing delivery.

3.3 Officers of the council are also consulted on planning applications which presents opportunities to inform developers to contact RSLs at an early stage to discuss the affordable housing requirements. This is helpful because many of the projects coming forward in the SHIP are reliant on Section 75 Agreements being completed. Many of the RSLs in Aberdeen do not have the financial capacity to compete with developers to acquire sites for their own use, therefore the SHIP is reliant on Section 75 Agreements to deliver affordable housing.

3.4 Projects have been placed in the actual year they could start if resources were available.

3.5 Constraints

3.5.1 A combination of factors including ongoing market impacts from Covid & Brexit, current inflation rates and the invasion of Ukraine affecting access to supply markets in Russia, Ukraine, and surrounding area, have led to a cycle of market and price volatility and shortages across many commodities which is having a negative impact on the delivery of capital projects and budgets.

3.5.2 This market and price volatility has led to the decision by Council to pause four of the six council new build housing sites at the appropriate point. Each site is currently being assessed to determine when this pause will take place.

4. **Prioritisation**

4.1 Projects submitted have been assessed using the following criteria:

- The extent the projects help to achieve the priorities in the LHS.
- The tenure of projects, with preference given for those with social rented housing.
- Preference given to those projects which reflect the housing need and demand for that area.
- Preference given to developments that provide specialist accommodation including wheelchair accessible and housing with supported accommodation.
- Planning consent is in place and the site is owned by the developer.
- The site is in the Local Development Plan to ensure there will be no delays due to departures from Planning.
- The project can be delivered immediately subject to availability of resources.

5. Consultation

5.1 Aberdeen City Council, with the involvement of its key partners via the SHIP Working Group has prepared this SHIP submission. The SHIP illustrates how the council and its RSL partners will seek to deliver the city's affordable housing investment needs and priorities identified in the Aberdeen City Local Housing Strategy 2018-2023 over a rolling 5-year programme. The SHIP Working Group is the Council's key working group that is responsible for development of the SHIP and the ongoing review of new and current projects through collaboration with Scottish Government via quarterly meetings.

5.2 The RSLs who form part of the SHIP Working Group are:

- Castlehill Housing Association
- Grampian Housing Association
- Hillcrest Housing Association
- Langstane Housing Association
- Osprey Housing
- Places for People
- Sanctuary Housing Association

5.3 In addition to the SHIP Working Group, the Council consults with the Affordable Housing Forum whose members include developers, RSLs and Planning Officers when necessary.

6. Resources

6.1 Through the Affordable Housing Supply Programme, the Scottish Government has confirmed the Resource Planning Assumptions up to 2025/26. However, for planning purposes, the 2025/26 RPA has been used as the basis of funding for the final two years of this SHIP period.

Year	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Allocation(m)	£15.981	£16.037	£16.302	£16.302	£16.302	£80.924

6.2 The Affordable Housing Supply Programme will seek to maximise the delivery of affordable housing through all available housing streams. Partners will continue to investigate and implement new and innovative delivery mechanisms.

6.3 The delivery by the RSL sector is predicated on partnership working with house developers. The co-ordination of these developments with availability of grant funding will continue to be a significant challenge and will need to be carefully managed to ensure the deliverability of the programme.

6.4 Discretion to Reduce Council Tax Discount on Second Homes and Long-Term Empty Properties

6.4.1 Local authorities have the discretion to reduce or retain the Council Tax discount on second homes and long-term empty properties. Aberdeen City Council uses this power, and the additional income is retained locally and used as grant funding for Aberdeen City Council for the provision of new-build affordable social housing and to fund the Empty Homes Officer post. The uncommitted balance is subject to a separate report at Committee to ensure the uncommitted available balance is used as part of the council new build.

6.4.2 Income received and paid up to 31 March 2022 is shown below.

	£
Income received	24,910,249
Paid to ACC	9,220,218
Paid to RSLs	2,478,643
Committed to ACC	10,541,417
Committed to RSLs	469,141
Empty Homes	150,608
Uncommitted Available Balance (at 31.3.22)	2,050,222 ¹

6.4.3 The Council Tax on second homes and long-term empty properties provided an income of £2.102m in 2021/22. Based on current void rates in both the private and public sector, projected annual income is assumed to be around this figure, but shall be closely monitored every year and assumptions adjusted accordingly. These funds are disbursed by the City Growth & Resources Committee to support the delivery of affordable housing.

6.5 Section 75 Affordable Housing Contributions

6.5.1 Section 75 agreements are provided through Section 75 of the Town and Country Planning (Scotland) Act 1997 and are negotiated through the planning process. Housing developers may, on occasion, be required to make a financial contribution towards affordable housing rather than delivering affordable housing on the specific site to which the planning permission applies.

6.5.2 Such agreements to date have provided an income as detailed at 6.5.3. These payments are linked to completions on site therefore it is difficult to accurately predict the total to be collected during 2022/23.

¹ The uncommitted balance is subject to a separate report to City Growth & Resources Committee requesting the uncommitted available balance is used as part of the council new build programme.

6.5.3 The table below details the Section 75 Funding to 31 March 2022.

Total Received (as at 31.3.22)	14,165,564
Grants previously paid to RSLs	3,613,801
Grants paid to ACC new build	9,524,428
Uncommitted Available Balance (at 31.3.22)	1,027,335 ²

6.5.4 These funds are disbursed by the City Growth & Resources Committee to support the delivery of affordable housing.

6.6 Local Authority Funding

6.6.1 The council is significantly investing in the delivery of affordable housing using funding from a variety of sources including Council Tax second homes and long-term empty properties detailed at 6.4 above, Developer Obligations detailed at 6.5 above, Council Housing Revenue Account – Capital from Current Revenue and Council Borrowing from Public Works Loan Board. These sources of funding alongside grant which may be available through the Affordable Housing Supply Programme will enable the council to deliver its ambitious new build programme.

7. **Wheelchair Accessible Housing**

7.1 Guidance issued by the Scottish Government states that local authorities must set a realistic target for the delivery of wheelchair accessible housing across all tenures. The first step of this process is to include a position statement in the SHIP that provides details of:

- What the current evidence base is regarding the requirement for wheelchair accessible housing, including any information gaps/further work required with plans to address identified need across all tenures.
- The intended approach to increase this provision and how it will be included within the LHS and Local Development Plan.
- The number of affordable wheelchair accessible homes the local authority plans to deliver over the next 5 years.

² The uncommitted balance is subject to a separate report to City Growth & Resources Committee requesting the uncommitted available balance is used as part of the council new build programme.

7.2 Evidence Base

7.2.1 The Housing Needs and Demand Assessment 2017 shows Aberdeen City Council has 516 wheelchair accessible properties in specialist accommodation (including sheltered and very sheltered) and 293 in 'mainstream' housing.

7.2.2 The Housing Needs Assessment Team (HNAT) assess and prioritise applicants with particular needs for Council housing. The table below shows the number of applicants and their housing requirements, including those who need fully wheelchair accessible accommodation. It shows that 1,358 households require ground floor accommodation, 119 require level access and 55 require full wheelchair accessible design.

Medical Recommendation	1	2	3	4	5	TOTAL
Ground floor recommendation	1,070	172	88	24	4	1,358
First floor recommendation	62	58	67	23	4	214
Level access required	75	26	15	3	0	119
Wheelchair accessible required	27	14	11	3	0	55
Able for stairlift	0	5	3	2	0	10
Community alarm recommended	17	5	0	0	0	22
Extra bedroom recommended	0	42	54	26	3	125
Any other recommendation	1,051	182	104	35	7	1,379
TOTAL	2,302	504	342	116	18	3,282

7.2.3 In 2021/22 there has been a 7.5% increase in the overall number of applicants applying for accessible housing rising from 3,048 to 3,282. This includes an 8.2% increase in applications for those requiring ground floor accommodation, increasing from 1,255 to 1,358: 2.5% increase for those applying for level access, rising from 116 to 119. The number of people applying for fully wheelchair accessible housing has decreased by 18% from 65 to 55 applicants. These figures demonstrate the ongoing requirement for accessible housing. It should be noted that the response to the pandemic and Covid-19 restrictions may have had an impact on the number of housing applications received during 2021/22.

7.2.4 The Council is committed to reducing waiting lists for accessible housing by working with its internal design team and RSL partners to ensure that the needs of those who are currently on the housing waiting lists for wheelchair accessible housing are met through the Affordable Housing Supply Programme.

7.2.5 There is robust information on the supply and demand for the Council's wheelchair accessible housing. Work is ongoing to establish the supply and demand for other sectors. Aberdeen City Council are working with registered social landlords, developers, and Disabled Person's Housing Service (DPHS) to establish a baseline. This work is being overseen by the Independent Living & Specialist Provision Strategic Group that delivers and monitors the Aberdeen City Local Housing Strategy's Joint Delivery Action Plan in relation to specialist provision housing.

7.3 Approach to increase provision

7.3.1 It is widely recognised that whilst new build housing is designed to meet Housing for Varying Needs Standards this does not always translate to wheelchair accessible housing.

7.3.2 Aberdeen City's Health and Social Care Partnership's Strategic Plan identifies the challenges of an ageing population and the desire to support people in a community setting. To meet these challenges an adequate supply of good quality accessible housing needs to be in place. The Housing Contribution Statement is now embedded into the refreshed [2022 – 2025 Strategic Plan](#). Housing's contribution is also articulated in the [Market Position Statement 2021 – 2026](#).

7.3.3 The intended approach is to increase the overall provision of wheelchair accessible properties and is articulated in the Local Housing Strategy 2018 – 2023. This sets a 15% target for delivery of wheelchair accessible social rented housing.

7.3.4 The target for wheelchair accessible housing in affordable housing is in place and engagement with private developers will continue, to encourage an increased provision of wheelchair accessible housing across all tenures. Scotland's Fourth National Planning Framework Position Statement states our policies should reflect our diverse housing and accommodation needs, including the housing needs of older people and disabled people. We will work with developers to encourage more wheelchair accessible homes through National Planning Framework 4.

7.4 Number of wheelchair accessible homes

7.4.1 The LHS identifies an affordable housing target with a minimum 15% being fully wheelchair accessible.

7.4.2 Aberdeen City Council has five developments ongoing at Cloverhill, Craighill, Kincorth, Kaimhill and Tillydrone which will have at least 15% of the homes as fully wheelchair accessible which will significantly increase the numbers of wheelchair accessible homes across the city.

7.4.3 RSL partners are also encouraged to deliver a minimum 15% as fully wheelchair accessible where this is possible.

7.4.4 Based on the 15% target, there is the potential to provide 493 specialist provision properties which includes a commitment for 317 wheelchair accessible properties and includes 59 specialist provision properties for people who require supported accommodation through the SHIP by the council and RSL partners by 2027/28.

7.4.5 The table below shows wheelchair accessible housing for the Aberdeen City Council developments which are currently on-site.

Site	Total Units	Flats		Cottage Flats		Houses		W/C Accessible	
		1 bed	3 bed	1 bed	2 bed	3 bed	4 bed	Total	%
Cloverhill	536	7		10	38		26	81	15
Craighill	99	18	18					36	36
Kaimhill	35					6	8	14	40
Kincorth	212	49	12			17		78	37
Tillydrone	70	18	2			2		22	31
Total	952	92	32	10	38	25	34	231	24

7.4.6 In relation to the private sector, the Council will make the case for greater numbers of accessible homes to be delivered during the consultation on National Planning Framework 4 (NPF4). Engagement with private developers will continue to encourage an increased provision of fully wheelchair accessible housing in the private sector, in line with the requirements of NPF4.

8. SHIP Summary

8.1 The SHIP 2023 – 2028 has the potential to provide up to 3,287 new affordable homes which will deliver significantly more units than are suggested in the affordable housing supply targets identified in the Local Housing Strategy. This will significantly help meet housing need and demand across the city.

8.2 Table 1 - Years 2023/4 – 2027/28

8.2.1 This table shows there is the potential to complete 2,751 affordable units during this period. If all the projects were to go ahead there would be a requirement for grant subsidy of £125,680,000. Through the Affordable Housing Supply Programme, the Scottish Government has confirmed the Resource Planning Assumptions up to 2025/26. However, for planning purposes, the 2025/26 RPA has been used as the basis of funding for the final two years of this SHIP period.

Year	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Allocation(m)	£15.981	£16.037	£16.302	£16.302	£16.302	£80.924

8.2 Tables 2 & 3

8.2.1 These tables show potential projects which may be able to claim from the Housing Infrastructure Fund. One potential project at Greenferns has been identified for 350 homes.

8.3 Table 4 - Affordable Housing Projects Funded or Supported by Sources other than the RPA/TMDF Budget

8.3.1 This table shows there is one affordable housing project at Cloverhill of 536 homes to be funded completely out with the RPA.

8.4 Table 5.1- Council Tax Raised on Empty and Second Homes

8.4.1 The council continues to raise considerable funding for affordable housing through reducing the Council Tax discounts on empty and second homes and by applying the premium levy on long-term empty homes. The Council Tax income on second homes and long-term empty properties provided an income of £2.102 in 2021/22. These funds have committee approval to be disbursed to the council house new build programme.

8.5 Table - 5.2 Affordable Housing Policies (AHPs) Contributions

9.5.1 As part of Section 75 Agreements, developers can make a commuted payment in lieu of the provision of affordable housing. This funding is used to provide grant for affordable housing to RSL and Council projects. In 2021/22 £1,027,335 was received. These funds have committee approval to be disbursed to the council house new build programme.

9. Council Approval of SHIP

9.1 The SHIP and the associated spreadsheets 2023/24 – 2027/28 are recommended for approval by the City Growth & Resources Committee on 21 September 2022.

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STRATEGIC HOUSING INVESTMENT PLAN 2023/24 - 2027/28

Table 1 - AFFORDABLE HOUSING SUPPLY PROGRAMME - Years 1-5 2023/24-2027/28

LOCAL AUTHORITY: Aberdeen City Council

PROJECT	PRIORITY Low / Medium / High	DEVELOPER	UNITS - TENURE						UNITS - BUILT FORM					GN Specialist Provision	UNITS - TYPE Type of Specialist Particular Need (if Known)	Total Units by Type	GREENER Enter Y or N	APPROVAL DATE Financial Year (Estimated or Actual)	UNITS SITE STARTS					TOTAL SITE STARTS OVER PERIOD OF SHP	UNITS - COMPLETIONS					50 AHPF FUNDING REQUIREMENT (€0,000)					TOTAL AHPF FUNDING REQUIRED OVER SHP PERIOD						
			Social Rent	Mid Market Rent	LCHO - Shared Equity	LCHO - Shared Ownership	LCHO - Improvement for Sale	PSR	Total Units	Rehab	Off the Shelf	NA	Total Units						2023/24	2024/25	2025/26	2026/27	2027/28		2023/24	2024/25	2025/26	2026/27	2027/28	2023/24	2024/25	2025/26	2026/27	2027/28							
Summerhill	High	Aberdeen City Council	113							113					113	Y	2019/20							113													0.000				
Kincoth	High	Aberdeen City Council	212							212					212	Y	2019/20							212												0.000					
Craighill	High	Aberdeen City Council	99							99					99	Y	2020/21							99												0.000					
Harris Drive (Tillydrene)	High	Aberdeen City Council	30							30					30	Y	2020/21							30												0.000					
Commingham Terrace (Tillydrene)	High	Aberdeen City Council	40							40					40	N	2022/23							40												0.000					
Kaimhill	High	Aberdeen City Council	35							35					35	N	2022/23							35												0.000					
City wide Council buy-back	High	Aberdeen City Council	200							200					200	N	2018/19						100	100											6.000						
Greenferns	High	Aberdeen City Council	350							350					350	N	2020/21																		25.000						
Greenferns Landward	High	Aberdeen City Council	350							350					350	N	2020/21																		25.000						
Grandhome	High	Aberdeen City Council	95							95					95	N	2022/23																		0.840						
Victoria Road School	High	Grampian Housing	58							58					58	Y	2022/23							58											3.114						
Oscar Road	High	Grampian Housing	21							21					21	Y	2022/23							21											2.858						
Charleston Crescent, Cove	Medium	Grampian Housing	26							26					26	Y	2023/24							26											2.600						
Inchbroom, Cove	Medium	Grampian Housing	45							45					45	Y	2024/25																		5.400						
15 Maberly Street	High	Hilcrest Homes	17							17					17	Y	2022/23							17											1.326						
181 Union Street	High	Hilcrest Homes	15							15					15	N	2021/22							15											1.255						
City Point, Aberdeen	Med	Hilcrest Homes	23							23					23	TBC	2023/24																	1.794							
Stoneywood Gate, Aberdeen	Med	Hilcrest Homes	12							12					12	Y	2023/24							12											0.936						
Stationfields (Falkland Avenue)	High	Hilcrest Homes	123	44						167					167	N	2020/21							24											0.000						
Banks of Dee Care Home, Abbotswell Road	High	Hilcrest Homes	25							25					25	N	2023/24							25											1.800						
Rossett South	Low	Places for People Scotland	140	130						270					270	N	2024/25																		21.060						
Don Street	High	Places for People Scotland	25							25					25	N	2022/23							25											1.950						
Crabstone Phase 4	Medium	Places for People Scotland	68	67						135					135	Y	2022/23							36	72	27	135								10.000						
Maidencraig	Medium	Places for People Scotland	16	20						36					36	N	2022/23							36											2.417						
Fritasfield, Culls	Medium	Places for People Scotland	8							8					8	N	2023/24							8											0.466						
Milltimber	Medium	Places for People Scotland	12	8						20					20	N	2023/24							20											1.029						
Lord Cullen House, Fraser Place	High	Places for People Scotland	19	15						34					34	Y	2022/23							34											2.647						
North Anderson Drive	High	Sanctuary Scotland Housing Association	118							118					118	N	2017/18							118											0.000						
Persley Den	High	Cab Homes Eastern Ltd/Sanctuary Scotland	150							150					150	N	2021/22							81	69										1.842						
Ellon Road, Bridge of Don	High	Osprey	10							10					10	N	2021/22							10											0.000						
Beech Court, Constitution Street	High	Osprey	7							7					7	N	2023/24							7											0.504						
LCHO Buybacks	High	Unknown		5						5					5	N	2020/21																		0.150						
Total			2454	297	0	0	0	0	0	2751	123	269	2389	2751	2434	317	0	2751						267	197	46	1	1066	1132	487	780	95	153	28	1468	30.823	30.167	26.470	25.170	10.000	125.680

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MORE HOMES DIVISION

STRATEGIC HOUSING INVESTMENT PLAN 2022/23-2026/27

LOCAL AUTHORITY:

TABLE 4 - AFFORDABLE HOUSING PROJECTS FUNDED OR SUPPORTED BY SOURCES OTHER THAN THE RPA/TMDF BUDGET

PROJECT ADDRESS	SUB-AREA	PRIORITY Low / Medium / High	GEOGRAPHIC COORDINATES (X:EASTING Y:NORTHING)	DEVELOPER	FUNDING SUPPORT SOURCE	APPROVAL DATE	UNIT STARTS					TOTAL SITE STARTS	UNIT COMPLETIONS					TOTAL UNIT COMPLETIONS	NON SG FUNDING TOTAL £0.000M	OTHER NON-AHSP SG FUNDING (IF APPLICABLE) £0.000M	TOTAL FUNDING £0.000M
							Financial Year (Actual or Estimated)	2022/23	2023/24	2026/25	2025/26		2026/27	2022/23	2023/24	2024/25	2025/26				
Cloverhill		High		ACC												536		536			
																					0.000
Total							0	0	0	0	0	0	0	0	0	536	0	536	0.000	0.000	0.000

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MORE HOMES DIVISION

STRATEGIC HOUSING INVESTMENT PLAN 2022/23 - 2026/27

LOCAL AUTHORITY: Aberdeen City Council

TABLE 5.1: COUNCIL TAX ON SECOND AND EMPTY HOMES(£0.000M)

	TAX RAISED OR IN HAND	TAX USED TO SUPPORT AFFORDABLE HOUSING	TAX CARRIED FORWARD TO SUBSEQUENT YEARS
Pre - 2020/21	20.834	8.099	12.735
2020/21	1.973		14.708
2021/22	2.102	3.600	13.210
	4.075		

TABLE 5.2: DEVELOPER CONTRIBUTIONS (£0.000M)

	SUMS			UNITS		
	RAISED OR IN HAND	USED TO ASSIST HOUSING	SUM CARRIED FORWARD TO SUBSEQUENT YEARS	AFFORDABLE UNITS FULLY FUNDED FROM CONTRIBUTIONS	UNITS PARTIALLY ASSISTED FROM CONTRIBUTIONS	UNITS TOTAL
Pre - 2020/21	£13.032	£7.075	£5.957		667	667
2020/21	£0.106	£4.595	1.468		283	283
2021/22	£1.027	£1.469	1.026		369	369
	£1.133					

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ABERDEEN CITY COUNCIL

COMMITTEE	City Growth & Resources
DATE	21 st September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Place Based Investment Programme
REPORT NUMBER	COM/22/205
DIRECTOR	Gale Beattie
CHIEF OFFICER	Richard Sweetnam
REPORT AUTHOR	Stuart Bews
TERMS OF REFERENCE	1.1.7

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to update Committee on the applications received and to seek instruction from Committee on the allocation of the remaining £126,013 from the Place Based Investment Programme (PBIP) Fund; and
- 1.2 To seek approval to enter into a grant agreement with Torry Development Trust and Grampian Housing Association enabling spend of up to £1,408,965 of Scottish Government Regeneration Capital Grant Funding (RCGF) secured by Aberdeen City Council on behalf of Torry Development Trust and Grampian Housing association for the Victoria Road School Community Regeneration Project.

2. RECOMMENDATION(S)

That the Committee:-

- 2.1 Awards up to £11,000 to the St Mary's Episcopal Church (at present procathedral) for the West end 'Peace Garden' project;
- 2.2 Awards up to £43,000 to Aberdeen City Council: Aberdeen Archives, Gallery and Museums (AAGM) for the Aberdeen Art Gallery auto-opening doors project; and
- 2.3 Instructs the Chief Officer – City Growth to enter into a grant agreement with Torry Development Trust and Grampian Housing Association for up to £1,408,965 specifically for the Victoria Road School Community Regeneration Project with the funding to come from the Regeneration Capital Grant Fund.

3. CURRENT SITUATION

- 3.1 The 2020-21 Programme for the Scottish Government announced the creation of a Place Based Investment Programme Fund with £275million of capital

funding to support community led regeneration, town centre revitalisation, community wealth building and 20 minute neighbourhoods (neighbourhood location where people can access most of their basic needs within a 20-minute walk.) It is a multi-annual capital fund with the Scottish Government distributing £38 million this financial year to local government, of which £847,000 was allocated to Aberdeen City Council to be administered locally.

- 3.2 The main objectives of the Place Based Investment Programme Fund are:
- to link and align place-based initiatives and establish a coherent local framework to implement the Place Principle;
 - to support place policy ambitions such as town centre revitalisation, community led regeneration, 20-minute neighbourhoods and Community Wealth Building;
 - to ensure that all place-based investments are shaped by the needs and aspirations of local communities;
 - to accelerate ambitions for net zero, wellbeing and inclusive economic development, tackling inequality and disadvantage, community involvement and ownership.
- 3.3 The Place Based Investment Programme Fund has been launched following the closure of the Scottish Government Town Centre Fund, however the focus within The Place Based Investment Programme Fund is targeted at the Place Principle. The Place Principle was adopted by Scottish Government and COSLA as a basis for collaborative working to ensure that future local investment is relevant to local communities and for the benefit of local people. Bringing relevant services, enterprise, and communities together to make our towns and neighbourhoods more viable. The Place Based Investment Programme, alongside the developing Place Framework, aim to embed the Place Principle.
- 3.4 Under the five-year Programme Councils will receive an annual share of the fund of the following values: £38m in 2021/22, £33m in 2022/23, £23m in 2023/24, £23m in 2024/25 and £23m in 2025/26. For 2022/23 Aberdeen City Council received an allocation of £847,000.
- 3.5 Officers placed information on the remaining funds on the Aberdeen City Council website including an application form and supporting guidance documents. Two applications were received over the summer and are summarised within the table below. Further detail on each project is also provided within the appendix to this report. All applications have been assessed by officers against the fund criteria. Where a project is proposed to be unsuccessful, or only partially successful in their grant request, the reasons are summarised within the officer review outcome column of table 1.

Table 1.

Applicant	Project	Total Project Cost	Grant Requested	Officer Review Outcome	Grant Proposed to award from PBIP 22/23

St Mary's Episcopal Church (at present procathedral)	West end 'Peace Garden' project	£40,000	£11,000	Recommend for approval – Project has good community support and strong links to LOIP. Links well with PBIP ambition community led regeneration and all objectives.	£11,000
Aberdeen City Council: Aberdeen Archives, Gallery and Museums (AAGM)	Aberdeen Art Gallery auto-opening doors project.	£43,000	£43,000	Recommend for approval – Project strongly supports PBIP objective tackling inequality and disadvantage and PBIP ambition town centre revitalisation.	£43,000
	TOTAL	£83,000	£54,000		£54,000

3.6 The Council has been successful in securing £1,408,965 from the Scottish Government Regeneration Capital Grant Fund (RCGF) for the Victoria Road school community regeneration project. RCGF is delivered in partnership with COSLA and local government, supporting locally developed place based regeneration projects that involves local communities, helping to tackle inequalities and deliver inclusive growth in deprived, disadvantaged and fragile remote communities across Scotland.

3.7 RCGF is available on a competitive basis to all 32 Local Authorities in Scotland. Aberdeen City Council successfully applied on behalf of Torry Development Trust and Grampian Housing Association for the Victoria Road School project.

4. FINANCIAL IMPLICATIONS

4.1 The Council has been allocated £847,000 of Place Based Investment Fund in 2022/23 from the Scottish Government. Further funds will be allocated for 2023/24 in due course by the Scottish Government. Up to £720,987 was previously approved with options to allocate part of the remaining £126,013

being brought forward in this report. This report makes recommendations to allocate a further £54,000. This would leave a balance of £72,013 still available for further applications which officers continue to seek. Officers expect to return to Finance and Resources Committee in December will further proposals to utilise and remaining funds.

- 4.2 The full £847,000 must be committed by 31st March 2023 and this is considered to be a commitment of expenditure which can be evidenced by a fully awarded contract or commencement of works. The eligible costs for which the grant can be used are capital costs incurred by the local authority or third parties which are in line with the main objectives of the fund. These costs must be additional to that which is already or would otherwise be allocated to the 2022/23 budget. The Place Based Investment Programme is therefore not a substitute for existing or committed spend. All projects recommended to receive funds have demonstrated that they can achieve this.
- 4.3 It is essential that the projects comply with the set requirements to avoid issues around eligibility and repayment of grant to Scottish Government if conditions are not complied with.
- 4.4 Any funds which remain uncommitted at 31st March 2023 will be expected to be returned to the Scottish Government. The fund currently remains open for applications and any further applications received will be presented to the next Committee for consideration.

5. LEGAL IMPLICATIONS

- 5.1 Grant Agreements will require to be put in place between Aberdeen City Council and those organisations which are awarded grant funding

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 There are no direct environmental implications arising from the recommendations of this report.

7. RISK

- 7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statemen

Category	Risk	Primary Controls/Control Actions to achieve Target Risk level	Target Risks Level Low (L) Medium (M) High (H)	Does target Risk Level Match Appetite Set?
Strategic Risk	No risks identified	None	L	Yes

Compliance	Non-compliance with grant conditions will require return of grant	External Funding team are familiar with the compliance requirements and will advise and monitor projects as required to ensure compliance	L	Yes
Operational	No risks identified	None	L	Yes
Financial	<p>As per the grant conditions the money must be committed by the end of Financial Year 2022/23</p> <p>Any unspent, or unallocated funds will require to be returned to Scottish Government</p> <p>There is a risk that Aberdeen city council is not awarded any Place Based Investment Programme Funding for 2023/24</p>	<p>Projects recommended to be awarded funding have demonstrated their ability to deliver within the required timescales within the application.</p> <p>Close project monitoring will take place throughout to ensure these timescales will be met.</p> <p>Scottish Government has committed to the Place Based Investment Programme as a multi-year fund. Calculations to determine Council allocations were agreed through COSLA.</p>	L	Yes
Reputational	Risk of reputational damage if funds are not spent in accordance to the grant conditions	Officers will work with projects to ensure proposals and applications meet the conditions of grant	L	Yes
Environment / Climate	No risks identified	None	L	Yes

7. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
	Impact of Report
Aberdeen City Council Policy Statement	All applicants were requested to detail the contribution of their project to Aberdeen City Council policy and strategies.
Aberdeen City Local Outcome Improvement Plan	
Prosperous Economy Stretch Outcomes	All applicants were requested to detail the contribution of their project to the LOIP as part of the application process.
Prosperous People Stretch Outcomes	All applicants were requested to detail the contribution of their project to the LOIP as part of the application process.
Prosperous Place Stretch Outcomes	All applicants were requested to detail the contribution of their project to the LOIP as part of the application process.

9. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	not required
Data Protection Impact Assessment	not required

10. BACKGROUND PAPERS

COM/21/176 External Funding report to City Growth And Resources Committee on 21st June 2022.

11. APPENDICES

Appendix 1 - Place Based Investment Fund – Summary of applications received.

12. REPORT AUTHOR CONTACT DETAILS

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Title	Team Leader – External Funding
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Tel	01224 523773

Appendix 1

St Mary's Episcopal Church – Westend 'Peace Garden' Project

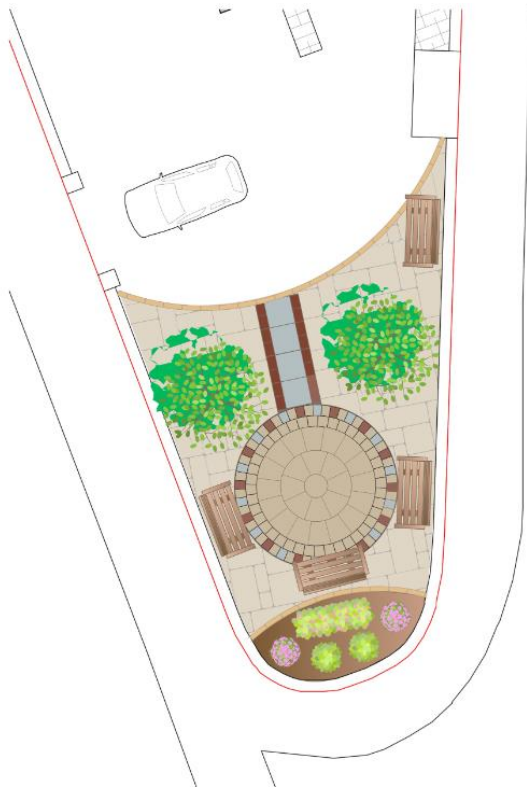
Our Vestry Committee is proceeding with a special "Peace Garden" project having successfully received funding from the Provincial Recovery & Renewal Fund and All Churches grant. It is intended that the garden comprise a low maintenance fully landscaped garden using high quality sandstone paving and a raised bed placed appropriately to create a sense of tranquillity and peace. We wish to provide an improved area for office workers that take their lunch here and encourage wider use from children and elderly and an enhanced area for passers-by on this major road into Aberdeen. The design provides an area for church events and easy access for the infirmed and wheelchair users.

St Mary's Pro-Cathedral wish to work with a local landscape garden company to create a tranquil and peaceful space for the congregation and the local community, including:

- 1) A low maintenance fully landscaped garden using high quality sandstone to match the polychromatic exterior of St Mary's
- 2) Paving design to be based upon designs supplied by a local design company which links to St Mary's external design characteristics (stain glass window and 'tartan kirk' nickname)
- 3) Whole area of garden to be slabbed with curved cobbled edge to define the car parking area closer to the church 4) Paving construction to be capable of withstanding cars turning in the west end area of the church grounds
- 5) Construction of a raised bed area at the apex of the west end area – with space for plaques to explain year and purpose of garden and the symbolism of the planting
- 6) Incorporation of existing bench seats and inclusion of additional durable/no maintenance benches
- 7) Pruning/reshaping of two existing rowan trees (non flourishing silver birch to be addressed)
- 8) Re-siting of existing "Welcome to St Mary's" signage in the area
- 9) Planting. Plant list: Rosemary, Sage, Lavender, Thyme, Camomile and Pulsatilla vulgaris.
- 10) Existing decorative granite chippings to be redistributed to other areas in the church grounds

The church is a Grade 1 listed building in a Conservation area; thus, permissions are required. A Conservation grade architect is overseeing works at the church and the planning application needed for this improvement, but not yet submitted.

The idea was prompted by a post covid opportunity. Encouraging greater use of the area and enhancing it and the community's mental health, while also addressing a difficult maintenance issue of weeds. The church has an ongoing relationship with Barnardo's opposite and they are keen to utilise the garden for young carers and others. The Bruce Nursery which supports the church with its Nativity has been approached to see if the garden could add to excursions by the children. The original hope was also to cater for the elderly – with an ability to interact and perhaps dig, but this will be explored/developed when a garden is in place. The hope is a tactile, scented area with uplifting sharing and love plus an ability to share herbs for use. Any assistance that can be provided to enable this project would be deeply appreciated.



Proposed site for Peace Garden

Front area down to car access points to be hard landscaped.



Shows car access from Carden Place. Garden to fill area at point beyond access.



Aberdeen City Council: Aberdeen Archives, Gallery and Museums (AAGM) -
Aberdeen Art Gallery auto-opening doors

Since reopening Aberdeen Art Gallery after a major redevelopment, visitor feedback has clearly indicated the need to further enhance the equity of access across the building. Significant improvements were made to accessibility of the building during the redevelopment including changing places toilets and a lift to all floors.

The gallery doors are large, double-glazed units between environmentally controlled gallery spaces and on to the roof terraces are much heavier than expected due to their thermal and air-exchange insulation. They have the aim of keeping consistent temperature and humidity conditions within that space. Particularly important as the second floor is the temporary exhibition space which displays loan items. As a result of this need the doors are heavy and difficult to open for those with accessibility requirements. The terrace doors have the same purpose. They are external doors and important to balance conditions within the building as much as possible, however has resulted in them being extremely difficult to open as well.

The adult “changing places” toilet facility has been designed specifically for adults with severe mobility requirements and as such those visitors are usually accompanied by an able-bodied person. However we are also aware that, based on Disability Equality Partnership (DEP) feedback, the door to the facility should be power assisted to allow for easier manoeuvring and access.

By providing nine power-assisted opening doors within the art gallery, this project will address current issues and feedback received from visitors and result in a more equally accessible and inclusive venue for those disadvantaged by mobility related restrictions. Comments received through surveys, comment cards and conversations with AAGM staff include:

‘The unwelcoming doors were heavy to use’

‘Maybe door assistance’

‘BP Gallery not accessible manual heavy doors – not suitable for wheelchairs’

‘It’s difficult to open if you have a stick’

‘Automation would make a big difference as they can be difficult with sticks or for wheelchair users. The exit doors would need automation too.’

‘Doors to temporary exhibition very heavy’

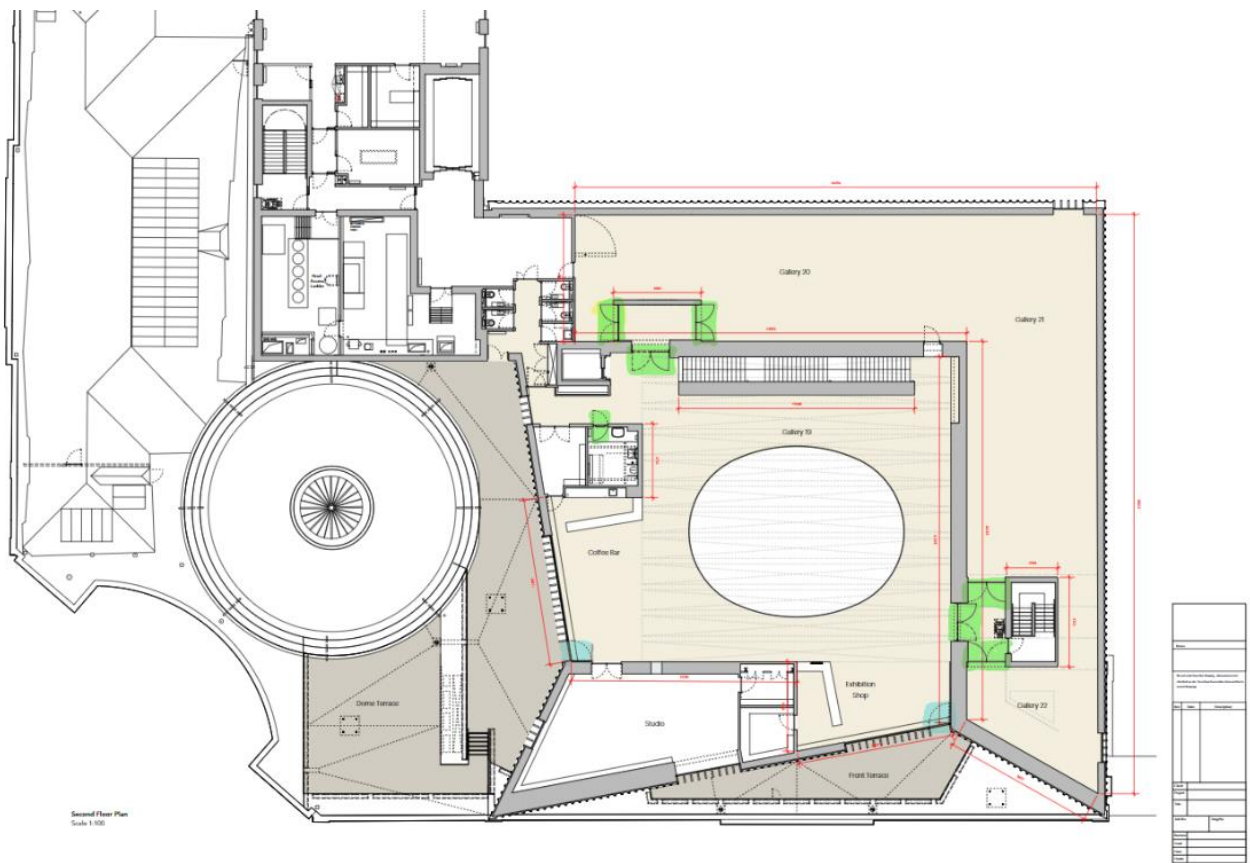
This project demonstrates close alignment to the Local Outcome Improvement Plan:

LOIP 3.2 – ‘Improving health and reducing inequalities’. More than ever museums and galleries are important in enhancing our wellbeing and mental and physical health. Aberdeen Art Gallery has an exciting and engaging programme of exhibitions and events for 2022/2023, and by improving the equity of access is vital to offer these free-to-access services to visitors.

LOIP 11.1 – ‘Supporting vulnerable and disadvantaged people, families and groups’. Aberdeen Art Gallery are committed to increasing the accessibility of their services and have worked with specialists to overcome barriers, including liaising with North East Sensory Services and the Aberdeen Disability Equity Partnership. The heaviness of the existing doors is a barrier that complicates access to the second floor Special Exhibition Galleries and roof terraces.

To complete this project no planning permission is required and initial costings of the project have been obtained and form the basis of the grant requested, however final costings will be subject to following procurement procedures.

Please see the floor plan below of Aberdeen Art Galleries second floor. The seven doors highlighted green – internal doors leading to exhibitions and accessible toilet, and the two doors highlighted blue - external doors leading to terrace area, will become automated through this project. The ground and first floors of the gallery are open plan, therefore it is only the second floor which requires auto opening doors.



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ABERDEEN CITY COUNCIL

COMMITTEE	City Growth and Resources
DATE	21 st September 2022
EXEMPT	<p>The report is not exempt but the appendices are exempt as follows:-</p> <p>Appendix 11.1: Financial Implications: Para 8: estimated expenditure on contracts</p> <p>Appendix 11.2: Investment Grade Business Case: Para 8: estimated expenditure on contracts</p> <p>Appendix 11.3: Business Case, update Aug 2022: Para 8: estimated expenditure on contracts</p>
CONFIDENTIAL	N/A
REPORT TITLE	Torry Heat Network – Fourth Progress Report
REPORT NUMBER	RES/22/204
DIRECTOR	Steve Whyte
CHIEF OFFICER	John Wilson
REPORT AUTHOR	Bill Watson
TERMS OF REFERENCE	1.1.2, 1.1.7, 2.1.1, 4.1

1. PURPOSE OF REPORT

- 1.1 This report updates the Committee on the progress made with the construction aspects of the Torry Heat Network project and seeks approval of a number of recommendations.

2. RECOMMENDATION(S)

That the Committee:-

- 2.1 approves the proposed scope for the next phase (Phase 2) of the Torry Heat Network project detailed within section 3.1 of this report;
- 2.2 approves expenditure on this project being increased, as described in exempt appendix 11.1, following receipt of the noted grant offer of £5.617m from the Scottish Government, towards the next phase (Phase 2) of the Torry Heat Network project;
- 2.4 subject to the associated expenditure in recommendations 2.2 being approved, approves the conclusion of call-off contracts with the Council's framework Contractor for the design and build of Phase 2;
- 2.5 authorises the Chief Officer Corporate Landlord to enter into commercial discussions with Grampian Housing Association with regard to the potential

supply of heat to their proposed mixed-use re-development of the former Victoria Road school, and report the outcome to a future meeting of this committee; and

- 2.6 authorises the Chief Officer Corporate Landlord to enter into commercial discussions with Ark Housing Association with regard to the potential supply of heat to their Balnagask Court premises, and report the outcome to a future meeting of this committee.

3. CURRENT SITUATION

- 3.1 The extent of the proposed infrastructure within Phase 2 of the Torry Heat Network is:

- extend the main spine heat distribution pipe network by connection with the heating network being delivered under the previously approved Phase 1 Torry Heat Network project to be capable of supplying heat to:
 - an additional (circa) 500 homes;
 - the new Torry Primary School and Community Hub;
 - Grampian Housing Association's Victoria Road School site (circa 50 homes); and
 - Ark Housing Association's Balnagask Court premises (17 homes).
- new internal installations, heat metering and heat supply pipes to the new Torry Primary School and Community Hub; and
- new internal installations, heat metering and heat supply pipes to an additional (circa) 500 homes.

- 3.2 The Council has received an offer of a capital funding grant to the value of circa £5.617m from the Scottish Government's Heat Network Fund towards this next phase of this Network. This offer has been accepted by the Council, utilising delegated powers.

- 3.3 Should the recommendations in this report be approved, work will continue/commence on a number of workstreams:

- 3.3.1 The supply, construction and installation of the network infrastructure is to be contracted out. The works will be procured in accordance with the Council's Procurement Regulations via a call-off from a pre-existing bespoke framework agreement for this project;

- 3.3.2 Road closure consents and planning permission are to be obtained, via the usual application processes; and

- 3.3.3 The assistance of the utility suppliers, who have services running in the vicinity of the proposed district heating network infrastructure, is to be obtained.

4. FINANCIAL IMPLICATIONS

4.1 The financial implications relating to this report are outlined in an exempt appendix attached to this report.

5. LEGAL IMPLICATIONS

5.1 The proposed investment by the 'state' (Aberdeen City Council) to create a heat network is considered to be a low subsidy control compliance risk due to the clear compliance with Scottish, UK and EU policy with regard to the creation of low carbon heat networks. Legal advice was obtained at the outset of this project (under EU State Aid rules) and the proposals have been designed to ensure that this risk remains low.

5.2 The proposals have been developed in a manner which takes into account current and proposed regulations for the suppliers of heat. This includes the Heat Networks (Scotland) Act 2021 (in so far as it is currently developed, further detail on the scheme is being introduced in stages, but a fully functioning regulatory regime is not expected until early 2024) and the Heat Networks (metering and billing) Regulations 2014.

5.3 With the exception of calls from the Scottish Government for the UK government to urgently bring forward its proposed market framework for heat networks in order to put in place the much needed consumer protection in the sector, there is no other relevant legislation, foreseen at present, that needs to be accounted for.

5.4 If agreements were to be entered into for heat supply to housing association owned blocks in the future, further advice shall be sought from the property legal team as to what legal rights need to be secured with regards to the installation of District heating network infrastructure within the boundaries of these sites.

6. ENVIRONMENTAL IMPLICATIONS

6.1 Phase 1 and 2 combined will help reduce the City's carbon emissions by an estimated 64,673 tonnes CO2e over 40 years.

7. RISK

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
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Strategic Risk	Potential for non-delivery of Heat Network project, which would negatively impact on the development of a Low Carbon regional economy	Proposals have been prepared, which deliver on this strategic requirement.	L	Yes
Compliance	Non-compliance with subsidy control rules Delay in securing legal rights to lay the Heat Network infrastructure over jointly owned property (including a right of access for operation and maintenance)	External legal advice was obtained at the outset of the project (under EU State Aid rules) and is to be followed. A significant programme allowance has been allowed against this risk, in this Report	L M	Yes
Operational	The EfW plant becoming operational later than programmed.	It is proposed that the number of houses that are connected to this network are restricted, within this proposed phase, until the EfW plant is fully operational.	L	Yes
Financial	The bids received for the Construction and installation of the network are in excess of the reported budget costs.	A contingency sum has been allowed for (in this Report) so as to manage this risk. In the event that all bids come in over budget, a range of options would be	M	Yes

		presented to Council for consideration.		
Reputational	Potential for non-delivery of Heat Network project	Proposals have been prepared, which deliver on this core requirement.	L	Yes
Environment / Climate	Non-delivery of this project will have a significantly adverse impact on the City's carbon emissions.	Proposals have been prepared, which deliver on the core requirement of reducing the City's carbon emissions.	L	Yes

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN 2022-2023</u>	
	Impact of Report
Aberdeen City Council Policy Statement <u>Working in Partnership for Aberdeen</u>	This project will contribute towards: <ul style="list-style-type: none"> - maximising community benefit from major developments - the development of the non-oil and gas economic potential of the city.
<u>Aberdeen City Local Outcome Improvement Plan</u>	
Prosperous Economy Stretch Outcomes	The construction programme for this heating project will support the local economy, employment and training during a period of relatively subdued construction activity.
Prosperous People Stretch Outcomes	The Council is committed to improving the key life outcomes of all people in Aberdeen City. The availability of affordable heating contributes to this objective by providing choice and opportunities which would otherwise not be available
Prosperous Place Stretch Outcomes	The Council is committed to ensuring that Aberdeen is a welcoming place to invest, live and visit and

	operate to the highest environmental standards. The availability of low cost, low carbon heating contributes to this objective.
Regional and City Strategies	The proposals within this report support the desire for Aberdeen to be a sustainable and smart city which meets the needs of present and future generations.

9. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	Not required for this report. This will, however, be relevant to the future operating business case
Data Protection Impact Assessment	Not required for this report. This will, however, be relevant to the future operating business case
Other	

10. BACKGROUND PAPERS

- 10.1 Special Council meeting on 24th October 2016, decisions
- 10.2 Communities, Housing and Infrastructure Committee on 24th January 2017, report
- 10.3 Communities, Housing and Infrastructure Committee on 24th May 2017, report
- 10.4 Council, 4th March 2019, report Joint Energy from Waste Project Contract Award
- 10.5 General Services Capital budget 2022, approved 7th March 2022.
- The Heat Network budget is listed under “Fully Legally Committed Projects” on page 3.
- 10.6 Housing Revenue Account budget 2022, approved 7th March 2022.
- The Torry Heat Network aspects fall under section 3.3 on page 275 of the (Public Pack) Agenda Document for Council.
- 10.7 City Growth and Resources on 28th October 2020, “Torry Heat Network – Third Progress Report”

11. EXEMPT & CONFIDENTIAL APPENDICES

11.1 Financial Implications

11.2 "Torry Heat Network Phase 2, Investment Grade Business Case with Options Appraisal", WSP, September 2021.

11.3 "Torry Heat Network Phase 2, Business Case – Interim Update", WSP, August 2022.

12. REPORT AUTHOR CONTACT DETAILS

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Title	Principal Architect
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Tel	07801 129455

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COMMITTEE	City Growth and Resources Committee
DATE	21st September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Performance Management Framework Report – City Growth and Resources
REPORT NUMBER	CUS/22/203
DIRECTOR	Andy MacDonald
CHIEF OFFICER	Martin Murchie
REPORT AUTHOR	Alex Paterson
TERMS OF REFERENCE	2.1.3

1. PURPOSE OF REPORT

1.1 To present Committee with the status of key performance measures relating to the City Growth and Resources clusters.

2. RECOMMENDATION

2.1 That the Committee note the report and provide comments and observations on the performance information contained in the report Appendix.

3. CURRENT SITUATION

Report Purpose

3.1 This report is to provide members with key performance measures in relation to the City Growth and Resources clusters as expressed within the 2022/23 Council Delivery Plan (the Plan)

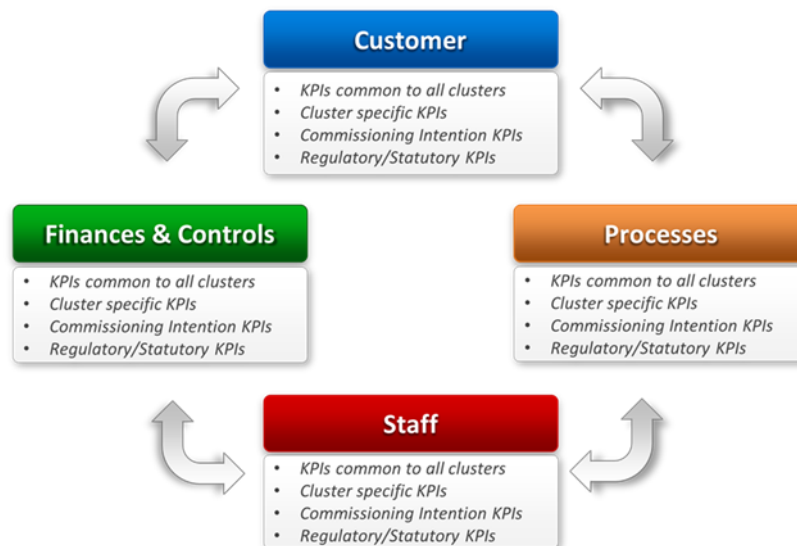
Report Structure and Content

3.2 Performance Management Framework Reporting against in-house delivery directly contributing to, or enabling delivery against, the City’s Local Outcome Improvement Plan,(LOIP) has informed development of successive Council Delivery Plans, including the [2022-23 Council Delivery Plan](#) that was agreed by Council on the 7th March 2022.

3.3 The Council's Performance Management Framework, supporting and enabling scrutiny against progress of the Council Delivery Plan, and its key measures, establishes a robust performance management and reporting system which encompasses single and multi-service inputs, outputs and outcomes.

3.4 Reporting of Service Standards against each function/cluster, associated with Council Delivery planning, offers continuous insight into the effectiveness, and accessibility of core service provision to the Council’s stakeholders and City communities.

- 3.5 Where appropriate, data capture against these Standards is incorporated within the suite of measures contained within Appendix A, and will be reported against on either a monthly, quarterly or annual basis.
- 3.6 This information will be updated for future cycles to include any new or amended Standards for 2022/23 arising from the on-going and continuous officer review of these being undertaken in advance of developing the proposals for the 2023/24 Standards.
- 3.7 Additional data-based reflection, linking with Standards outcomes from 2021/22 will be captured in reporting against various service level annual Statutory Performance Indicators, to a future meeting of this Committee.
- 3.8 The Performance Management Framework provides for a consistent approach within which performance will be reported to Committees. This presents performance data and analysis within four core perspectives, as shown below, which provides for uniformity of performance reporting across Committee.







- 3.9 This report, as far as possible, details performance up to the end of June 2022 or Quarter 1 2022/23, as appropriate. Data around the majority of Planning Management outcomes is based on the most recently available national publications, covering Quarters 3 and 4 of the previous fiscal year.
- 3.10 The Appendix to this report contains an overview of performance across the functions within the remit of this Committee, with reference to recent trends and performance against target.
- 3.11 This also includes, at appropriate points, further analysis of performance measures which have been identified as of potential interest in terms of either performance implications, data trends or changes in these metrics. This particular report contains several specific data-led highlights and, where relevant, additional/extended Service Commentary and/or metrics context is provided against these to inform Member scrutiny.

- 3.12 The Appendix to this report, on this occasion, contains extended time series data which allows some additional consideration of the direction of travel in the performance of services between the position in early 2021 and 2022, when the majority of COVID-19 legislation and restrictions were lifted.
- 3.13 Within the summary dashboard the following symbols are also used:

Performance Measures

Within the summary dashboard the following symbols are used

Traffic Light Icon

-  On target or within 5% of target/benchmarked outcome
-  Within 5% and 20% of target/benchmarked outcome and being monitored
-  Below 20% of target/benchmarked outcome and being actively pursued
-  Data only – target not appropriate/benchmarked outcome not available

Children's Rights

- 3.14 This report contains no recommendations or content that require for the direct accounting of impact on children's rights.

4. FINANCIAL IMPLICATIONS

- 4.1 There are no direct financial implications arising out of this report.

5. LEGAL IMPLICATIONS

- 5.1 There are no direct legal implications arising out of this report.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 There are no direct environmental implications arising out of this report

7. RISK

- 7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement"

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
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Strategic	None	NA	NA	NA
Compliance	No significant legal risks.	Publication of service performance information in the public domain ensures that the Council is meeting its legal obligations in the context of Best value reporting.	L	Yes
Operational	No significant operational risks.	Oversight by Elected Members of core employee health and safety/attendance data supports the Council's obligations as an employer	L	Yes
Financial	No significant financial risks.	Overview data on specific limited aspects of the cluster's financial performance is provided within this report	L	Yes
Reputational	No significant reputational risks.	Reporting of service performance to Members and in the public domain serves to enhance the Council's reputation for transparency and accountability.	L	Yes
Environment / Climate	None	NA	NA	NA

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
	Impact of Report
<p>Aberdeen City Council Partnership Agreement</p> <p>Improving Educational Choices</p>	<p>The provision of information on cluster performance will support scrutiny of progress against the delivery of the following Agreement Statements:</p> <ul style="list-style-type: none"> - Work with the city's universities, North East Scotland College and businesses to increase educational and training options and the number of care experienced young people and young people from deprived communities, going onto positive destinations, including further and higher education, vocational training and apprenticeships.

<p>Creating Better Learning Environments</p>	<ul style="list-style-type: none"> - Promote the number of apprenticeships on offer through the council. - Review and invest in our school estate, ensuring all of Aberdeen's schools are fit for the educational needs and the challenges of the 21st century.
<p>Caring for our young people</p>	<ul style="list-style-type: none"> - Seek to make Aberdeen a UNICEF Child Friendly City.
<p>City Centre and Beach</p>	<ul style="list-style-type: none"> - Refresh our tourism and cultural strategies for the city. - Revitalise our beachfront, working with partners including Aberdeen FC with an aim to deliver new sports facilities and a new stadium, not using public funds except where collaborative working is mutually beneficial. - Expand the Beach Masterplan, extending the footprint from the River Dee to the River Don. - Bring forward plans to improve active travel links between the Castlegate and the beach. - Create a new urban garden for our city centre in Queen Street, with active travel routes linking in with the wider city centre and the improved links to the beachfront. - With a view to ensuring safe pedestrianised areas in our city, we will effectively engage with the Disability Equity Partnership, public transport providers, city centre businesses and others over the future of central Union Street and Broad Street, to ensure that they are accessible to people with disabilities and limited mobility and commit to maintaining bus and taxi access to Central Union Street until that is achieved. - Continue to move the City Centre and Beach Masterplans forward, expanding it to include George Street and ensuring it remains current with annual reviews.
<p>The Arts Matter</p>	<p>Our city should become distinguished by the range and depth of active creative expression and artistic enjoyment experienced by those who live here and by visitors. By supporting and working with cultural partners, we will ensure there is richness and diversity of arts activities.</p>

Building a Greener and Sustainable City

- Work with partners to explore opportunities to develop heritage, museum and online services with a special emphasis on local history and stories of stories of our heritage.
- Declare a climate emergency.
- Work with partners to deliver a just transition to net zero and plan to make Aberdeen a net-zero city by no later than 2037, and earlier if that is possible.
- Support Aberdeen's continued pioneering of Hydrogen technologies and make the case to bring alternatively powered rail services to the City.
- Commit to providing an annual carbon budget alongside the council's annual budget and providing CO² emission statements as part of the Annual Accounts of the Council.
- Invest at least £25 million over five years and work with partners to expand the city's Electric Vehicle charging network.
- Continue to reduce the carbon footprint of the council's building estate and vehicle fleet and adopt an "environment first" approach to all new Council building projects, seeking to maximise the energy efficiency of, and minimise the carbon footprint of, new buildings
- Review current recycling and waste minimisation policies and practices within Council establishments and for flatted accommodation with the objective of reducing waste, increasing recycling levels and improve efficiency of the Council collections.
- Recognise the threat climate change already poses to our city by investing in flood and erosion prevention measures in Lower Deeside and along the beach.

Greener Transport, Safer Streets, Real Choices

- Delivering a revised Local Transport Strategy.
- Working with the Scottish Government and NESTRANS to improve the city's bus network, including considering options for an Aberdeen Rapid Transit network, with the support of the Scottish Bus Fund, and consider options for council-run services in the city.

<p>Homes for the Future</p>	<ul style="list-style-type: none"> - Reviewing our cycle and active transport network, and work with Aberdeen Cycle Forum to deliver our shared vision of making Aberdeen a cyclist friendly city and provide covered secure cycle storage in suitable locations across Aberdeen. - Improving cycle and active transport infrastructure, including by seeking to integrate safe, physically segregated cycle lanes in new road building projects and taking steps to ensure any proposal for resurfacing or other long-term investments consider options to improve cycle and active transport infrastructure. - Work with partners to produce a ten-year plan to increase the stock and variety of Council and social housing to meet the needs of Aberdeen's citizens and continue to deliver Council and social housing projects to tackle the Council house waiting lists and do everything in our power to end homelessness. - Extend Aberdeen's district heating network to offer affordable warmth to many more homes and help alleviate fuel poverty. - Ensure that Aberdeen City Council's housing stock provides more choice for our city's older citizens. - Support the adaption of homes to accommodate people's changing needs, and to support the building of more homes that are future-proofed for accessibility.
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[Aberdeen City Local Outcome Improvement Plan](#)

<p>Prosperous Economy</p> <ol style="list-style-type: none"> 1.No one will suffer due to poverty by 2026 2. 400 unemployed Aberdeen City residents supported into Fair Work by 2026 3. 500 Aberdeen City residents upskilled/reskilled to enable them to move into, and within economic opportunities as they arise by 2026 	<p>The activities reflected within this report support the delivery of LOIP Stretch Outcomes 1 and 2 through the following Aims.</p> <p>Outcome 1 Improvement Aims:</p> <p>Reduce by 50% the number of homes with an EPC rating of F or G by 2026</p> <p>Increase support for those who have been most disadvantaged through the pandemic by 2023</p> <p>Outcome 2 Improvement Aims:</p>
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	<p>Supporting 50 people to start a business in Aberdeen, migrating from or reducing reliance on benefits by 2023 and 100 by 2026</p> <p>Increase employer sign up to the Real Living Wage by 5% year on year to 2023 to achieve Real Living Wage City Status by 2026</p> <p>Support 15 care experienced young people to progress to employment through public sector funded employability programmes by 2023.</p> <p>Support 50 people into sustainable, good quality employment by 2023 and 100 by 2026 (priority neighbourhoods and over 50's)</p> <p>Outcome 3 Improvement Aims</p> <p>Improve the overall impact of partnership wide community benefits through raising the number of community co-designed activities from 0 to 5 by 2023.</p> <p>By December 2022, increase by 10% the number of people who have digital access, and are comfortable using digital tools</p>
<p>Prosperous People</p> <p>6. As corporate parents we will ensure that 95% of care experienced children and young people will have the same levels of attainment in education, health and emotional wellbeing, and positive destinations as their peers by 2026</p> <p>7. 95% of children living in our priority neighbourhoods will sustain a positive destination on leaving school by 2026</p> <p>8. Child Friendly City where all decisions which impact on children are informed by them by 2026.</p>	<p>The delivery of services referred to within this report supports each of the Children & Young People Stretch Outcomes 6,7 and 8 in the LOIP.</p> <p>This includes the following Improvement Aims:</p> <p>Outcome 6 Improvement Aim</p> <p>Increase the number of care experienced young people accessing a positive and sustained destination by 25% by 2022.</p> <p>Outcome 7 Improvement Aim</p> <p>Increase the number of accredited courses directly associated with growth areas by 7% by 2023.</p> <p>Outcome 8 Improvement Aims</p> <p>Achieve UNICEF badge status in Place as part of wider Child Friendly City attainment</p> <p>Increase by 50% the number of communications which are accessible to children and young people by 2023.</p>

	Increase to 100% the proportion of staff, working directly or indirectly with children, who have received Child Friendly City training
<p>Prosperous Place Stretch Outcomes</p> <p>13. Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate.</p> <p>14. 38% of people walking and 5% of people cycling as main mode of travel by 2026.</p> <p>15 Addressing the nature crisis by protecting/managing 26% of Aberdeen's area for nature by 2026.</p>	<p>The report reflects on activity which contributes to Stretch Outcomes 13,14 and 15:</p> <p>Outcome 13 Improvement Aims</p> <p>Reduce public sector carbon emissions by at least 7% by 2023.</p> <p>Reduce the generation of waste in Aberdeen by 8% by 2023.</p> <p>Community led resilience plans in place for areas most vulnerable to flooding by 2023, leading to plans for all areas of Aberdeen by 2026.</p> <p>Outcome 14 Improvement Aims</p> <p>Increase % of people who walk as one mode of travel to 10% by 2023.</p> <p>Increase % of people who cycle as one mode of travel by 2% by 2023.</p> <p>Outcome 15 Improvement Aims</p> <p>Increase by a minimum of eight the number of community run green spaces that are self-managed for people and nature by 2023</p> <p>Number of organisations across Aberdeen pledging to manage at least 10% of their land for nature by 2023, and 26% by 2026</p>
Regional and City Strategies	The report reflects outcomes aligned to the Regional Economic Strategy, Local and Regional Transport Strategies and Regional Skills Strategy, along with Local and Strategic Development Plans

9. IMPACT ASSESSMENTS

Assessment	Outcome
Integrated Impact Assessment	A full impact assessment is not required for this report
Data Protection Impact Assessment	A Data Protection Impact Assessment is not required for this report.
Other	

	No additional impact assessments have been completed for this report.
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10. BACKGROUND PAPERS

Council Delivery Plan 2022/23 – CUS/22/059

11. APPENDICES

Appendix A – City Growth and Resources Performance Summary Dashboard

12. REPORT AUTHOR CONTACT DETAILS





Alex Paterson
Strategic Performance and Improvement Officer
Data and Insights
apaterson@aberdeencity.gov.uk
01224 522137/07540 295159

Appendix A - Performance Management Framework Report, 21st September 2022 – City Growth and Resources Clusters





CITY GROWTH CLUSTER





1. Customer

Cluster Level Measures – Service Standards^

Performance Measure	Current Status
We will operate Aberdeen Art Gallery, Aberdeen Maritime Museum, and Provost Skene's House as free to enter visitor attractions within the advertised/specified opening hours for each venue	
We will operate Aberdeen City and Shire Archives service from the Town House and Old Aberdeen House within the advertised/specified opening hours for each venue	
Working with partners, we will provide a continuously updated investment prospectus of development opportunities in the City available through investaberdeen.co.uk	
We will support businesses through delivery of Business Gateway, city centre management, and the actions in the Socio-Economic Action Plan	




Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	Target	Long Trend Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – City Growth	0	2	2	0	1			
% of complaints resolved within timescale stage 1 and 2) – City Growth	N/A	50%	100%	N/A	100%		75%	

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	Target	Long Trend Quarterly
	Value	Value	Value	Value	Value			
% of complaints with at least one point upheld (stage 1 and 2) – City Growth	N/A	0%	0%	N/A	0%			
Total No. of lessons learnt identified (stage 1 and 2) – City Growth	N/A	0	0	N/A	0			

2. Processes

Service Level Measures





Performance Indicator	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Long Trend - Quarterly
	Value	Value	Value	Value	Value	
Number of total visits/attendances at museums and galleries (includes outreach/enquiries and events)	264,443	300,316	303,675	302,078	324,776	
Number of virtual visits/attendances at museums and galleries	252,856	264,993	256,845	259,926	258,878	
Number of visits at museums and galleries that were in person	10,237	34,542	46,474	61,599	64,748	

Service Commentary

The number of Total Visits experienced a sustained rise in Quarter 1 as a result of substantial gains on both the prior Quarter and against the same period in 2020/21 as the removal of remaining pandemic restrictions enabled growth in visits in person, whilst the profile of Virtual Visits was maintained. The Outreach and Events programmes were paused at conclusion of the Spring timetable and will recommence in Autumn 2022.

Strategic Level Measures (shared with internal and external partners)

Performance Measure	2018-19 academic year		2019-20 academic year		2020-21 academic year			
	Value	Status	Value	Status		Status		

					Value		2020-21 National Figure	Long Trend - Annual
Proportion of school leavers in a positive sustained destination	93.2%		89.5%		92.1%		93.2%	

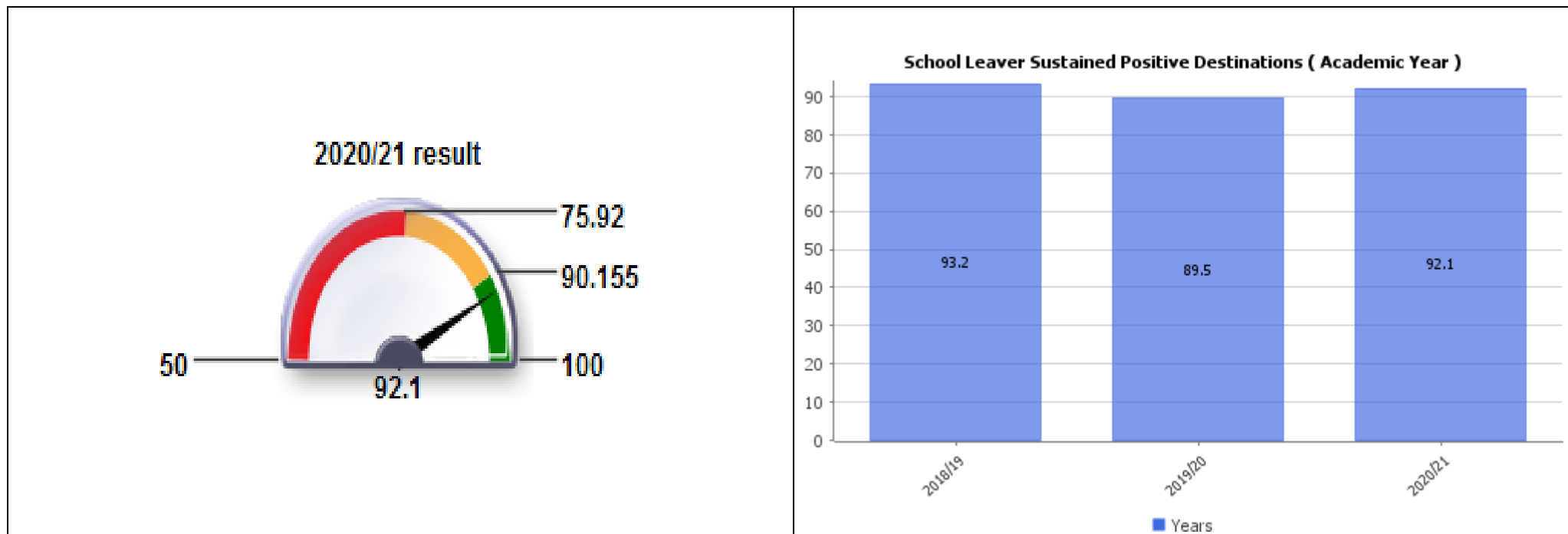
Metric Descriptor

The strategic level data above represents outcomes that are delivered in collaboration with a range of internal and external partners where Aberdeen City Council plays a direct or facilitation role. The figures above are drawn from sampling of the Statistics in Schools Bulletin (9 months post academic year sample) that link with Scottish Local Authority Economic Development (SLAED) Indicator reporting, where the City Growth Service is a significant contributing partner, or materially supports delivery vehicles.

Follow-up (Sustained) destinations relate to outcomes approximately nine months after the end of the school year and the figures for the 2020/21 school leaver cohort relate to statuses recorded as at April 2022

Data Source: [Summary Statistics Follow-up Leaver Destinations, No.4 2022 Edition](#)

The Percentage of school leavers attaining a Sustained Positive Destination



Why is this important?

Positive Sustained Destinations of school leavers are a critical measure of the extent to which the City Growth Service (and other Council teams) have enabled our young people to attain the skills necessary for a successful transition from statutory education provision.

Benchmark Information:

Benchmarking of this measure is provided through the publication of the Scottish Government’s bi-annual publication of Statistics in Schools Bulletins, with further localised data being provided through Skills Development Scotland datasets that support the Insight Benchmarking Tool.

Target:

Aberdeen City Council has an improvement-based target for this measure, as captured in Aberdeen City Council’s National Improvement Framework Plan, to increase those school leavers attaining a positive destination by 1 percentage point each year. This target was exceeded.

This is what the data is saying:

The data tells us that an increased proportion of young people have secured positive destinations upon leaving school and fewer are in a non-positive destination than has previously been recorded.

This is the trend:

Aberdeen City recorded an overall outcome of 92.1%, an advance of 2.6 percentage points on the prior year and, significantly, returned to the improving trend that was established in 2018/19, after a substantive loss and movement away from the National figure for the 2019/20 academic year. At this level, the City is statistically in line with the Scotland outcome, although failing marginally short of this absolute figure (93.2%)

Comparatively, this trend largely mirrors that of the national level figures, and with some variation, those of the City's nearest neighbours with the impact of the first waves of COVID-19 being equally encountered in 2019/20 across the suite of comparators.

The statistical effect of change within the size of leavers cohort (1,470 in 2020/21 from 1,451 in 2019/20) would be considered negligible and can be discounted as a potential influence, which was not possible in 2019/20 which experienced a reduction of greater than 13% on the previous year.

In the context of the national figure, and those or natural benchmark comparators, the City is on a par with the average for the four large urban comparator grouping (including Dundee, Edinburgh and Glasgow).which was 92.7% and is the most improved year-on-year of the four authorities. This is in contrast to the City having experienced the greatest percentage point fall in 2019/20 at -3,7%.

More extensive benchmarking by Urban Rural Classification, demonstrates a similar pattern, with the overall figure for this geographical cohort (9 local authorities) being 92.5% in a positive destination and the outcomes against each destination statistically being a close match for those of the City with the exception of Employment where the benchmark average is above that in Aberdeen (29.0% as opposed to the City's 22.3%)

Within the suite of destinations, Higher Education continues to be the most prevalent Destination at 41.5% with Further Education being the next highest at 24.6%, although both have fallen on 2019/20 levels, reverting to the levels last seen in 2016/17. The % in Employment rose most significantly from 12.6% in 2019/20 to 22.3%, faster than both the geographic cohort average (+ 8.8%) and Scotland figure (+7.7%) with an apparent migration from Higher and Further Education destinations accounting for the majority of this change, alongside a material reduction in the proportion of leavers in a negative destination from 8.3% to 5.9% in 2020/21.

This latter figure is the lowest percentage of leavers in the combined Unemployed destinations (both Seeking and Not Seeking Employment) over the lifetime of this measure, with those Unemployed Seeking Employment falling to 3.3 % (the second lowest figure to date) whilst the percentage of leavers in a Training Destination rose to 3.1%, similarly the second best outcome for this measure to date.

This is the impact:

Securing a positive destination is a key indicator of long-term outcomes for young people.

Last Updated:

Responsible officer:





Jim Johnstone/Mark Jones (Education)




August 2022

Service Commentary

The Employability team within City Growth, alongside other Council services, have strong working relationships with both schools and Skills Development Scotland and are working increasingly closely together to ensure data is accurate, up to date, and that positive destinations are being captured accurately. Pathway planning meetings for young people identified as being at risk of leaving school without a positive destination are continuing successfully and supporting young people take their next steps after leaving school, and is contributing to the overall improvement outlined above.

3. Staff**Corporate Measures – Cluster Level**

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – City Growth	0	0	1	0	0		
H&S Employee Non-Reportable by Cluster – City Growth	0	0	2	1	1		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – City Growth	1.0	1.1	1.1	1.2	1.3	1.3		5.3	
Establishment actual FTE – City Growth	167.7	167.15	176.99	188.29	185.33	180.98			

4. Finance & Controls





Corporate Measures – Service Level

Performance Measure	Quarter 1 2022/23		Quarter 2 2022/23		Quarter 3 2022/23		Quarter 4 2022/23	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – City Growth	31.3%							

STRATEGIC PLACE PLANNING CLUSTER



5. Customer





Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 20122/23	Quarterly Status	Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – Strategic Place Planning	5	3	2	3	0			
% of complaints resolved within timescale stage 1 and 2) – Strategic Place Planning	80%	66.6%	0%	33.3%	NA	NA	75%	NA
% of complaints with at least one point upheld (stage 1 and 2) – Strategic Place Planning	0%	33.3%	50%	66.7%	NA			NA
Total No. of lessons learnt identified (stage 1 and 2) – Strategic Place Planning	1	0	0	0	NA			NA

Service Measures – Service Standards

Performance Measure	Current Status	2022/23 Target

We will respond to building warrant applications within 20 working days		90%
We will respond to building warrant approvals within 10 working days		80%



Performance Measure	2021-22 Annual Average	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	Long Trend-Quarterly
	Value	Value	Value	Value	Value	Value		
Percentage of first reports, (for building warrants and amendments) issued within 20 working days	97.5%	98.0%	97.0%	97.0%	98.0%	96.0%		
Percentage of building warrant approvals responded to within 10 days	79.2%	83.0%	78.0%	75.0%	81.0%	77.0%		



Metric Descriptor

The Scottish Government applies targets for these measures as part of the Planning Authority's Verifier Status which are set at 90% for the issuing of first reports and 80% for response times, respectively. These measures align directly with the current 2022/23 Strategic Place Planning Service Standards around Building Standards processing. The complexity of individual applications and the rate of re-submissions are both significant influences in quarterly variances in both first report production and warrant approvals.

6. Processes







Service Measures – Service Standards

Performance Measure	Current Status
We will ensure that the local authority area is covered by an up to date Local Development Plan	
We will determine local (householder) applications within 2 months (by Year End averaged outcome) *	

We will determine local (non-householder) applications within 2 months (by Year End Averaged outcome) *	
We will determine Major Planning Applications within 25 weeks (by Year End Averaged outcome) *	

*excludes applications subject to a processing agreement and Status is defined by comparison with, and variation from, the local Service Standard targets which are percentage based.

Service Standards - National Quarterly Planning Performance Framework

Performance Measure	Quarter 3 2020/21	Quarter 4 2020/21	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Status **	Long Trend-Quarterly	National Quarter 4 2021/22 Figure
	Value	Value	Value	Value	Value	Value			
Percentage of All Local Development applications determined within 2 months ** (Applications)	82.2%	69.6% (87)	80.0% (136)	70.1% (115)	75.3% (166)	67.5% (120)			57.6%
Percentage of local (non-householder) applications determined within 2 months ** (Applications)	73.8%	69.5% (41)	66.7% (38)	57.5% (42)	63.3% (59)	57.6% (49)			46.5%
Percentage of local (householder) applications determined within 2 months ** (Applications)	86.0%	69.7% (46)	86.7% (98)	80.2% (73)	80.3% (117)	77.0% (61)			67.2%

** excludes applications subject to a processing agreement and Status is defined by comparison with National figures. Data around the percentage of Major Applications determined within 25 weeks are processed on an annual basis due to the limited numbers of applications within this category.

Service Commentary

The Service Standards outcomes at Quarter 4 were above the national figures against each of the three categories with rolling 12-month outcomes of 73.2%, 61.7% and 81.1% respectively. Year-to-date (2021-22) determination times for All Local and householder applications were within 5 percentage points of the local targets and followed the national trend pattern. The outcome for Local Non-Householder applications was above the national figure, although it fell below the 2022/23 Standard target of 70% for this measure.

As a result, the Status of this specific Standard, on a year-to-date basis, is currently Amber, although application determination times vary according to the level, and complexity, of applications received and are affected by seasonality so it's not presently possible to infer that this represents a consistent data trend in local outcomes or that the direction of travel differs from the National context,

However, the overall data pattern suggests that application determination times have lengthened slightly over the last two years for both local Standards following continuous improvement in the previous years. This is a direct consequence of the impact of the COVID pandemic coupled with decreased staff resource as a result of issues around being able to fill vacant positions. This latter impact is being addressed through increased efforts being made to recruit into vacant posts within the development management team.

Additional reflection on this data will be provided in the context of the reporting of the Strategic Planning Service Statutory Performance Indicator outcomes for 2021/22 at a future meeting of Committee.

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Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Long Trend-Quarterly
	Value	Value	Value	Value		
Number of Development Management Applications processed	402	356	325	320	330	↓
Number of Building Standards Applications processed	455	428	390	386	404	↑



Service Measures – National Quarterly Planning Performance Framework*

Performance Measure	Quarter 3 2020/21	Quarter 4 2020/21	Quarter1 2021/22	Quarter2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Status	Long Trend - Quarterly	National Quarter 4 2021/22 Figure
	Value	Value	Value	Value	Value	Value			
Percentage (and Number of decisions) of Application Processing Agreements agreed within timescale – Local Developments	96.0% (50)	100% (47)	100% (60)	97.1% (70)	97.1%(69)	98.3% (60)	✓	↑	72.2%
Percentage (and Number of decisions) of Application Processing Agreements agreed within timescale – Major Developments	75.0% (4)	100.0% (1)	100.0% (2)	100.0% (1)	100.0% (1)	100.0% (1)	✓	▬	62.1%

Performance Measure	Quarter 3 2020/21	Quarter 4 2020/21	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Status	Long Trend-Quarterly	National Quarter 4 2021/22 Figure
	Value	Value	Value	Value	Value	Value			
Average Determination Times of Major Development Planning Applications in Weeks (Applications)	28.3	47.4 (2)	48.3 (1)	26.1(2)	19.5 (2)	26.9 (2)			39.7
Average Determination Times of All Local Development Planning Applications in Weeks (Applications)	9.3	10.9 (125)	10.2 (170)	11.4 (164)	10.2 (166)	13.4 (110)			11.7
Average Determination Times of Non-Householder Local Development Planning Applications in Weeks (Applications)	12.7	12.1 (59)	14.8 (57)	14.4 (73)	12.6 (59)	17.5 (59)			14.3
Average Determination Times of Householder Local Development Planning Applications In Weeks (Applications)	7.8	9.8 (66)	7.9 (113)	9.0 (91)	9.1 (117)	9.4 (61)			9.5
Average Determination Times of Local Business and Industry Planning Applications in Weeks (No. of Applications)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.9

** excludes applications subject to a processing agreement and Status is defined by comparison with National figures.

Performance Measure	Quarter 3 2020/21	Quarter 4 2020/21	Quarter1 2021/22	Quarter2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Status	Long Trend - Quarterly	National Quarter 4 2021/22 Figure
	Value	Value	Value	Value	Value	Value			
Percentage (and Number of decisions) of Application Processing Agreements agreed within timescale – Local Developments	96.0% (50)	100% (47)	100% (60)	97.1% (70)	97.1%(69)	98.3% (60)			72.2%

Performance Measure	Quarter 3 2020/21	Quarter 4 2020/21	Quarter1 2021/22	Quarter2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Status	Long Trend - Quarterly	National Quarter 4 2021/22 Figure
	Value	Value	Value	Value	Value	Value			
Percentage (and Number of decisions) of Application Processing Agreements agreed within timescale – Major Developments	75.0% (4)	100.0% (1)	100.0% (2)	100.0% (1)	100.0% (1)	100.0% (1)			62.1%

Metric Descriptor

Increasingly, the proportion of Planning Applications which are subject to Processing Agreements (with or without legal agreements) and the extent to which these are delivered within timescale require to be considered when viewing Planning Performance in the round. On this basis, the information on Average Determination times represents only a proportion of Planning delivery outcomes. By means of example, in Quarter 4, more than 36% of all Local Development Planning Applications were subject to Processing Agreements, of which 98.3% were decided within agreed timescales. In the same period, of the total of 81 Non-Householder applications, 25 (31%) decisions were delivered through Processing Agreements, of which 96.0% were concluded within timescale.

Combining the two different measures (e.g. the number of applications determined within 2 months and % of Processing Agreements delivered within timescale) is presently not represented within the National statistics template due to issues around statistical accuracy where the balance and extent of use of Processing Agreements vary between Local Authorities.

At the same time, if a valid methodology for cross-authority comparison were to be determined, this would likely equate to 78.3% of all Local Development Applications being agreed or determined in timescale for Quarter 4. This figure sits between the two single measure outcomes and exceeds the National level of 59.6% for the Quarter. based on bespoke local calculations.

*Information on the formal status of the above standards and measures is updated twice yearly on publication of data relating to the national Planning Performance Framework. The latest of these publications, covering 2021/22 quarters 3 and 4, along with full year outcomes was published on 31st August 2022

7. Staff

Corporate Measures – Cluster Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – Strategic Place Planning	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – Strategic Place Planning	0	0	0	0	0		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – Strategic Place Planning	1.0	1.2	1.4	1.2	2.0	2.1		5.3	
Establishment actual FTE – Strategic Place Planning	90.85	90.12	91.16	93.47	91.59	92.43			

8. Finance & Controls

Corporate Measures – Service Level

Performance Indicator	Quarter 1 2022/23		Quarter 2 2022/23		Quarter 3 2022/23		Quarter 4 2022/23	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – Spend to full year budget profile – Strategic Place Planning	23.8%							

Service Measures

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status
	Value	Value	Value	Value	Value	Value	
YTD % of budgeted income received from Planning Application fees *	88.4%	93.1%	101.8%	3.8%	9.8%	15.9%	
YTD % of budgeted income received from Building Warrant fees	79%	82.8%	91.4%	8.7%	14.8%	24.4%	

*Excludes fees generated from Pre-Application processing activity. As at 30th June 2022, the cumulative value of this activity was £4,800.

<p>Service Commentary</p> <p>Planning Application Fees</p> <p>Seasonality and the scale of Planning Applications received are significant demand influences around the fees received from management processing. The circumstances around the easing of pandemic restrictions in March 2022, which might have been expected to produce the first quarter uplift experienced in previous years have been countered by the economic circumstances around raw materials costs and the availability of construction employee resource which continues to influence the development landscape and the progression of pipeline works that might have been anticipated from first contacts with the Management teams.</p>

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GOVERNANCE CLUSTER

9. Customer

Corporate Measures -Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – Governance	3	5	4	2	1			
% of complaints resolved within timescale stage 1 and 2) – Governance	100.0%	40.0%	75.0%	100.0%	100%		75%	

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
% of complaints with at least one point upheld (stage 1 and 2) – Governance	0.0%	20.0%	25.0%	50.0%	0%			
Total No. of lessons learnt identified (stage 1 and 2) – Governance	0	2	2	0	0			

10. Processes

Service Measures – Service Standards

Performance Measure	Current Status
Local Review Body – number of requests for review acknowledged within 14 days	
School Placing and Exclusion requests – hearings heard within 28 days of request	
% of Civic Licence Applications determined within 9 months of a valid application	
% of Hearings to determine a Premises Licence application or Variation application within 119 days of the last date for representations.	
% of Decision Letters for alcohol applications issued within 7 days of Board meeting	
Personal Licence issued within 28 days of date of grant	

11. Staff

Corporate Measures - Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – Governance	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – Governance	0	0	0	0	0		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – Governance	1.02	1.04	1.02	0.97	0.88	0.72		5.3	
Establishment actual FTE – Governance	58.49	56.6	59.71	59.11	57.44	56.99			

12. Finance & Controls

Corporate Measures – Service Level

Performance Indicator	Quarter 1 2022/23		Quarter 2 2022/23		Quarter 3 2022/23		Quarter 4 2022/23	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – Governance	25.2%							

FINANCE CLUSTER

13. Customer

Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – Finance	2	8	4	2	1			
% of complaints resolved within timescale stage 1 and 2) – Finance	50%	75%	25%	50%	100%		75%	
% of complaints with at least one point upheld (stage 1 and 2) – Finance	50%	25%	25%	0%	100%			
Total No. of lessons learnt identified (stage 1 and 2) – Finance	1	1	0	0	0			

14. Processes

Service Measures – Service Standards

Performance Measures	Current Current Status
We will deliver all relevant statutory financial requirements for the Council met on time – statutory accounts, quarterly monitoring, budget preparation data and reports, tax, and statutory returns	
We will provide budget holder meetings provided in accordance with risk schedule	
We will maintain an inbox query service during core hours (10am – 4pm) every working day.	
We will ensure that data systems with financial transactions are maintained, developed and up to date to comply with proper financial administration	
We will ensure that business advice is provided for all Committee decisions with financial implications to comply with proper financial administration	

15. Staff

Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – Finance	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – Finance	0	0	0	0	0		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – Finance	3.2	3.1	2.9	2.6	2.4	2.1		5.3	
Establishment actual FTE – Finance	90.59	92.21	92.69	92.08	96.15	94.76			

16. Finance & Controls

Corporate Measures – Service Level

Performance Indicator	Quarter 1 2022/23		Quarter 2 2022/23		Quarter 3 2022/23		Quarter 4 2022/23	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – Finance	24.6%							

PEOPLE AND ORGANISATION CLUSTER

Corporate Measures – Service Level

17. Customer

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – People and Organisation	0	0	0	0	0			
% of complaints resolved within timescale stage 1 and 2) – People and Organisation	N/A	N/A	N/A	N/A	N/A		75%	N/A
% of complaints with at least one point upheld (stage 1 and 2) – People and Organisation	N/A	N/A	N/A	N/A	N/A			N/A
Total No. of lessons learnt identified (stage 1 and 2) – People and Organisation	N/A	N/A	N/A	N/A	N/A			





18. Processes

Service Measures – Service Standards

Performance Measure	Current Status	2022/23 Target
We will complete evaluation panels upon receipt of all completed and verified documentation within 10 working days for each individual job, in relation to Job Evaluation.		80%
We will allocate an Investigation Officer, when required, within 3 working days		90%
We will allocate a People and Organisation advisor to formal casework within 3 working days		80%
We will make initial contact with redeployees within 3 working days of redeployment confirmation		90%

19. Staff


Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – People and Organisation	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – People and Organisation	0	0	0	0	0		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – People and Organisation	0.27	3.01	2.85	2.64	2.35	2.05		5.3	
Establishment actual FTE – People and Organisation	31.47	31.44	31.85	31.81	31.67	29.91			

20. Finance & Controls

Corporate Measures – Service Level

Performance Indicator	Quarter 1 2022/23		Quarter 2 2022/23		Quarter 3 2022/23		Quarter 4 2022/23	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – People and Organisation	21.3%							

CAPITAL CLUSTER

21. Customer

Corporate Measures – Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – Capital	2	3	2	5	1			
% of complaints resolved within timescale stage 1 and 2) – Capital	50%	66.7%	100%	40%	100%		75%	
% of complaints with at least one point upheld (stage 1 and 2) – Capital	0%	33.3%	50%	80%	100%			
Total No. of lessons learnt identified (stage 1 and 2) – Capital	0	0	1	1	0			

22. Processes

N/A

23. Staff

Corporate Measures – Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 3 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – Capital	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – Capital	0	0	0	0	0		

Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – Capital	1.54	1.73	1.73	1.63	1.02	1.20		5.3	
Establishment actual FTE – Capital	64.35	65.46	66.21	66.21	65.13	54.51			

24. Finance & Controls

Corporate Measures - Service Level






Performance Indicator	Quarter 1 2021/22		Quarter 2 2021/22		Quarter 3 2021/22		Quarter 4 2021/22	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – Capital	16.8%							

CORPORATE LANDLORD CLUSTER

25. Customer

Corporate Measures - Service Level

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
Total No. complaints received (stage 1 and 2) – Corporate Landlord	8	12	20	12	5			

Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Quarterly Status	2022/23 Target	Long Trend - Quarterly
	Value	Value	Value	Value	Value			
% of complaints resolved within timescale stage 1 and 2) – Corporate Landlord	37.5%	41.7%	70.0%	50.0%	60.0%		75%	
% of complaints with at least one point upheld (stage 1 and 2) – Corporate Landlord	50.0%	25.0%	35.0%	16.7%	20.0%			
Total No. of lessons learnt identified (stage 1 and 2) – Corporate Landlord	1	0	0	1	0			



Service Commentary

Whilst the outcome for Quarter 1 fell below the corporate target for Complaints resolved within timescale, in common with the majority of Services reflected in this report, there is an appreciable improvement trend in the overview of data against Complaints, with the number of complaints being reduced, the resolution timescales being speeded up and the proportion of complaints being upheld on a downwards trend.

This is resulting in improved rolling 12 month outcomes which the Service hopes can be maintained through an increased focus on, and understanding of, data variations across the year to ensure that the efforts of the Corporate Landlord teams in handling Complaints are applied to the greatest effect, and take better account of the circumstances that generate complaint levels.

26. Processes





Service Level Measures – Service Standards

Service Standards	Current Status
Cyclical maintenance works (statutory) on public buildings are completed in accordance with agreed programmes	
Cyclical maintenance works (statutory) on council houses are completed in accordance with agreed programmes	



Asset Valuations are provided within reported timescale	
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27. Staff

Corporate Measures – Service Level


Performance Measure	Quarter 1 2021/22	Quarter 2 2021/22	Quarter 3 2021/22	Quarter 4 2021/22	Quarter 1 2022/23	Status	Long Trend - Quarterly
	Value	Value	Value	Value	Value		
H&S Employee Reportable by Cluster – Corporate Landlord	0	0	0	0	0		
H&S Employee Non-Reportable by Cluster – Corporate Landlord	0	0	0	0	0		

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Performance Measure	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Status	Corporate Figure June 2022	Long Trend - Monthly
	Value	Value	Value	Value	Value	Value			
Average number of total working days lost per FTE (12 month rolling figure) – Corporate Landlord	6.7	6.5	6	5.4	4.9	4.3		5.3	
Establishment actual FTE – Corporate Landlord	50.96	50.96	50.96	53.16	54.41	53.83			

28. Finance & Controls












Corporate Measure - Service Level

Performance Indicator	Quarter 1 2021/22		Quarter 2 2021/22		Quarter 3 2021/22		Quarter 4 2021/22	
	Value	Status	Value	Status	Value	Status	Value	Status
Staff Expenditure – % spend to full year budget profile – Corporate Landlord	21.2%							

Appendix Notes

^Where no target is applied against Service Standards, the Business As Usual objective is that these will be delivered consistently, which would equate to a metrics target of 100%

*Staff Costs: Staffing costs referred to throughout this Appendix exclude adjustments for the corporate vacancy factor.

PI Status		Long Term Trends		Short Term Trends	
	Alert – more than 20% out with target/national figure		Improving/Increasing		Improving/Increasing
	Warning – more than 5% out with target/national figure		No or Limited Change		No or Limited Change
	OK – within limits of target/national figure		Getting Worse/Decreasing		Getting Worse/Decreasing
	Unknown				
	Data Only				

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ABERDEEN CITY COUNCIL

COMMITTEE	City Growth and Resources
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	A92 (Bridge of Don to Bridge of Dee) Multi-Modal Transport Corridor Study
REPORT NUMBER	COM/22/200
DIRECTOR	Gale Beattie
CHIEF OFFICER	David Dunne
REPORT AUTHOR	Tony Maric
TERMS OF REFERENCE	2.1.1 & 2.1.2

1. PURPOSE OF REPORT

- 1.1 This report seeks to inform Members of the outcomes of the A92 (Bridge of Don to Bridge of Dee) Multi-Modal Transport Corridor Study (part of the Bus Partnership Fund Programme) Initial STAG (Scottish Transport Appraisal Guidance) based Options Appraisal report and seeks approval of the recommendations outlined below.

2. RECOMMENDATION(S)

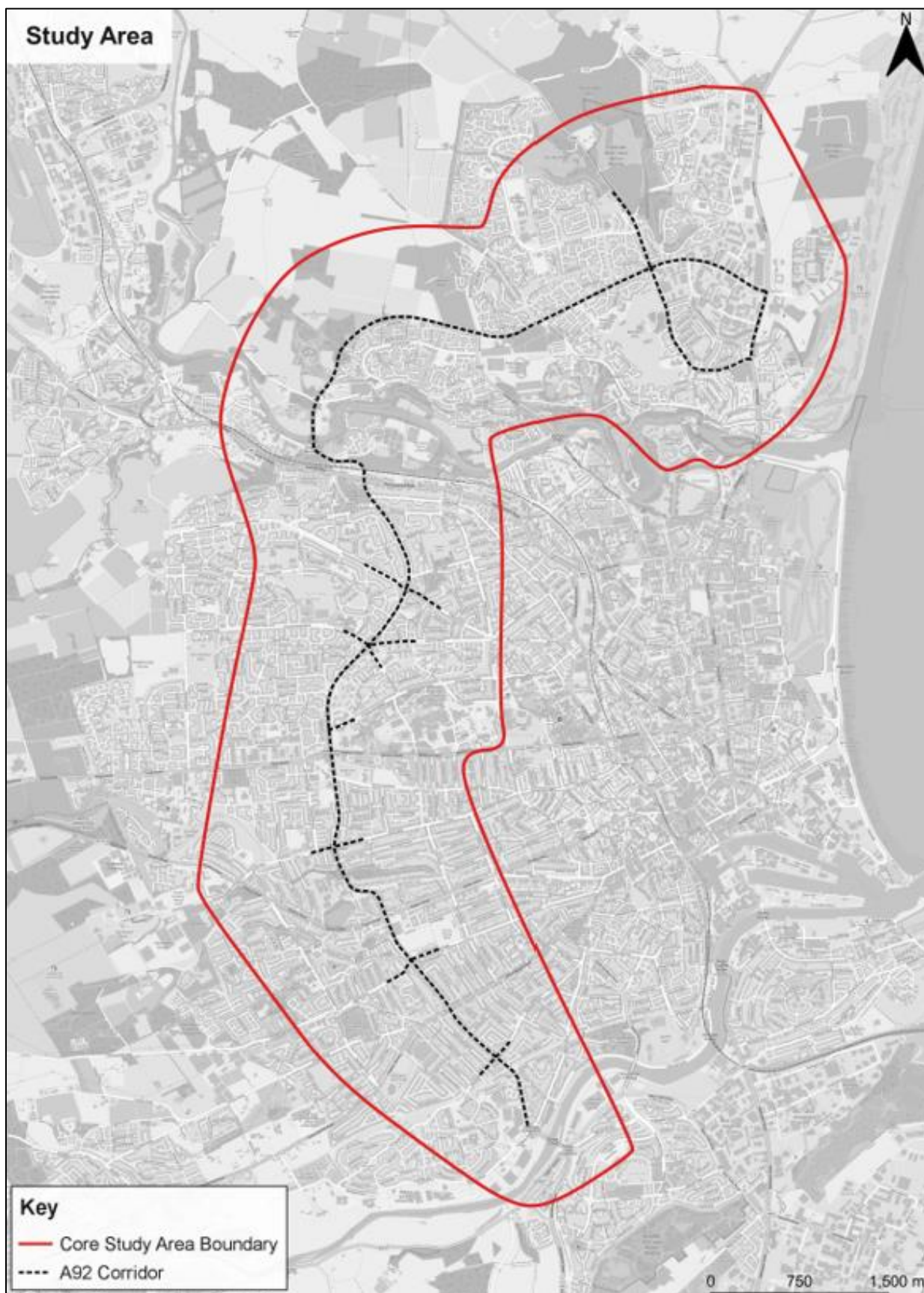
That the Committee:-

- 2.1 Agree that work to further develop the options outlined in paragraph 3.7 below be progressed to Detailed Appraisal and Outline Business Case (OBC);
- 2.2 Instruct the Chief Officer – Strategic Place Planning to develop the Detailed Appraisal and OBC in accordance with the Transport Scotland governance decisions on the gateways for the Bus Partnership Fund;
- 2.3 Note that the Bus Partnership Fund programme has been enabled through Scottish Government funding and that officers will continue to work with partners to deliver the projects in accordance with the grant conditions; and
- 2.4 Instruct the Chief Officer – Strategic Place Planning to report back to the Net Zero, Environment and Transport Committee with the Detailed Appraisal and OBC and next steps by March 2023.

3. CURRENT SITUATION

- 3.1 This report provides the Committee with the outcomes of a STAG-based Initial Appraisal of the A92 corridor from Bridge of Dee to Bridge of Don. It should be noted that this is part of a 2-part study of the entire A92 corridor between Stonehaven and Aberdeen, and that Nestrans will be conducting a study of the route between Stonehaven and Aberdeen. The area covered in this report

focuses on the northern section of the corridor, and a map of the study area is shown below:



- 3.2 The study is part of the wider Bus Partnership Fund (BPF) programme funded by Transport Scotland which includes examining the feasibility of an Aberdeen Rapid Transit (ART) system. As such the study will also be subject to a Gateway Review by Transport Scotland before approval can be granted to progress to the Detailed Appraisal stage
- 3.3 The Council's Ashgrove Connects corridor study is also ongoing and interacts with the A92 Multi-Modal Corridor study at the North Anderson Drive/Ashgrove Road West Junction. This project has similar complementary aims and objectives to the A92 Multi Modal Corridor study. The A92 Multi-Modal Corridor study has progressed with due cognisance of the Ashgrove Connects study and will continue to do so as it progresses.
- 3.4 A STAG-based, multi-modal Initial Appraisal was carried out for the A92 Multi-Modal Corridor, with a particular focus on active travel and public transport, looking at Anderson Drive, the Parkway and the B997 Scotstown Road/North Donside Road in particular.
- 3.5 An initial extensive review of the problems and opportunities along the corridor was undertaken, and this led to the development of a Problems, Issues, Constraints and Opportunities (PICO) Technical Note in February 2022 by the consultants Jacobs, which is contained within the initial appraisal and Case for Change Report. An executive summary and the full report and appendices are attached as Appendix 1 (link attached) and Appendix 2 (link attached).
- 3.6 Transport Planning Objectives (TPOs) were subsequently drawn up, together with a long list of options. An initial round of consultation with stakeholders and the public was also carried out between the end of May 2022 and the beginning of July 2022. The TPOs for the study are listed below:
- Reduce the severance effects caused by the A92 for journeys across the corridor, particularly for journeys by bus;
 - Enable the A92 corridor to be a more effective connector between communities/key trip attractors for users of active modes;
 - Reduce the environmental impact of traffic on the A92 corridor;
 - Reduce real and perceived road safety risks for users of all modes considering travelling along or across the A92 corridor;
 - Support the roads hierarchy by encouraging use of the most appropriate routes for local and through traffic; and
 - Improve journey times and journey time reliability for emergency vehicles and for buses, especially so that bus journey times can be more competitive than car.
- 3.7 Informed by the public consultation, an initial option sifting appraisal was then carried out and a list of options was drawn up, which were grouped into a number of different packages, namely Walking, Cycling, Public Transport, and other options such as enforcement, bus priority and speed restriction measures.

3.8 This report recommends that the options listed below are taken forward to Detailed Appraisal, further design work and OBC development, with a report back to the Net Zero, Environment and Transport Committee in the autumn of 2023:

- Implement new / improved active travel crossings at junctions and key desire lines along the A92 corridor;
- Implement two-way segregated cycle lanes throughout the A92 corridor;
- Implement two-way segregated cycle lanes (or shared-use paths) on those parts of the A92 corridor where demand is likely to be greatest;
- Implement cycle routes on parallel routes to the A92 corridor, away from main roads where possible;
- Improve the quality of surfacing of foot- and cycle-paths throughout the corridor;
- Improve the quality and extents of street/path lighting along the corridor;
- Ensure cyclists are given priority over vehicular traffic when on segregated routes that cross side roads;
- Review the need for existing pedestrian guardrail on the corridor and consider removal if safe to do so;
- Review and improve active travel signage throughout the corridor;
- Implement early release signals for cyclists at all signalised junctions (new and existing) along the A92 corridor;
- Consider the introduction of orbital bus services, which avoid interchange in the city centre;
- Implement robust bus priority measures on constrained sections of A92;
- Implement robust bus priority measures on key constrained radial approaches to the A92 corridor;
- Review of accessibility to bus stops along the corridor;
- Replace some or all roundabouts on corridor with signalised junctions to enable improved bus priority and safer crossings for pedestrians and cyclists; and
- Introduce a 30mph speed limit along the length of the A92 to improve road safety.

3.8 It should be noted that regular consultation was carried out in conjunction with the two rounds of public consultation with the wider project group and main stakeholders, including bus operators and Community Councils. There will also be further consultation with stakeholders and the general public as the project progresses through the detailed appraisal process, and it is intended that this will include school visits.

3.9 An Executive Summary of the initial appraisal and Case for Change is included at Appendix 1 (link attached) and the full report is included at Appendix 2 (link attached).

4. FINANCIAL IMPLICATIONS

4.1 There are no direct financial implications arising from the recommendations of this report. The Bus Partnership Fund provides 100% of funding for staff time and consultant fees to complete the STAG Appraisal work. Transport Scotland

funding to complete the OBC will be dependent on a satisfactory gateway review with the BPF team. The intention is to bid to the Bus Partnership Fund for infrastructure works recommended in the Outline Business Case, however this will be detailed in a future report to the Net Zero, Environment and Transport Committee.

5. LEGAL IMPLICATIONS

5.1 As this transport corridor is a part of the BPF programme, it is subject to condition 9 (Default & Recovery etc. of Grant) of the grant award, in which section 9.1 says: *The Scottish Ministers may re-assess, vary, make a deduction from, withhold, or require immediate repayment of the Grant or any part of it in the event that:*

9.1.1 The Grantee commits a Default;

9.1.3 The Grantee fails to carry out the project.

5.2 There are other project level conditions associated with the BPF grant that must be complied with in order to claim eligible spend for the study.

5.3 A number of actions might require Traffic Regulation Orders which may be subject to statutory objection; land acquisition may also be necessary for some infrastructure measures following the outcome of the OBC. However, this will be detailed in a future report to the Net Zero, Environment and Transport Committee following conclusion of the OBC.

6. ENVIRONMENTAL IMPLICATIONS

6.1 There are no direct environmental implications arising from the recommendations of this report. When Detailed Appraisal is completed and a preferred options of intervention are identified, in the subsequent stages towards progressing designs, an Environmental Impact Assessment will have to be undertaken to inform any environmental implications of the project. It should be noted however that Environmental considerations are part of the STAG criteria which has influenced the recommendations of this report in terms of the options to be taken forward for more detailed examination.

7. RISK

7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
Strategic Risk	Delivery of public transport measures supports a number of	Continue to work with partners to deliver the	L	Yes

	the Council's strategic priorities, particularly in terms of a sustainable economy, a sustainable transport system, the continued health and prosperity of our citizens, reductions in carbon emissions and a high-quality environment.	projects within the BPF grant award and continue to work in partnership to maximise 'match in kind' to add value to the grant in terms of meeting the strategic objectives of partners and Transport Scotland.		
Compliance	See section 5 above.	Compliance with statutory processes, grant conditions and Scheme of Governance with regular progress and spend reporting to Transport Scotland, Aberdeen City Council, and the Transportation Programme Boards.	L	Yes
Financial	If non-compliant to the grant conditions, there is risk around spend being ineligible or rejected, and therefore having to be absorbed by this Council and partners.	Regular monthly reporting to Transport Scotland will help to reduce this risk.	L	Yes
Reputational	Failure to deliver in accordance with the BPF grant conditions to help meet the Council's (and partners) strategic transport objectives undermines the Council's commitments to improving the	Obtain Committee approval to progress works to a detailed appraisal. Continue working with partners to deliver the projects within the BPF grant award	L	Yes

	transport network, achieving the Place outcomes set out in the LOIP (Local Outcome Improvement Plan), and supporting Scotland's Climate Change Plan commitment to reduce car kilometres by 20% by 2030.	and continue to work in partnership to maximise 'match in kind' to add value to the grant in terms of meeting the strategic objectives of partners and Transport Scotland.		
Environment / Climate	ACC's net zero vision and strategic infrastructure plan – energy transition: transport emissions are a significant contributor to climate emissions so increasing sustainable travel will be necessary to achieving this sector's required reduction. If active travel and public transport measures are not delivered, ACC would not provide conditions which could encourage more sustainable travel movements which are likely to bring environmental improvements to the city and region.	Continue working with partners to deliver the projects within the BPF grant award and continue to work in partnership to maximise 'match in kind' to add value to the grant in terms of meeting the strategic objectives of partners and Transport Scotland.	L	Yes

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
Impact of Report	
Aberdeen City Council Policy Statement <ul style="list-style-type: none"> • PLACE Policy Statement 3 -Refresh 	The proposals within this report support the delivery of PLACE Policy Statement 3. Facilitating an increase in public transport patronage and active travel uptake through utilisation of the Bus

<p><i>the local transport strategy, ensuring it includes the results of a city centre parking review; promotes cycle and pedestrian routes; and considers support for public transport.</i></p>	<p>Partnership Fund grant to determine the best intervention towards delivering enabling infrastructure will be highly beneficial to supporting the associated Policy Statement identified.</p>
<p><u>Aberdeen City Local Outcome Improvement Plan</u></p>	
<p>Prosperous Economy Stretch Outcomes</p> <p>1. <i>No one will suffer due to poverty by 2026.</i></p> <p>2. <i>400 unemployed Aberdeen City residents supported into Fair Work by 2026.</i></p> <p>3. <i>500 Aberdeen City residents upskilled/ reskilled to enable them to move into, within and between economic opportunities as they arise by 2026.</i></p>	<p>The proposals within this report support the delivery of LOIP Stretch Outcomes 1 to 3 as a good transport network and infrastructure provision means anyone regardless of their social status/economic means can choose a sustainable mode of travel for commuting.</p> <p>A reliable transport network supports economic growth and movement both locally and otherwise and affords the public the opportunity to choose a sustainable mode of travel to and from their workplaces. The proposals within this report aim to provide journey time reliability for buses.</p>
<p>Prosperous Place Stretch Outcomes</p> <p>13. <i>Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate.</i></p> <p>14. <i>Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.</i></p>	<p>The proposals within this report support the delivery of Place Stretch Outcomes 13 and 14 in the LOIP.</p> <p>A robust and reliable public transport network where well-integrated with active travel infrastructures will encourage public transport uptake and patronage and subsequently contribute towards reducing transport carbon emissions given the move towards alternative forms of fuel by bus operators in the region and the Council's fleet.</p>
<p>Regional and City Strategies</p> <ul style="list-style-type: none"> • <i>Regional Transport Strategy (2040)</i> • <i>Local Development Plan,</i> 	<p>The proposals within this report support Regional and Local Transport Strategies and related strategies, which all aim to deliver a sustainable transport system as well as enhance the connectivity of the existing transport network.</p>

<ul style="list-style-type: none"> • <i>Local Transport Strategy including the Active Travel Action plan</i> • <i>Strategic Development Plan</i> • <i>Regional Economic Strategy</i> • <i>Net Zero Vision for Aberdeen</i> 	
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9. IMPACT ASSESSMENTS

Assessment	Outcome
Integrated Impact Assessment	Full impact assessment not required. The projects funded by this grant are being undertaken in accordance with the Scottish Transport Appraisal Guidance which appraises impacts across a range of categories (Economy, Environment, Accessibility and Social Inclusion, Safety and Integration). Further detailed assessments will be undertaken through the development and design process, as appropriate.
Data Protection Impact Assessment	Not required.
Other	None.

10. BACKGROUND PAPERS

None

11. APPENDICES

Appendix 1: A92 Bridge of Don to Bridge of Dee Multimodal Corridor Study: Case for Change and Preliminary Appraisal Report - Executive Summary

<https://aberdeencitycouncilo365.sharepoint.com/:w:/s/TransportStrategyandProgrammes/EU7p7WrFnXZLjrhyCqrO3UMBIRx4n43ybGnNx3JLhoz0pQ?e=hEO56C>

Appendix 2: A92 Bridge of Don to Bridge of Dee Multimodal Corridor Study: Case for Change and Preliminary Appraisal Report - Full Report.

https://aberdeencitycouncilo365.sharepoint.com/:w:/s/TransportStrategyandProgrammes/Eb99Q1QQRKhMv18Y__vbrqEBhVvfXZUVcIDktNtlBINazw?e=1nKIGs

12. REPORT AUTHOR CONTACT DETAILS

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A92 Bridge of Don to Bridge of Dee Multi-Modal Corridor Study: Case for Change and Preliminary Appraisal Report

Executive Summary

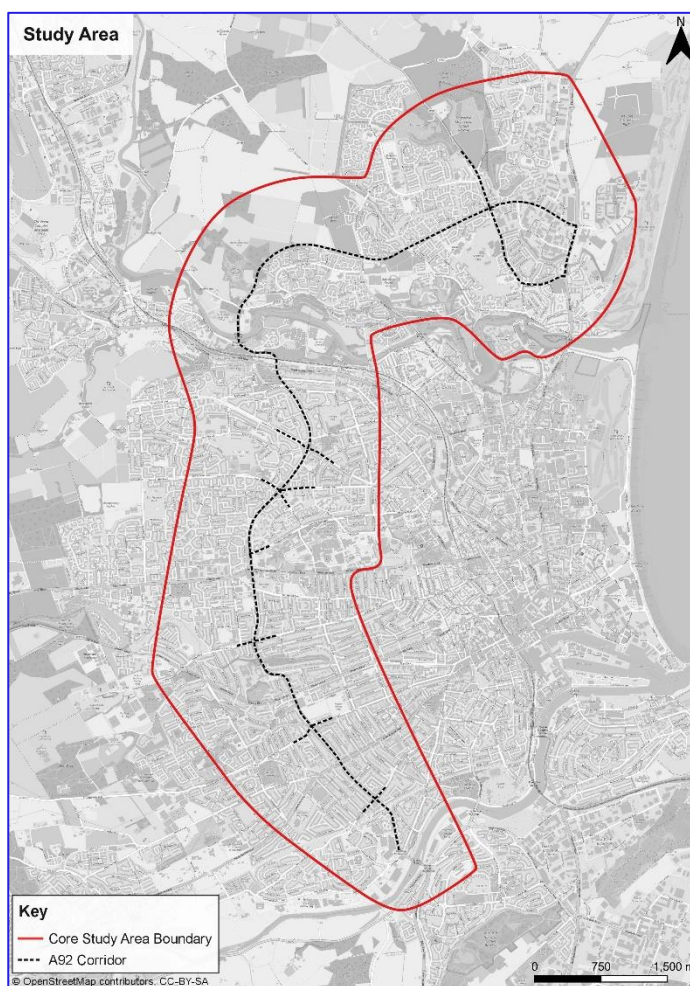
Introduction and Context

The consultancy Jacobs was appointed by Aberdeen City Council to undertake a study of the A92 corridor. Their scope was to consider opportunities for improvements on that part of the A92 between Bridge of Don and Bridge of Dee (i.e. The Parkway and Anderson Drive), as well as the B997 Scotstown Road/North Donside Road.

The study is proceeding in tandem with others which are considering some of the main corridors radiating from Aberdeen (these being the A92/A90 north, A96, A944/A9119, A93 and A92 south routes). Its work is considering the A92 and junctions of other roads that cross it, with the exception of the junctions with routes that are being considered as part of other radial corridor studies (as those other studies are considering those locations).

The methodology for their work follows Transport Scotland's Scottish Transport Appraisal Guidance (STAG), which is a prerequisite for schemes which may seek Transport Scotland funding. Their commission is funded by Transport Scotland's Bus Partnership Fund and this may form a funding mechanism for the study's recommendations.

To date, the consultants have completed the Case for Change and Preliminary Appraisal elements of the work. They will be going on to undertake Detailed Appraisal of preferred options, and develop an Outline Business Case.



Problems, Opportunities and Objectives

An extensive review of problems and opportunities on the corridor underpins the work. This was informed by consultation both with key stakeholders (including bus companies and the emergency services) and with members of the public through an on-line survey.

The problems and opportunities identified related to conditions for people walking, wheeling and cycling, for operations of buses and emergency vehicles, and those related to general traffic. In summary, those issues are:

Strengths	Weaknesses
<p>A92 is an important transport corridor</p> <p>Good radial public transport provision</p> <p>Some good existing active travel infrastructure</p> <p>Good accessibility / connectivity in places to nearby active travel provision</p> <p>Lower traffic volumes</p> <p>Lack of car parking on main corridor route</p>	<p>Limited and constrained infrastructure for sustainable travel</p> <p>Delay to bus services and emergency vehicles</p> <p>Limited public transport provision along the corridor</p> <p>Real and perceived road safety concerns</p> <p>Poor accessibility / connectivity for users of active modes</p> <p>Lack of controlled crossings on some pedestrian desire lines</p> <p>Air pollution</p> <p>High traffic volumes, despite AWPR</p>
Opportunities	Constraints
<p>Reprioritise radial and orbital movements and between modes</p> <p>Promoting active and sustainable transport</p> <p>Reduce severance across the A92 corridor, making Aberdeen more accessible and vibrant</p> <p>Potential to improve sustainable links to key trip attractors</p> <p>Improve sense of place in local communities close to the corridor</p> <p>Haudagain improvements</p> <p>Ample space for re-purposing / re-allocation of roadspace on some sections of A92 with wide adopted road boundary</p> <p>Interaction with other corridor studies to ensure joined up package of interventions</p> <p>Bold approach to active travel and public transport interventions given sustainability / climate change policy direction</p> <p>Future developments</p> <p>Reduce traffic speeds</p>	<p>Challenging topography</p> <p>High traffic volumes</p> <p>Constrained adopted road boundary</p> <p>Potential impacts of LEZ/CCMP</p> <p>Future developments</p> <p>Roundabouts useful for blue light emergency response</p>

From these issues, six Transport Planning Objectives have been identified, which have been used to define which solutions are most relevant:

1. Reduce the severance effects caused by the A92 for journeys across the corridor, particularly for journeys by bus;
2. Enable the A92 corridor to be a more effective connector between communities/key trip attractors for users of active modes;
3. Reduce the environmental impact of traffic on the A92 corridor;
4. Reduce real and perceived road safety risks for users of all modes considering travelling along or across the A92 corridor;
5. Support the roads hierarchy by encouraging use of the most appropriate routes for local and through traffic;
6. Improve journey times and journey time reliability for emergency vehicles and for buses, especially so that bus journey times can be more competitive than car.

Option Identification, Sifting and Preliminary Appraisal

STAG then requires a process of identification of a long-list of potential options, which is then sifted (to remove any that are clearly undeliverable or conflict with objectives). A total of 42 options was identified for the A92 corridor (of which, eleven related to active travel, twelve to public transport, five to roads, six to policy changes, five to technology and three to multi-modal measures).

Remaining options were then subject to a preliminary appraisal against objectives, the five STAG criteria¹, and for deliverability and public acceptability. A second public and stakeholder engagement exercise informed the preliminary appraisal.

Following this process, 16 options remain and are listed below.

1. Implement new / improved active travel crossings at junctions and key desire lines along the A92 corridor
2. Implement two-way segregated cycle lanes (or shared-use paths) on those parts of the A92 corridor where demand is likely to be greatest
3. Implement two-way segregated cycle lanes throughout the entire A92 corridor
4. Implement cycle routes on parallel routes to the A92 corridor, away from main roads where possible
5. Improve the quality of surfacing of foot- and cycle-paths throughout the corridor
6. Improve the quality and extents of street/path lighting along the corridor
7. Ensure cyclists are given priority over vehicular traffic when on segregated routes that cross side roads
8. Review the need for existing pedestrian guardrail on the corridor and consider removal if safe to do so
9. Review and improve active travel signage throughout the corridor
10. Implement early release signals for cyclists at all signalised junctions (new and existing) along the A92 corridor
11. Consider the introduction of orbital bus services, which avoid interchange in the city centre
12. Implement robust bus priority measures on constrained sections of A92
13. Implement robust bus priority measures on key constrained radial approaches to the A92 corridor
14. Replace some or all roundabouts on corridor with signalised junctions to enable improved bus priority and safer crossings for pedestrians and cyclists
15. Introduce a 30mph speed limit along the length of the A92 to improve road safety
16. Amend timings at existing signalised junctions at Mid-Stocket Rd and Ashgrove Rd West to increase priority to radial movements

¹ Environment; Climate Change; Health, Safety & Wellbeing; Economy; Equality & Accessibility

Next Steps

The 16 options are being considered in a more detailed appraisal exercise, again following the requirements of STAG, which will report later in 2022. The outcomes of that appraisal will determine which come forward as potential recommendations for change.

ABERDEEN CITY COUNCIL

COMMITTEE	City Growth and Resources
DATE	21 September 2022
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	A947 Multi-Modal Corridor Study
REPORT NUMBER	COM/22/199
DIRECTOR	Gale Beattie
CHIEF OFFICER	David Dunne
REPORT AUTHOR	Tony Maric
TERMS OF REFERENCE	2.1.1 & 2.1.2

1. PURPOSE OF REPORT

- 1.1 This report seeks to inform Members of the outcomes of the A947 Multi-Modal Transport Corridor Study initial Scottish Transport Appraisal Guidance (STAG) based options appraisal report and seeks approval of the recommendations outlined below.

2. RECOMMENDATION(S)

That the Committee:-

- 2.1 Agree that work to further develop the options outlined in paragraph 3.8 below be progressed to Detailed Appraisal and Outline Business Case (OBC);
- 2.2 Instruct the Chief Officer – Strategic Place Planning to proceed to Detailed Appraisal and OBC, subject to appropriate funding being sourced;
- 2.3 Instruct the Chief Officer – Strategic Place Planning to implement the ‘quick win’ options identified in paragraph 3.9 below, subject to appropriate funding being sourced; and
- 2.4 Subject to recommendation 2.2, instruct the Chief Officer – Strategic Place Planning to report the Detailed Appraisal and Outline Business Case and next steps to the Net Zero, Environment and Transport Committee when complete.

3. CURRENT SITUATION

- 3.1 This report provides the Committee with the outcomes of a STAG-based initial appraisal of the A947 corridor from Bucksburn Roundabout to Parkhill Junction (junction with the Aberdeen Western Peripheral Route (AWPR)). A map of the study area is shown below:



- 3.2 The STAG-based appraisal was funded by Nestrans and was a multi-modal study, with a particular focus on active travel and public transport, looking at improvements both within Dyce to major trip attractors such as the Rail Station, Aberdeen International Airport, Craibstone Park and Ride and TECA, but also to and from the City Centre and further into Aberdeenshire.
- 3.3 Site visits were carried out in late November and early December 2021, and this led to the publication of a Problems, Issues, Constraints and Opportunities (PICO) Technical Note in February 2022 by the consultants AECOM. The Technical Note can be found within Appendix 3 attached (link attached).
- 3.4 Transport Planning Objectives (TPOs) were subsequently developed, together with a long list of initial options. An initial round of consultation with stakeholders and the public was carried out between mid-November 2021 and early January 2022. The TPOs developed for the study are:

- Increase the modal share of walking on the A947 corridor for all journey types;
 - Increase the modal share of public transport on the A947 corridor for all journey types;
 - Increase the modal share of cycling on the A947 corridor for all journey types;
 - Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements;
 - Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes; and
 - Ensure the main routes through the study area function in accordance with their role in the revised Roads Hierarchy.
- 3.5 Informed by the public consultation, an initial option development and sifting process was carried out and a shortlist of options agreed, which were grouped into a number of different packages, namely Active Travel (AT), Public Transport (PT) and Other (O) options such as enforcement and speed restriction measures, for Initial Appraisal.
- 3.6 A second round of stakeholder and public consultation on the options took place between the end of July and mid-August 2022. In order that the views of children and young people could be sought, a workshop session with one Primary 7 class at Stoneywood School was carried out on 20th May 2022. Pupils were given a presentation on the role of a Transport Planner and then were asked to think about what they like and don't like with the transport network in their local area using large maps and sticky notes. Approximately 25 pupils took part in the workshop. The results were fed into the consultation exercise.
- 3.7 It should be noted that regular consultation was carried out in conjunction with the two rounds of public consultation with the wider project group and main stakeholders, including bus operators and Community Councils and site visits were organised with local stakeholders and elected Members. There will also be further consultation with stakeholders and the general public as the project progresses through the detailed appraisal process.
- 3.8 Following Initial Appraisal, this report recommends that the following options be taken forward for Detailed Appraisal and OBC:
- AT3: Review the layout of Victoria Street / Pitmedden Road for pedestrians;
 - AT4: Implement measures to give active travel users priority over Burnside Drive when using the shared use path on Riverside Drive;
 - AT8: Reconfigure the Auchmill Road/Oldmeldrum Road junction to improve connections for pedestrians and cyclists;
 - AT13: Provide a formal pedestrian crossing point to the north of the A947/Riverview Drive Roundabout to facilitate movements to the Formartine and Buchan Way;
 - AT14: Provide a formal pedestrian crossing point to the east of the A947/Riverview Drive Roundabout;

- AT16: Implement formal pedestrian crossing facilities on the arms of the Riverview Drive/Stoneywood Road Roundabout;
- AT17: Implement signalised crossing facility on Victoria Street adjacent to Tesco;
- AT19: Implement pedestrian crossing facilities at the Oldmeldrum Road/Mugiemoss Road Junction;
- AT20: Conduct a footway review throughout the study area, identifying gaps in provision and considering the width and surfacing of existing footways;
- AT23: Implement a bike hire scheme within Dyce;
- AT24: Improve active travel connectivity between the A947 study area and Aberdeen Airport/Heliport;
- AT26: Improve active travel connectivity between the A947 study area and TECA;
- AT27: Improve active travel connectivity between the A947 study area and Kirkhill Industrial Estate;
- AT30: Provide direct active travel link between Dyce Drive and Riverview Drive;
- AT31: Improve active travel links between the Riverside Path and housing within Dyce;
- AT32: Implement footways on the south side of the carriageway on Pitmedden Road;
- AT33: Provide improved active travel links between Dyce Rail Station and the A947 and the eastern section of Dyce, particularly along Station Road;
- AT35: Implement quiet route measures on the local road network to the west of the A947 via Bankhead Road, Wellheads Drive and Farburn Terrace to Dyce Rail Station;
- AT41: Improve active travel access to the retail park at the Bucksburn Roundabout;
- AT42: Review access to the Formartine and Buchan Way from within Dyce;
- AT43: Implement active travel connection between the A947 and the B977, utilising a section of the old A947 (pre-AWPR);
- AT45: Upgrade the Riverside Path to a high quality active travel route, including improvements to the surfacing of the route;
- AT46: Implement lighting on the Riverside Path;
- AT47: Implement with-flow segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction;
- AT48: Implement two-way segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction;
- AT51: Implement with-flow segregated cycleway on Oldmeldrum Road;
- AT52: Implement two-way segregated cycleway on Oldmeldrum Road;
- AT55: Implement with-flow segregated cycleway on Gilbert Road;
- AT56: Implement two-way segregated cycleway on Gilbert Road;
- AT58: Implement shared use path on Dyce Drive between the A947 and Kirkhill Industrial Estate to the north of Aberdeen International Airport;
- AT59: Widen the shared use path on the east side of the A947 to the north of Riverview Drive;

- AT60: Provide continuous footways on Riverview Drive for the duration of the route;
- AT61: Implement shared use path on Victoria Street;
- AT64: Implement shared use path on Oldmeldrum Road;
- AT65: Implement streetscape improvements and widened pavements along Mugiemoor Road;
- AT66: Implement shared use path on Gilbert Road;
- AT68: Conduct a review of wayfinding signage throughout the study area;
- PT2: Conduct a traffic signal review to consider bus priority at all traffic signals along the A947 corridor;
- PT5: Implement real time passenger information at key bus stops along the study corridor;
- PT9: Improve public transport connectivity between the A947 study area and Aberdeen Airport/Heliport;
- PT10: Improve public transport connectivity between the A947 study area and Craibstone Park & Ride;
- PT11: Improve public transport connectivity between the A947 study area and TECA;
- PT12: Improve public transport connectivity between the A947 study area and Kirkhill Industrial Estate;
- O2: Review the layout of the Victoria Street/Skene Place Junction;
- O3: Review the layout of the Riverview Drive/Balloch Way Junction;
- O4: Review the layout of the Riverview Drive/Todlaw Walk Junction;
- O5: Review the layout of the Riverview Drive/Netherview Avenue Junction;
- O7: Review the layout of the A947/Stoneywood Junction at Co-Op/Marks and Spencers;
- O8: Review the layout of the A947/Stoneywood Brae Junction;
- O10: Review layout of the A947/McDonalds access road junction;
- O11: Undertake a review of parking arrangements on Victoria Street;
- O15: Introduce placemaking and gateway features on Victoria Street;
- O16: Implement package of measures to support implementation of a 20-minute neighbourhood in Dyce;
- O18: Consider options to reduce vehicle speeds on Bankhead Road;
- O24: Implement electric vehicle charging points at key locations within Dyce;
- O25: Implement access only restrictions for general traffic on Victoria Street; and
- O26: Implement one-way restrictions for general traffic on Victoria Street.

3.9 A package of 'Quick Wins' has also been developed and are recommended for early implementation subject to funding being obtained. These are small-scale, low cost projects which can be implemented quickly and with minimum resources and do not require major infrastructure works.

Project	
AT1	Review the junction for active travel users at the A947/A90 slip road junction
AT2	Review visibility for cyclists at the B977/A90 slip road roundabout
AT7	Review signals at Forrit Burn Road bus gate to allow cyclists access
AT10	Widen on-road advisory cycle lane on Riverview Drive
AT11	Implement missing sections of on-road advisory cycle lane on Riverview Drive
AT12	Widen on-road advisory cycle lane on Stoneywood Road at Stoneywood Park junction
AT21	Implement cycle parking at key trip attractors in the study area
AT22	Promote Craibstone Park & Ride as a Park & Pedal facility
AT28	Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don
AT37	Implement dropped kerbs between Wellheads Drive shared use path and the carriageway
AT38	Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles
AT39	Review access controls on off-road path between Waterton Road and Ruthriehill Road
O1	Increase enforcement of zigzag lines at zebra crossing on Victoria Street, specifically adjacent to Tesco
O12	Implement signage to encourage reverse parking at the shops on Victoria Street

3.10 An Executive Summary of the Initial Appraisal Report is presented as Appendix 1 (link attached), the full report is presented as Appendix 2 (link attached), with the appendices as Appendix 3 (link attached).

4. FINANCIAL IMPLICATIONS

4.1 Nestrans are funding this Initial STAG Appraisal and have approved a budget of £50,000 for financial year 2022/23 for the funding of small-scale quick wins. Any projects which are not able to be completed within the confines of the specified budget will be implemented when appropriate funding is sourced.

4.2 There is currently no budget for the project to proceed to Detailed Appraisal or OBC stage, or for the implementation of further works, therefore progress will be dependent on the sourcing of continued external funding from Nestrans or any other appropriate funding sources.

5. LEGAL IMPLICATIONS

5.1 There are no direct legal implications arising from the recommendations of this report, although dependent on the package of small-scale quick wins that are implemented there may be a requirement for Traffic Regulation Orders (TROs).

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 There are no direct environmental implications arising from the recommendations of this report. However, when detailed appraisal is completed preferred options or intervention are identified, in the subsequent stages towards progressing designs, an Environmental Impact Assessment will have to be undertaken to inform any environmental implications of the project. It should be noted however that Environmental considerations are part of the STAG criteria which has influenced the recommendations of this report in terms of the options to be taken forward for more detailed examination.

7. RISK

- 7.1 The assessment of risk contained within the table below is considered to be consistent with the Council's Risk Appetite Statement.

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
Strategic Risk	<p>Delivery of public transport measures supports a number of the Council's strategic priorities, particularly in terms of a sustainable economy, a sustainable transport system, the continued health and prosperity of our citizens, reductions in carbon emissions and a high-quality environment.</p> <p>Failure to deliver public transport improvements where there is evidence of their effectiveness could undermine the Council's ability to realise these aspirations.</p>	Continue to work with Nestrans to deliver this project and continue to work in partnership to add value in terms of meeting the strategic objectives of partners	L	Yes

Compliance	See section 5 above.	Compliance with statutory processes, ACC procurement regulations, grant conditions and Scheme of Governance with regular progress and spend reporting to Nestrans and the Transportation Programme Boards	L	Yes
Financial	If non-compliant to the grant conditions, there is risk around spend being ineligible or rejected, and therefore having to be absorbed by this Council and partners.	Regular monthly reporting to Nestrans will help to reduce this risk.	L	Yes
Reputational	Failure to deliver in accordance with the grant conditions to help meet the Council's (and partners) strategic transport objectives undermines the Council's commitments to improving the transport network, achieving the PLACE outcomes set out in the LOIP (Local Outcome Improvement Plan), and supporting Scotland's Climate Change Plan commitment to reduce car kilometres by 20% by 2030.	Obtain Committee approval to progress works to a detailed appraisal. Continue working with Nestrans to deliver the project and continue to work in partnership to add in terms of meeting our shared strategic objectives	L	Yes
Environment / Climate	ACC's net zero vision and strategic infrastructure plan –	Continue working with Nestrans to deliver the project	L	Yes

	<p>energy transition: transport emissions are a significant contributor to climate emissions so increasing sustainable travel will be necessary to achieving this sector's required reduction.</p> <p>If active travel and public transport measures are not delivered, ACC would not provide conditions which could encourage more sustainable travel movements which are likely to bring environmental improvements to the city and region.</p>	<p>and continue to work in partnership to add value in terms of meeting our shared strategic objectives</p>		
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8. OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>	
	Impact of Report
<p>Aberdeen City Council Policy Statement</p> <ul style="list-style-type: none"> • PLACE Policy Statement 3 -<i>Refresh the local transport strategy, ensuring it includes the results of a city centre parking review; promotes cycle and pedestrian routes; and considers support for public transport.</i> • PLACE Policy Statement 4 -<i>Cycle hire scheme</i> 	<p>The proposals within this report support the delivery of PLACE Policy Statement 3 & 4.</p> <p>Facilitating the feasibility of encouraging an increase in public transport patronage and active travel uptake to determine the best intervention towards delivering enabling infrastructure will be highly beneficial to supporting the associated Policy Statements identified.</p>
<u>Aberdeen City Local Outcome Improvement Plan</u>	
<p>Prosperous Economy Stretch Outcomes</p>	<p>The proposals within this report support the delivery of LOIP Stretch Outcomes 1 to 3 as a good transport network and infrastructure provision means anyone</p>

<p>1. <i>No one will suffer due to poverty by 2026.</i></p> <p>2. <i>400 unemployed Aberdeen City residents supported into Fair Work by 2026.</i></p> <p>3. <i>500 Aberdeen City residents upskilled/ reskilled to enable them to move into, within and between economic opportunities as they arise by 2026.</i></p>	<p>regardless of their social status/economic means can choose a sustainable mode of travel for commuting.</p> <p>A reliable transport network supports economic growth and movement both locally and otherwise and affords the public the opportunity to choose a sustainable mode of travel to and from their workplaces. The proposals within this report aim to provide journey time reliability for buses.</p>
<p>Prosperous Place Stretch Outcomes</p> <p>13. <i>Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate.</i></p> <p>14. <i>Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.</i></p>	<p>The proposals within this report support the delivery of Place Stretch Outcomes 13 and 14 in the LOIP.</p> <p>A robust and reliable public transport network where well-integrated with active travel infrastructures will encourage public transport uptake and patronage and subsequently contribute towards reducing transport carbon emissions given the move towards alternative forms of fuel by bus operators in the region and the Council's fleet.</p>
<p>Regional and City Strategies</p> <ul style="list-style-type: none"> • <i>Regional Transport Strategy (2040)</i> • <i>Local Development Plan,</i> • <i>Local Transport Strategy including the Active Travel Action plan</i> • <i>Strategic Development Plan</i> • <i>Regional Economic Strategy</i> • <i>Net Zero Vision for Aberdeen</i> 	<p>The proposals within this report support Regional and Local Transport Strategies and related strategies, which all aim to deliver a sustainable transport system as well as enhance the connectivity of the existing transport network.</p>

9. IMPACT ASSESSMENTS

Assessment	Outcome
Integrated Impact Assessment	Full impact assessment not required. The projects funded by this grant are being undertaken in accordance with the Scottish Transport Appraisal Guidance which appraises impacts across a range of categories (Economy, Environment, Accessibility and Social Inclusion, Safety, and Integration). Further detailed assessments will be undertaken through the development and design process, as appropriate.
Data Protection Impact Assessment	Not required
Other	None

10. BACKGROUND PAPERS

None

11. APPENDICES

Appendix 1 – A947 STAG Appraisal Executive Summary
https://aberdeencitycouncilo365.sharepoint.com/:b:/s/TransportStrategyandProgrammes/EQ0eHM_unLNBmPJmNRE86AABDK2VvtkNEb9WvYftdmIMGg?e=EMkRNM

Appendix 2 - A947 STAG Appraisal Full Report
https://aberdeencitycouncilo365.sharepoint.com/:b:/s/TransportStrategyandProgrammes/Ebn1hQ2d_mBMmb1CsGsFqmMBYK1q00Px9MnKi0SedVdlCw?e=A7kxYQ

Appendix 3 – A947 STAG Appraisal Appendices
https://aberdeencitycouncilo365.sharepoint.com/:b:/s/TransportStrategyandProgrammes/EVBQfurH1q5OqL_5RbvPGM8B5wyaheLz7sjmleEjv-DOfA?e=MtLvOQ

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A947 Multi-Modal Study - STAG-Based Appraisal: Executive Summary

Aberdeen City Council

Project number: 60667436

September 2022

Quality information

<u>Prepared by</u>	<u>Checked by</u>	<u>Verified by</u>	<u>Approved by</u>
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Revision History

<u>Revision</u>	<u>Revision date</u>	<u>Details</u>	<u>Authorized</u>	<u>Name</u>	<u>Position</u>
0	23-08-2022	Executive Summary	AR	Andrew Robb	Project Manager
1	26-08-2022	Updates in line with Draft Report	AR	Andrew Robb	Project Manager
2	07-09-2022	Final	AR	Andrew Robb	Project Manager

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A947 Multi-Modal Study - STAG-Based Appraisal: Executive Summary

Introduction

AECOM has been commissioned by Aberdeen City Council (ACC) to develop a Scottish Transport Appraisal Guidance (STAG)-based appraisal of options for improving transport connections (particularly public transport and active travel connections) along the A947 corridor between the Aberdeen Western Peripheral Route (AWPR) Parkhill Junction and the A96/A947 Junction.

The study is being guided by a Project Steering Group led by ACC and supported by Aberdeenshire Council, Nestrans and Sustrans.

The study area is the north-south corridor between the AWPR Parkhill Junction and the A96/A947 Junction to the south of Dyce. The study corridor is four miles (6km) long and includes Stoneywood Road, Victoria Street and Riverview Drive. The study area is shown in [Figure E.1](#).



Figure E.1: Study Area

Study Problems, Issues, Constraints and Opportunities ('PICO's')

The study has identified actual and perceived problems, issues, constraints and opportunities ('PICO's') within the study area. Within STAG, PICO's are described as follows:

- **Problem:** existing and future problems within the transport and land use system;
- **Issues:** uncertainty that the study may not be in a position to resolve, but must work within the context of;
- **Constraints:** representing the bounds within which a study is being undertaken;
- **Opportunity:** changes to improve the transport and land use system to realise opportunities.

Localised PICO's were identified along various sections of the corridor before consideration was given to non-location specific issues and wider issues to be borne in mind as the study progresses.

Study Transport Planning Objectives (TPOs)

Central to the appraisal of options using STAG is that the process should be objective-led rather than solution-led. A number of Transport Planning Objectives (TPOs) have been developed to reflect the identified problems, issues, constraints, and opportunities within the study area. The TPOs reflect the outcomes sought from the study and will play an integral role in the appraisal process when assessing the performance of each option.

The TPOs developed for the A947 Multi-Modal Corridor Study are presented in the table below. For each TPO, an accompanying design-focused objective has been developed to assist a focused option development approach as recommended by design guidance, such as Cycling by Design.

Table E.1: A947 Multi-Modal Corridor Study TPOs

Ref	Transport Planning Objective	Design-Focused Objective
TPO1	Increase the modal share of walking on the A947 corridor for all journey types	Improve the level of service for walking and wheeling on the A947 corridor to complement and enhance the existing strategic active travel network
TPO2	Increase the modal share of cycling on the A947 corridor for all journey types	Improve the level of service for cycling on the A947 corridor to complement and enhance the existing strategic active travel network
TPO3	Increase the modal share of public transport on the A947 corridor for all journey types	Improve the attractiveness of bus services along the A947 corridor
TPO4	Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	Improve active travel network access to local facilities in Dyce, with enhanced opportunities to access and cross the A947 corridor by walking, wheeling and cycling with an improved level of service
TPO5	Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	Improve the level of service for non-motorised users to the key transport hubs and key destinations in Dyce
TPO6	Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	Improve the distribution of movements by all modes to routes appropriate to their Roads Hierarchy classification, including motorised vehicles travelling through or outwith Dyce.

Study Consultation

The study has taken a multi-pronged approach to consultation. The purpose of the initial stage of engagement, undertaken in Autumn 2021, was to determine the problems, issues, constraints and opportunities along the study corridor. A number of steps were involved in delivering the first stage of the engagement process, as outlined below.

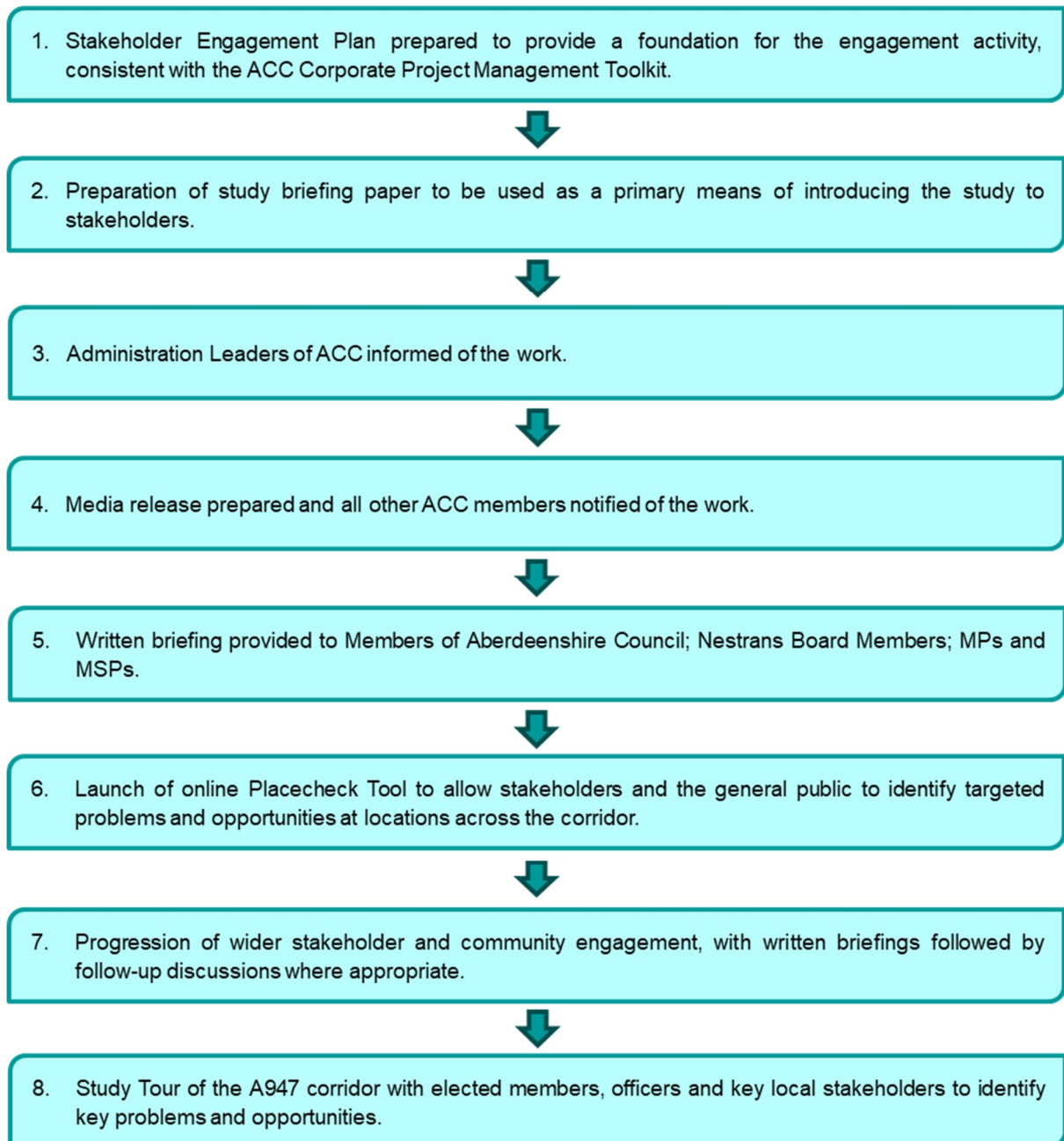


Figure E.2: Part 1 Engagement Activities

The second stage of consultation was undertaken in Summer 2022 and focused on gaining public and stakeholder feedback on the six devised option packages for the corridor. The feedback received has supported the appraisal of each option package in terms of public acceptability. The consultation period at this stage lasted four weeks between 22nd July 2022 and 19th August 2022 and consisted of:

1. An AECOM-hosted Virtual Consultation Room linked through the ACC website. This interactive platform, as shown in **Figure E.3** below, displayed materials related to the study TPOs, problems, issues, constraints and opportunities and option packages showing indicative layouts, benefits, design considerations and precedent images. An online feedback form was also linked through this platform.



Figure E.3: Virtual Consultation Room

2. An in-person drop-in event and online live Q&A sessions (hosted through the Virtual Consultation Room). The drop-in event took place in Dyce Church Hall on Wednesday 27th July between 16:00-20:00 and the online live Q&A sessions took place on Wednesday 10th August and Wednesday 17th August, both from 19:00-20:00.



Figure E.4: Public Drop-In Event at Dyce Church Hall

Several methods were used to promote the second stage of consultation:

- Social media posts from ACC and Nestrans;
- Emails direct to key stakeholders; and
- Emails direct to Community Councils.

Local Elected Members, MSPs and MPs were also contacted to raise awareness of the consultation and support its promotion.

The table below provides a summary of the responses received at this stage of the consultation.

Table E.2: Type of Respondent by Response Mechanism

	Online Questionnaire	Online Q&A	Direct Email	Total	%
General Public	17	1	0	18	95%
Organisations	0	0	0	0	0%
Elected Members	0	0	1	1	5%
Total	17	1	1	19	100%

Detailed findings from the consultation are presented in *Part 2 Consultation Outcomes* ([Appendix E](#) of the study report) and relevant feedback has been incorporated within the Public Acceptability section of the Deliverability Appraisal of each option package in [Chapter 8](#) of the study report.

Option Generation, Sifting and Development & Package Development

Building on the identification of PICOs and establishment of study TPOs, a long list of options was developed based on a number of sources including:

- Consultation with ACC, Aberdeenshire Council and Nestrans officers, stakeholders, Community Council groups and members of the public;
- A review of previous studies to identify historical proposals that remain viable options;
- A review of statutory planning and policy documents; and
- Outputs from the evidence-led process followed by the team undertaking the appraisal.

A multi-criteria approach was then adopted in agreement with the Client Group to sift options based on their high-level performance against TPOs, Deliverability Criteria (including feasibility), Position in the Sustainable Investment Hierarchy (defined by the NTS) and Identified Problems and Opportunities in the study area. Based on the high-level performance of options against these criteria, a number of options were sifted from further consideration at this stage. Following this process, the remaining options were grouped into six packages for the purposes of appraisal as follows:

Table E.3: Option Packages for Appraisal

Package Name	Package Description
Active Travel – Strategic Routes	The Active Travel – Strategic Routes package includes segregated cycling infrastructure along the A947 between the AWPR Junction and Bucksburn Roundabout (A947/A96 Junction). This would provide a safer cycling environment on the main route through Dyce to help encourage cycling for everyday journeys.
Active Travel – Leisure Route	The Active Travel – Leisure Route Package is formed of three active travel options with the aim of creating a quality active travel route along the existing Riverside Path which runs close to the River Don.
Active Travel – Quiet Route Measures	The Quiet Route Measures Package is a package of options aimed at active travel improvements on routes away from the main A947 and Victoria Street routes around Dyce. The focus of this package is to improve active travel provision on routes away from large volumes of traffic and provide quiet routes which may be more suitable for leisure walking and cycling or cyclists who are less confident to travel adjacent to vehicular traffic.

Package Name	Package Description
Public Transport – Priority Interventions	The Public Transport – Priority Interventions Package contains seven options specifically aimed to increase public transport use within the study area. The package contains options to increase connectivity between the study area and transport hubs and key destinations as well as some options to provide bus priority.
Placemaking – Living Streets	The Placemaking – Living Streets package is formed of 12 options from the active travel and other categories. The focus of this package is to enhance the sense of place within the study area by providing a better environment for active travel, providing better access to key locations by non-car modes and reducing the prominence of private cars in certain places within the study area. This package has a particular focus on Victoria Street given its revised position within the new Roads Hierarchy.
Placemaking – Complementary Measures	A series of supporting placemaking measures such as village greens, landmarks and gateway signage within Dyce could help to recognise the area as a community by encouraging a reduction of vehicle speeds, providing areas for residents to socialise and highlighting local areas of significance.

Appraisal Approach

Appraisal was undertaken on each of the above option packages. A high-level appraisal of individual options was carried out and the findings of this exercise are presented in *Individual Option Appraisal* included in **Appendix D** of the study report. A seven-point scale assessment was undertaken to gauge the level of impact against the TPOs and five STAG criteria of Environment, Climate Change, Health, Safety & Wellbeing, Economy and Equality and Accessibility.

Table E.4: STAG Seven-Point Scale

Impact	Description
Major positive impact (+3)	These are positive impacts which, depending on the severity of impact, should be a principal consideration when assessing an option.
Moderate positive impact (+2)	The option is anticipated to have a moderate positive impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Minor beneficial impact (+1)	The option is anticipated to have a minor positive impact. Minor positive impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
Neutral impact (0)	The option is anticipated to have a neutral impact.
Minor negative impact (-1)	The option is anticipated to have a small negative impact. Small impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
Moderate negative impact (-2)	The option is anticipated to have a moderate negative impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Major negative impact (-3)	These are negative impacts which, depending on the severity of impact, should be a principal consideration when assessing an option.

An implementability appraisal was also undertaken, covering Feasibility, Affordability and Public Acceptability. The Implementability Criteria were assessed based on the extent of risk (low, medium and high). Affordability takes account of the anticipated cost of the option; whilst high-level cost estimates have been provided as part of the option appraisal, further work will be required to develop costs during further stages of option development. Public Acceptability assessed the likely public response to the option packages, including consideration of the outcomes of consultation.

Appraisal Outcomes: Active Travel – Strategic Routes

Table E.5: Active Travel – Strategic Routes Appraisal Summary

Appraisal Summary: Active Travel – Strategic Routes	
Summary:	<ul style="list-style-type: none"> This package would provide positive impacts across the majority of the TPOs, particularly in terms of increasing the modal share of cycling on the A947 corridor for all journey types and

Appraisal Summary: Active Travel – Strategic Routes

ensuring the main routes through the study area function in accordance with their role in the revised Roads Hierarchy.

- In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk.
- The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2.
- The majority of options within this package have been appraised to have low deliverability risk and are considered to be achievable as part of the study, assisting in the improvement of active travel links throughout the study area. The options classified to create a high risk to the Implementability Criteria were some of the corridor-wide active travel improvements within the package. Assessment of these options highlighted that any improvements over the full length would not be achievable due to physical constraints at various points throughout the route.
- Options were assessed to have a higher risk in terms of affordability due to factors such as acquisition of third-party land, major earthworks and large infrastructure works. Options which were evaluated as low risk involved minimal works such as updating road markings, vegetation management and new kerbing layouts.
- More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken.
- Overall, consultation comments were generally supportive of this option concept with many welcoming the proposals to segregate cyclists and vehicles and make it easier for cyclists to navigate existing bottlenecks such as roundabouts and Victoria Street. Emphasis was placed on 'hard' segregation measures with many noting that advisory cycle lanes would not make them feel any safer or encourage modal change. Negative comments received were generally in relation to the cost of implementing the infrastructure.

Appraisal Outcomes: Active Travel – Leisure Route

Table E.6: Active Travel – Leisure Route Appraisal Summary

Appraisal Summary: Active Travel – Leisure Route

Summary:

- This package would provide positive impacts across some of the TPOs, with minor positive impacts in terms of increasing the modal share of walking and cycling, and on promoting improved accessibility for local movements.
- In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk.
- The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2.
- Creating an active travel link between the leisure route and nearby housing within Dyce is considered a medium feasibility risk. This is due to the work required and environmental impact caused by formalising existing trails or creating new links along the Riverside Path. The other options within this package focus on upgrades to the surface and lighting of the existing Riverside Path – both are considered feasible.

Appraisal Summary: Active Travel – Leisure Route	
	<ul style="list-style-type: none"> • The active travel improvements were evaluated to have medium to high risk in terms of affordability. The potential volume and complexity of the work involved to deliver the options within this package resulted in this evaluation. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, there was strong support for this option concept during consultation, with widespread support for improved surfacing of the Riverside Path and support for better leisure routes in the wider area. Some environmental concerns were raised regarding lighting provision on the Riverside Path.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

Appraisal Outcomes: Active Travel – Quiet Route Measures

Table E.7: Active Travel – Quiet Route Measures Appraisal Summary

Appraisal Summary: Active Travel – Quiet Route Measures	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across most of the TPOs, particularly in terms of increasing the modal share of walking and cycling. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • Within this package it is anticipated that the majority of the options included would have a low feasibility risk in terms of their overall implementability. The active travel improvements within the package which present a higher risk are achievable, however, they would require substantial infrastructure interventions. • Many of the active travel improvements which are proposed have a low risk in terms of affordability as they require little financial burden to implement across the study area. However, some of the broader options would require larger scale improvements across the study area and represent potential financial risk as a result. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, this option concept received strong public support during consultation, with many considering it to be a good alternative to Stoneywood Road for cyclists of all abilities and providing a safer route for children. There was general support for making use of existing infrastructure and this was noted to be more cost effective than installing new infrastructure. Concerns were raised around the impact traffic calming measures could have on commercial vehicles, particularly delivery vehicles.

Appraisal Outcomes: Public Transport – Priority Interventions

Table E.8: Public Transport – Priority Interventions Appraisal Summary

Appraisal Summary: Public Transport – Priority Interventions	
Summary:	<ul style="list-style-type: none"> • With regards the TPOs, this package would provide positive impacts in terms of increasing public transport modal share and improving accessibility to key transport hubs and key destinations. • In terms of the STAG criteria, this package would promote minor positive impacts across the majority of the criteria. Within the Equality and Accessibility Criterion, this package would have a major positive impact on Public Transport Network Coverage. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the overarching aims of the North East Bus Alliance. • The feasibility of five of the package components have been assessed as high risk, creating concerns about their implementability. These are considered as high risk due to the requirement for wider stakeholder consultation to be carried out and potentially having to be delivered in partnership with public transport operators. • All of the improvements included in this package have been identified as a medium risk in terms of affordability as part of the implementability criteria. The options outlined involve extensive reviews and improvements of existing public transport throughout various sections of the study area and may present a financial burden in order to deliver each of the options. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Consultation highlighted existing poor public transport connections between Dyce and Aberdeen International Airport, TECA and Danestone and some respondents stated they would welcome and directly benefit from better public transport links between Dyce, the airport and TECA. Some respondents felt active travel measures should be prioritised over public transport.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

Appraisal Outcomes: Placemaking – Living Streets

Table E.9: Placemaking – Living Streets Appraisal Summary

Appraisal Summary: Placemaking – Living Streets	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a major positive impact in terms of ensuring the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy. • In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4. • The extent of feasibility risk for options in the Placemaking – Living Streets package range between low and medium. Options have been classified as a medium risk for a number of factors such as cross-sectional width constraints and impacts they would have for different road users. Options classified as having a low risk to overall implementability have minor impacts such as upgrading existing features within the study area. • The affordability risks associated with the options within this package vary between low, medium, and high. The highest risk has been identified as the proposal to implement a shared use path along Victoria Street. Despite being assessed as feasible, the variability of the existing

Appraisal Summary: Placemaking – Living Streets	
Summary:	<p>road corridor along Victoria Street presents a number of constraints which may present a financial burden.</p> <ul style="list-style-type: none"> • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, this option concept received a mixed response with some welcoming improvements in the centre of Dyce, which could make it more attractive, helping encourage active travel and fostering greater community spirit. However, there were concerns raised about access to properties, impact on cross-Dyce journeys and a lack of clarity on what the option concept would entail.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

Appraisal Outcomes: Placemaking – Complementary Measures

Table E.10: Placemaking – Complementary Measures Appraisal Summary

Appraisal Summary: Placemaking – Complementary Measures	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a moderate positive impact on increasing the modal share of cycling and improving accessibility to key transport hubs and key destinations by non-car modes. • In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4. • The extent of feasibility risk for the options in the Placemaking – Complementary Measures package is low to medium. The low-risk options involve improvements to existing features within the study area which are considered achievable. The medium-risk options focus on the implementation of new schemes and infrastructure throughout the A947 study area. The risk to delivering these options is higher due to the wider stakeholder engagement required to deliver them. • The extent of affordability risk in this package varies from low to medium. Similar to feasibility, the options with a low affordability risk involve upgrades to existing locations/features within Dyce. Classification of the medium-risk options is due to the introduction of new infrastructure or schemes. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • There was support for better cycle parking at key trip attractors during consultation. As noted in the Placemaking – Living Streets package appraisal, there was generally strong support for making the centre of Dyce more attractive and easier to access by active travel.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

Identification of 'Quick Wins'

As study options have been developed, and packages assembled, it has become clear that there are several options which, if brought forward for early implementation, could offer ACC 'quick win' opportunities on the corridor that complement the overall aims and objectives of the study. These options are shown in the table below.

Table E.11: 'Quick Win' Opportunities on the Corridor

Active Travel – Strategic Routes	
AT1	Provide protected junction for active travel users at the A947/A90 slip road junction
AT2	Improve visibility for cyclists at the B977/A90 slip road roundabout
AT10	Widen on-road advisory cycle lane on Riverview Drive
AT11	Implement missing sections of on-road advisory cycle lane on Riverview Drive
AT12	Widen on-road advisory cycle lane on Stonewood Road at Stonewood Park junction
AT28	Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don
Active Travel – Quiet Route Measures	
AT7	Review signals at Forrit Burn Road bus gate to allow cyclists access
AT37	Implement dropped kerbs between Wellheads Drive shared use path and the carriageway
AT38	Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles
AT39	Remove access controls on off-road path between Waterton Road and Ruthriehill Road
Public Transport – Priority Interventions	
AT22	Promote Craibstone Park & Ride as a Park & Pedal facility
Placemaking – Living Streets	
O1	Increase enforcement of stopping restrictions on Victoria Street, specifically adjacent to Tesco
O12	Implement signage to encourage reverse parking at the shops on Victoria Street
Placemaking – Complementary Measures	
AT21	Implement cycle parking at key trip attractors in the study area

While Options AT10, AT11 and AT12 could be delivered as 'quick wins', on-road cycling infrastructure is not shown to influence modal shift and therefore it is considered that segregated cycling infrastructure should be promoted as part of this study. However, these options may provide interim opportunities to improve on-road cycling infrastructure in advance of further consideration of segregation in the study area.

A full assessment of the remaining 'quick win' options has not been undertaken in the context of the appraisal criteria. However, each of these options would provide support for the TPOs, and, taking into consideration the scope of each of these options, it is considered that there are early opportunities for ACC to progress these measures to delivery. These measures can be progressed in isolation of any more detailed option development beyond this appraisal. However, in due course, these measures would themselves complement any packages or options ultimately delivered following more detailed work.

Study Next Steps

In order to fully determine those packages (and options within packages) which have the potential for delivery along the corridor, detailed STAG-based appraisal is required, including more detailed design work, to confirm the package(s) that would move forward into an Outline Business Case (OBC) for delivery.

The work undertaken to date provides the foundation for ACC to take the outcomes of this study forward to further level of study. This will ensure a continued consistency in terms of route corridor appraisal in the city, with the Ellon P&R-Garthdee study now moving to OBC stage, with the A96 corridor to follow. In the case of the latter, there will be a need to ensure a consistent approach is taken to OBC preparation in the context of the A947 corridor, mindful of the interrelationship between these two corridors.

A947 Multi-Modal Study - STAG-Based Appraisal

Final Report

Aberdeen City Council

Project number: 60667436

September 2022

Quality information

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1. Introduction

1.1 Introduction

AECOM has been commissioned by Aberdeen City Council (ACC) to develop a Scottish Transport Appraisal Guidance (STAG)-based appraisal of options for improving transport connections (particularly public transport and active travel connections) along the A947 corridor between the Aberdeen Western Peripheral Route (AWPR) Parkhill Junction and the A96/A947 Junction.

The study is being guided by a Project Steering Group led by ACC and supported by Aberdeenshire Council, Nestrans and Sustrans.

1.2 Study Area

The study area is the north-south corridor between the AWPR Parkhill Junction and the A96/A947 Junction to the south of Dyce. The study corridor is four miles (6km) long and includes Stoneywood Road, Victoria Street and Riverview Drive. The study area is shown in **Figure 1.1**.



Figure 1.1: Study Area

1.3 Structure of Report

Following this introduction, the remainder of the report is structured as follows:

- Chapter 2 – Context Setting;
- Chapter 3 – Public and Stakeholder Engagement;
- Chapter 4 – Problems and Opportunities;
- Chapter 5 – Transport Planning Objectives;
- Chapter 6 – Option Generation, Sifting and Development;
- Chapter 7 – Option Appraisal Approach;
- Chapter 8 – Option Appraisal; and
- Chapter 9 – Summary and Next Steps.

A separate appendices document has been provided to complement this report. It includes:

- Appendix A – Problems, Issues, Constraints and Opportunities Technical Note;
- Appendix B – Transport Planning Objectives Technical Note;
- Appendix C – Option Generation, Sifting and Development Technical Note;
- Appendix D – Individual Option Appraisal; and
- Appendix E – Part 2 Consultation Outcomes.

2. Context Setting

2.1 Introduction

This chapter sets out the background context of the study, including the policy, geographic, socio-economic, transport, development, and environmental context for the work. It should be noted that full detail is provided in the *Problems, Issues, Constraints and Opportunities Technical Note* included in **Appendix A**.

2.2 Policy Context

This section provides an overview of national, regional and local strategies of relevance to this study.

2.2.1 National

At a national level, Scotland's second **National Transport Strategy (NTS2) (2020)**¹ provides the national transport policy framework, setting out a clear vision of a sustainable, inclusive, safe and accessible transport system which helps deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. It sets out four key priorities to support this vision: reducing inequalities; taking climate action; helping to deliver inclusive economic growth; and improving health and wellbeing. In addition to these priorities, the NTS2 supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. It also supports the adoption of a Sustainable Investment Hierarchy, which prioritises investment aimed at reducing the need to travel unsustainably and maintaining and safely operating existing assets ahead of new infrastructure investment.

Delivery of the NTS2 will be supported by accompanying NTS Delivery Plans, the **Climate Change Action Plan**² and the second **Strategic Transport Projects Review (STPR2)**³. In the NTS Delivery Plan and The Climate Change Plan 2018-2032 Update, the Scottish Government sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030. In January 2022, the Scottish Government published its route map⁴ outlining steps needed to achieve this reduction. It sets out a range of sustainable travel behaviours grouped into the four categories of travel less, stay local, switch mode and combine a journey. STPR2 involves a whole-Scotland, evidence-based review of the performance of the strategic transport network across all transport modes and made draft recommendations in January 2022 for potential transport investments for Scottish Ministers to consider as national investment priorities in an updated 20-year (2022-2042) Infrastructure Investment Plan for Scotland. It is anticipated to conclude later in 2022. The work undertaken to develop Nestrans' Regional Transport Strategy 2040 (RTS2040) has fed into the development of STPR2, thus ensuring key issues for the North East are represented at a national level. The Scottish Government's **Programme for Scotland 2020-2021**⁵ also outlines the commitment towards delivering on health, economic and environment goals by investing £500m over the next five years in active travel infrastructure, access to bikes and behaviour change schemes to promote walking, wheeling and cycling. It also outlines a reaffirmed commitment to a £500m Bus Partnership Fund (BPF) to support authorities' ambitions around tackling congestion so that bus journeys are quicker and more reliable, and more people make the choice to take the bus. The BPF was officially launched in November 2020, with funding awarded to eight partnerships in June 2021, including £12m for the North East Bus Alliance. The **Programme for Scotland 2021-2022**⁶ continues to support this focus under its action to 'Support a net zero nation'.

In addition to the above, the UK Government announced in March 2021 that the phase out date for the sale of new petrol and diesel cars and vans will be brought forward to 2030 and from 2035, all new cars and vans must be fully zero emission at the tailpipe⁷. In November 2021, the UK Government subsequently announced that all heavy goods vehicles in the UK will be zero-emission by 2040⁸.

A wider range of national policy and guidance, covering active travel and bus, provide direction on national aspirations for increasing the share of healthier, cleaner travel choices. This includes the **Cycling Action Plan for Scotland**⁹ and the national Walking Strategy: **Let's Get Scotland Walking**¹⁰, which aim to increase the levels of walking and cycling as part of everyday journeys and promote the development of well-designed places and

¹ <https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf>

² <https://sp-bpr-en-prod-cdneq.azureedge.net/published/2021/11/12/afbd2373-a14f-4a78-af9c-4fc5c775b23d/SB%2021-01.pdf>

³ <https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review-2/>

⁴ <https://www.transport.gov.scot/publication/a-route-map-to-achieve-a-20-per-cent-reduction-in-car-kilometres-by-2030/>

⁵ <https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/>

⁶ <https://www.gov.scot/publications/fairer-greener-scotland-programme-government-2021-22/documents/>

⁷ <https://www.gov.uk/government/consultations/consulting-on-ending-the-sale-of-new-petrol-diesel-and-hybrid-cars-and-vans>

⁸ <https://www.gov.uk/government/news/uk-confirms-pledge-for-zero-emission-hgvs-by-2040-and-unveils-new-chargepoint-design>

⁹ <https://www.transport.gov.scot/media/10311/transport-scotland-policy-cycling-action-plan-for-scotland-january-2017.pdf>

¹⁰ <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2014/06/lets-scotland-walking-national-walking-strategy/documents/00452622-pdf/00452622-pdf/govscot%3Adocument/00452622.pdf>

infrastructure to encourage walking and cycling. The passing of the **Transport Scotland Act (2019)**¹¹ also signals the intent at a national level to promote sustainable transport. The Act enables local authorities to introduce Workplace Parking Levies and supports authorities with options to influence and improve bus services in their area.

2.2.2 Regional

At a regional level, the Nestrans **Regional Transport Strategy (RTS) 2040**¹² sets the long-term vision and direction for transport in the North East for the next 20 years. The key transport priorities within the RTS are linked to the priorities in the NTS2 and include improving journey efficiencies to enhance connectivity; reducing carbon emissions to support net zero targets; and creating a step change in public transport and active travel allowing for a 50:50 mode split. The RTS identifies a range of associated policies and actions including increasing the number of people travelling actively for health and the environment; improving the region's bus network; reducing emissions from transport; and planning and designing places for people, all of which are relevant in the context of this corridor study.

The **Regional Economic Strategy (2018-2023)**¹³ includes objectives associated with the promotion of modal shift and helping to maximise the benefits of improved transport infrastructure. Both the **Aberdeenshire Proposed Local Development Plan (LDP) (2020)**¹⁴ and the **Aberdeen City Proposed LDP (2020)**¹⁵ identify opportunities for significant development within the study area. Within Aberdeen City, there are allocations for up to 1,000 new homes within the study area, with an additional 8,500 homes, business and employment land allocations on land adjacent to the study corridor. The Aberdeenshire LDP indicates up to 2,000 homes are planned on the A947 corridor as well as business and employment land. The **Nestrans Active Travel Action Plan (2014-2035)**¹⁶ identifies the Formartine and Buchan Way (F&B Way) as an already established active travel corridor in the study area, noting the presence of National Cycle Network Route 1 (NCN1). The Plan refers to aspirations for further development of this route including improved surfacing and signage.

Recently, there has also been renewed impetus given to the improvement of bus services in the region following the establishment of a new **North East Scotland Bus Alliance**¹⁷ (building on work of the former Local Authority Bus Operators Forum). The Bus Alliance was formed in 2018 as a voluntary partnership of Nestrans, ACC, Aberdeenshire Council, First Bus Aberdeen, Stagecoach, and Bain's Coaches. The overarching objectives of the Alliance are to:

- Arrest the decline in bus patronage in the North East of Scotland by 2022; and
- Achieve year on year growth in bus patronage to 2025.

Sub-objectives exist around increasing modal share of bus patronage, improving operational performance and customer satisfaction, reducing bus emissions, and improving service accessibility. In April 2020, the Bus Alliance published a new **Bus Action Plan**¹⁸ setting out the priority actions of the partners over the next five years. The A947 corridor is identified to be one of four corridors to be completed following conclusion of the initial priority corridors.

2.2.3 Local

Locally, both the **Aberdeenshire Local Transport Strategy (LTS) (2012)**¹⁹ and **Aberdeen City LTS (2016-2021)**²⁰ aim to reduce non-sustainable journeys, increase the modal share of public transport and active travel, and make travel more effective. ACC is currently going through the process of updating its LTS. The 'Main Issues Consultation' took place in October and November 2021 and the analysis of problems and opportunities has now been undertaken which will inform the strategy. A draft LTS is anticipated to be published in 2023, and, following consultation on this, a final version will be developed. The **Sustainable Urban Mobility Plan (SUMP) (2019)**²¹ identifies the need to improve connectivity both within and to the city of Aberdeen, as well as improving the public transport experience, particularly in terms of improving journey times and reliability for passengers. These objectives are aimed at locking in the benefits of the AWPR and preventing the erosion of these benefits, as would be anticipated should traffic be allowed to continue to grow to fill the additional road capacity that has been created.

¹¹ <https://www.legislation.gov.uk/asp/2019/17/enacted>

¹² <https://www.nestrans.org.uk/wp-content/uploads/2021/03/Nestrans-RTS-Final-Submitted.pdf>

¹³ <https://investaberdeen.co.uk/images/uploads/RES%20Action%20Plan%202018-2023%20FINAL.pdf>

¹⁴ <https://www.arcgis.com/apps/MapJournal/index.html?appid=0b6df3fd06024c798c89138dce7a6a7e>

¹⁵ <https://www.aberdeencity.gov.uk/sites/default/files/2020-05/Proposed%20Aberdeen%20Local%20Development%20Plan%202020.pdf>

¹⁶ https://www.nestrans.org.uk/wp-content/uploads/2017/02/ACrAP_FINAL.pdf

¹⁷ https://www.nestrans.org.uk/wp-content/uploads/2017/09/5b_App-A-Region-Wide-QP-Agreement.pdf

¹⁸ https://www.nestrans.org.uk/wp-content/uploads/2020/04/Bus-Action-Plan-Published_April-2020.pdf

¹⁹ <https://www.aberdeenshire.gov.uk/media/2374/2012finalts.pdf>

²⁰ <https://www.aberdeencity.gov.uk/sites/default/files/Local%20Transport%20Strategy%20%282016-2021%29.pdf>

²¹ https://consultation.aberdeencity.gov.uk/planning/sump/supporting_documents/Draft%20Sustainable%20Urban%20Mobility%20Plan.pdf

The **Aberdeen City Centre Masterplan (CCMP) (2015)**²² aims to create a vibrant city centre, identifying 49 development and infrastructure projects to support this. A new **Roads Hierarchy for the North East**²³ was agreed in 2019 following a study to develop options to provide a system that reflects the new role of the city centre (as a destination) and makes the most effective use of the AWPR for distributing traffic around the city to the most appropriate radial route to reduce the extent of cross-city traffic movements. In April 2020, ACC set out its net zero vision for Aberdeen in **A Climate-Positive City at the Heart of the Global Energy Transition**²⁴ and in March 2021, ACC published its **Climate Change Plan 2021-2025**²⁵ to outline its ambitions and support progress with public sector climate duties. Additionally, ACC introduced a **Low Emission Zone**²⁶ (LEZ) in May 2022, where only certain vehicles can enter based on their emissions standard. It has been introduced with a two year 'grace' period meaning that between 2022 and May 2024, drivers will not be fined for entering the LEZ with a non-compliant vehicle. The LEZ area is shown in the diagram below²⁷. An updated **Active Travel Action Plan** for 2021-2026²⁸ was approved at ACC's City Growth and Resources Committee in February 2021.

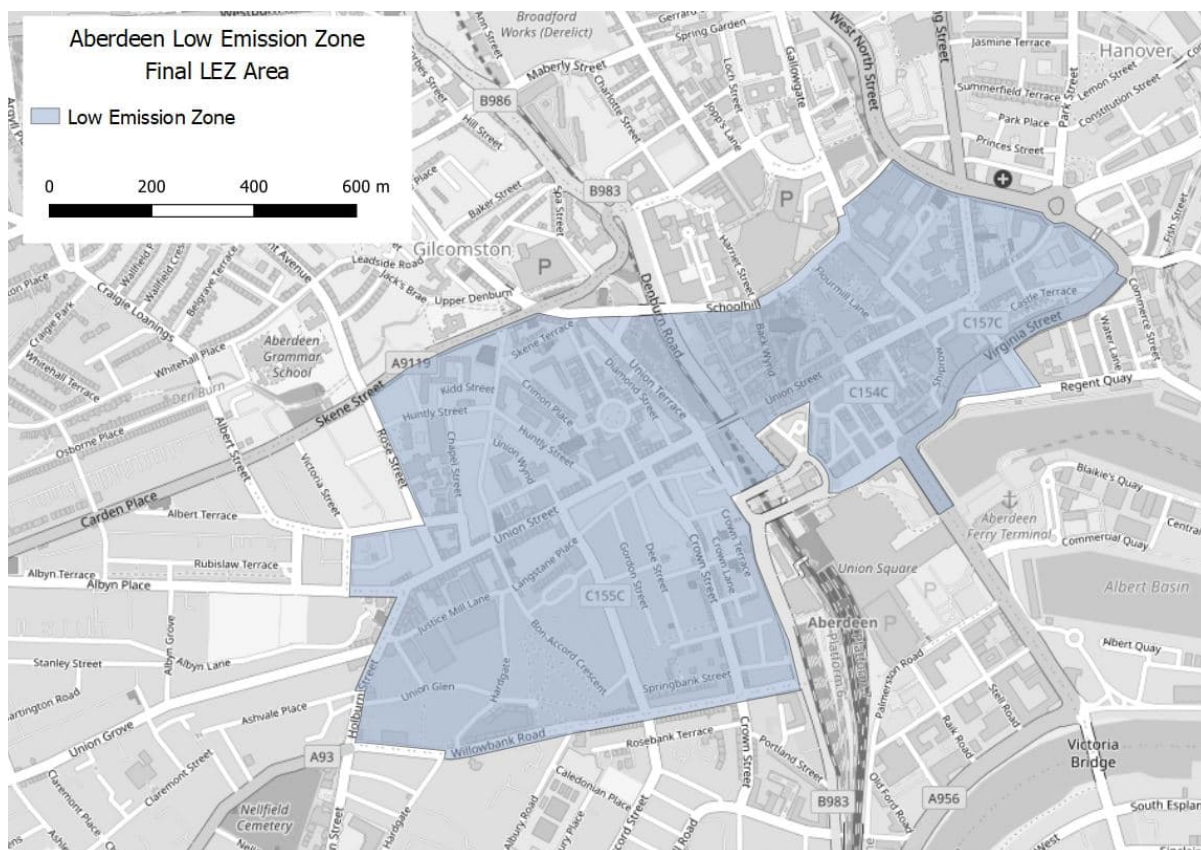


Figure 2.1: Aberdeen's LEZ Area

The policy review presented above enables several themes to be identified, including support for more trips to be undertaken using sustainable modes of travel and the requirement to meet net zero commitments being outlined at national, regional, and local policy levels. As such, the key focus of this study on developing options for improving public transport and active travel connections along the A947 corridor strongly aligns with the national, regional and local policy context.

2.3 Geographic Context

The study area encompasses the north-south corridor between the AWPR Parkhill Junction and the A96/A947 Junction to the south of Dyce. Whilst the study corridor only covers a distance of approximately four miles (6km) from north to south, it has varied characteristics including urban sections along Victoria Street and more rural sections to the north of the River Don.

²² <https://www.aberdeencity.gov.uk/sites/default/files/2018-06/Aberdeen%20City%20Centre%20Masterplan%20and%20Delivery%20Programme.pdf>

²³ <https://www.nestrans.org.uk/wp-content/uploads/2019/06/North-East-Scotland-Roads-Hierarchy-Study-2019.pdf>

²⁴ <https://committees.aberdeencity.gov.uk/documents/s109162/Appendix%201%20-%20Aberdeen%20Energy%20Transition%20Vision.pdf>

²⁵ <https://data.climateemergency.uk/media/data/plans/aberdeen-city-council-23971ac.pdf>

²⁶ <https://www.aberdeencity.gov.uk/sites/default/files/2021-06/Proposal%20to%20make%20a%20LEZ%20Scheme.pdf>

²⁷ <https://www.aberdeencity.gov.uk/services/roads-transport-and-parking/low-emission-zone>

²⁸ <https://consultation.aberdeencity.gov.uk/place/draft-active-travel-action-plan-consultation/>

The study area encompasses the settlement of Dyce, which has a population of 6,190²⁹ and is located in the north-west of Aberdeen City, approximately five miles (8km) from the city centre³⁰. The area consists of a diverse selection of land uses, including residential, industry, business, transport and education. The residential areas are generally located in the east of Dyce, between Victoria Street and Riverview Drive. Aberdeen International Airport is located in the west of Dyce. Industrial and business land is mostly congregated around Aberdeen International Airport, including many industrial estates and business parks. Dyce Primary School (~379 pupils³¹) and Dyce Academy (~538 pupils) provide education within Dyce. There are additionally two schools within close proximity of the study area to the south of the A96 – Brimmond Primary School (~457 pupils) and Bucksburn Academy (~803 pupils).

The A947 is the primary road link through Dyce, providing a connection between Aberdeenshire and the A96. Dyce Drive forms a key route to the west of the area, forming part of a loop around Aberdeen International Airport and connecting to various industrial estates and business parks. Wellheads Drive provides a connection from the centre of Dyce to Dyce Drive and performs a key role in connecting Dyce to nearby industrial estates and business parks.

Dyce is served by Dyce Rail Station, which is located on Station Road, to the west of the centre of Dyce. The station is located on the Aberdeen to Inverness line which is currently undergoing a programme of improvements to shorten journey times between the two cities. The station is located between Aberdeen and Inverurie which formed Phase 1 of this work, involving redoubling of the track. This was completed in 2019³². Aberdeen International Airport is a key regional transport hub for the North East. It serves destinations throughout the UK and Europe and also serves as the main heliport for the North Sea oil and gas industry. Although the primary route to the airport is via the A96, the A947 provides a key access route to the eastern helicopter terminal buildings.

The study area has been defined based on data zones from Dyce, Bucksburn North and Bucksburn South. The data zones making up these areas are illustrated in **Figure 2.2**, along with key transport hubs within the study area.

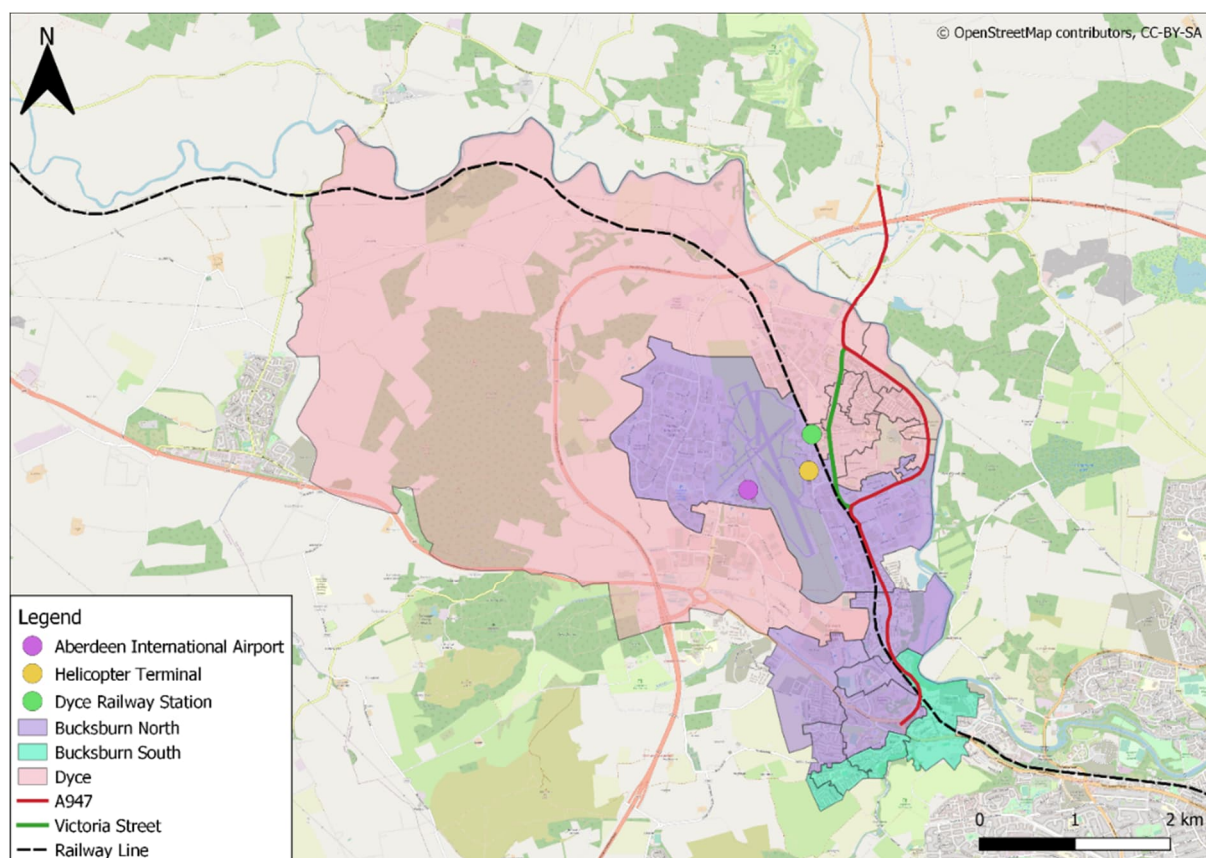


Figure 2.2: Geographic Context of Study Corridor

²⁹ <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/small-area-population-estimates-2011-data-zone-based/mid-2020>

³⁰ Measured from the Victoria Street/Farburn Terrace Junction to Union Street.

³¹ School rolls are based on ACC 2022 forecasts: <https://www.aberdeencity.gov.uk/services/education-and-childcare/schools-and-education/schools-pupil-roll-forecasts>

³² <https://www.transport.gov.scot/projects/aberdeen-to-inverness-rail-improvements/aberdeen-to-inverness-rail-improvements/>

2.4 Socio-Economic Context

The key findings from a detailed review of the socio-economic context for the study are presented below.

Table 2.1: Socio-Economic Context Summary

	Key Findings
Population	<ul style="list-style-type: none"> • There has been a 9% increase in the population of the study area between 2001 and 2020, which is broadly in line with the population growth across Aberdeen City (8%). • Population growth in Aberdeen City has been in line with the national average (8%), whilst the rate of growth in Aberdeenshire has been significantly above the national average (15%).
Age Profile	<ul style="list-style-type: none"> • There is an older population in the study area relative to the Aberdeen City, Aberdeenshire and Scotland averages for those aged 65 and over, with 22% of people in the study area within this category compared to 16% for Aberdeen City, 20% for Aberdeenshire and 19% for Scotland. • The percentage of the population in the '15 and under' age group is in line with Aberdeen City as a whole (16%) but is lower than the averages for Aberdeenshire (19%) and Scotland (17%). • In terms of the working age population, the study area (62%) is broadly in line with the averages for Aberdeenshire (61%) and Scotland (64%). The proportion of those of working age in the study area, however, is notably less than the average for Aberdeen City (68%).
Employment	<ul style="list-style-type: none"> • The unemployment rate is low within the study area (3%) and is in line with the unemployment rates of Aberdeen City (4%) and Aberdeenshire (3%). • The unemployment rate across the region as well as in the study area is significantly lower than the national average of 7%.
Car/Van Availability	<ul style="list-style-type: none"> • There is a high car/van availability within the study area. The data shows that 79% of adults within the study area have access to a car or van, which is higher than the averages for Aberdeen City (69%) and Scotland (69%).
Distance Travelled to Work	<ul style="list-style-type: none"> • The most common travel to work destination is within the A947 study area itself (33%), with an additional 8% who work from home. • A total of 41% travel to work elsewhere in Aberdeen, including Aberdeen North (13%), the city centre (12%), Aberdeen West (9%) and Aberdeen South (7%). • 8% of people travelling to work from the A947 study area travel to somewhere in Aberdeenshire.
Transport Poverty	<ul style="list-style-type: none"> • 65% of the data zones in the study area are identified to be at medium risk of transport poverty. • 24% of the data zones in the study area are identified to be at high risk of transport poverty. These data zones are located in the north-west of the study area and around the northern section of Riverview Drive. • 12% of the data zones in the study area are identified to be at low risk of transport poverty. These data zones are located in the south-east of the study area in proximity to the A947/A96 roundabout.
SIMD	<ul style="list-style-type: none"> • There are no data zones in the study area within the 20% most deprived in Scotland according to the 2020 SIMD figures. The most deprived areas within the study area are located in the south-west and are within the 40% most deprived areas in Scotland. • The SIMD 2020 figures note that 77% of the data zones within the study area are located in the top 50% least deprived areas in Scotland.
Health & Physical Activity	<ul style="list-style-type: none"> • General health is shown to be good in the study area, with 83% reporting very good or good health. This is slightly lower than the average for Aberdeen City (85%) and the average for Aberdeenshire (86%), however it is higher than the average for Scotland (82%).

2.5 Transport Context

The key findings from a detailed review of the transport context for the study are presented below.

2.5.1 Active Travel

National Cycle Network

As shown in **Figure 2.3** below, the NCN1 features prominently in the area. NCN1 joins the study corridor in the south at Mugiemooss Road, routeing along Stonewood Road, Riverview Drive and joining the F&B Way in the north of the study area. The route is mostly formed of traffic-free sections throughout the study area, with small sections of on-road provision.

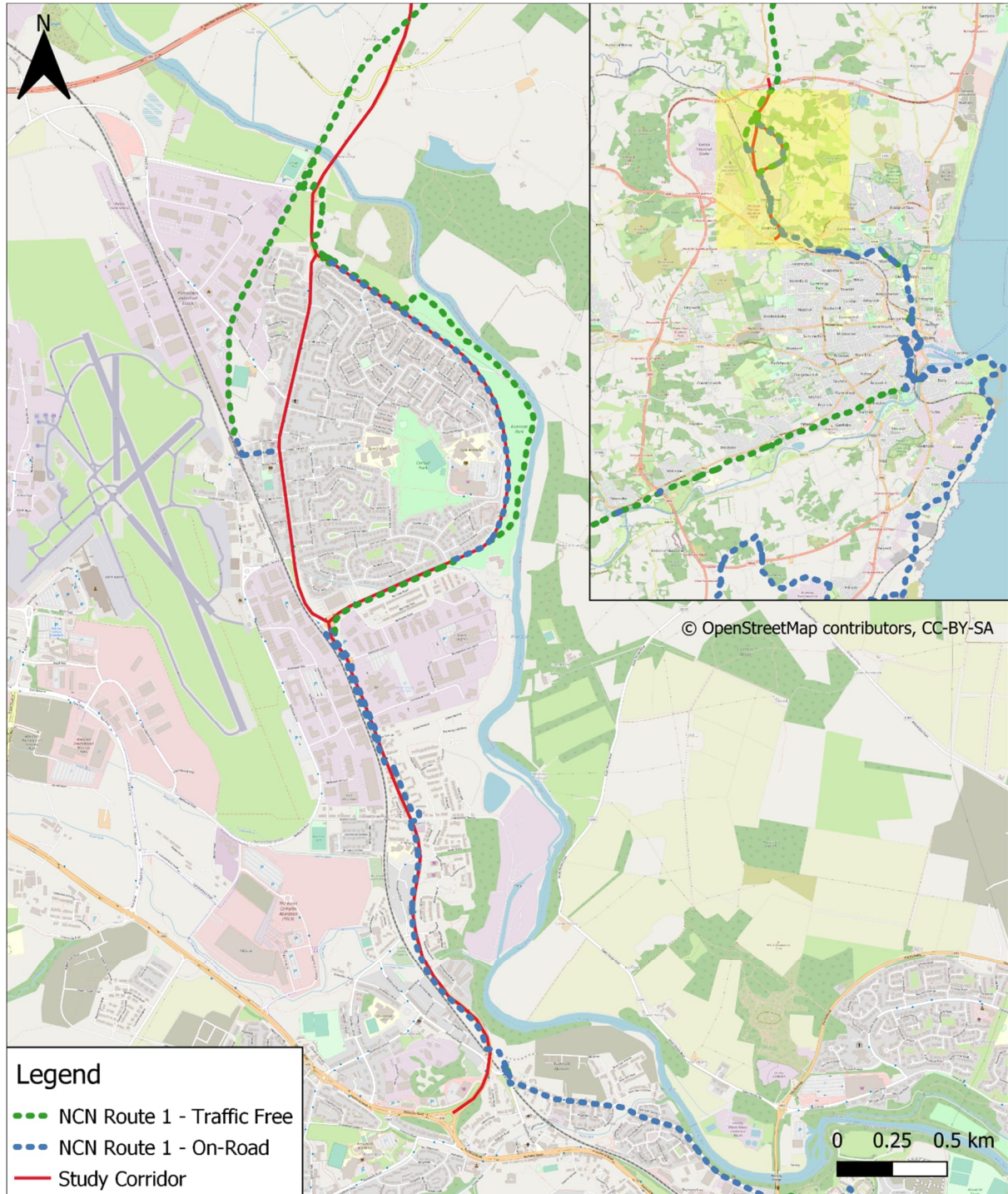


Figure 2.3: National Cycle Network

Active Travel Infrastructure

The existing active travel infrastructure within the study area is shown below.

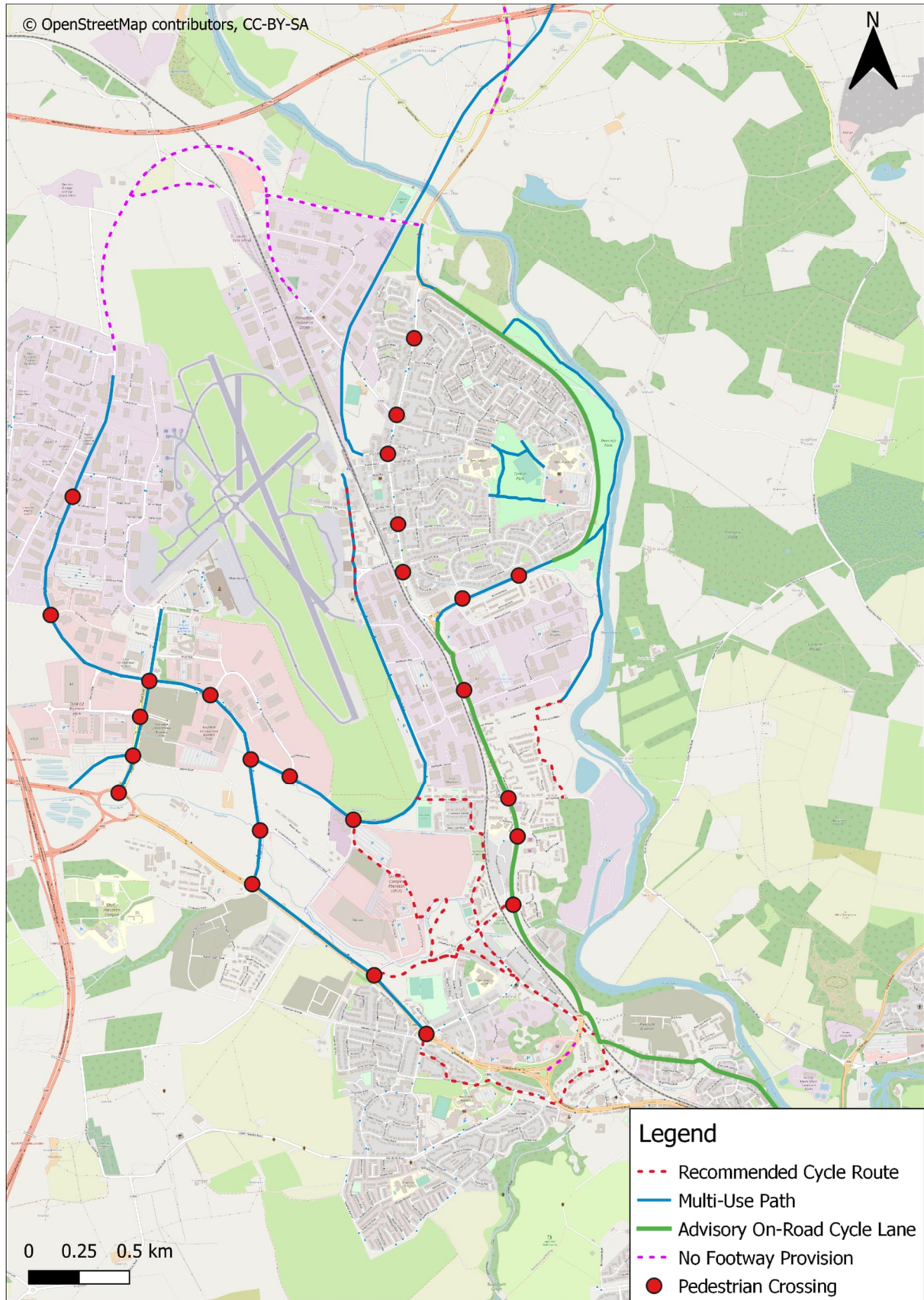


Figure 2.4: Active Travel Infrastructure within the Study Area

As shown, there are a number of active travel routes within the study area, including both on-road and off-road routes. The F&B Way and Riverside Path provide key links for pedestrians and cyclists in the north-west and east

of the study area respectively. On-road advisory cycle lanes connect Mugiemooss Road in the south-east of the study corridor to the north of the study corridor via Stonewood Road and Riverview Drive. As shown, there are few pedestrian crossing points on Stonewood Road or Riverview Drive to facilitate active travel movements.

Active Travel Counts

There are five active travel counters located in close proximity to the study corridor as shown in **Figure 2.5**. Analysis of the active travel counters has been undertaken, with key results presented below. There is a degree of variability across some of the counters, reflecting issues with the count technology in some instances. Average daily pedestrian and cycle counts have been used for the analysis, with a snapshot of average daily counts from 2019 illustrated in the diagram below.

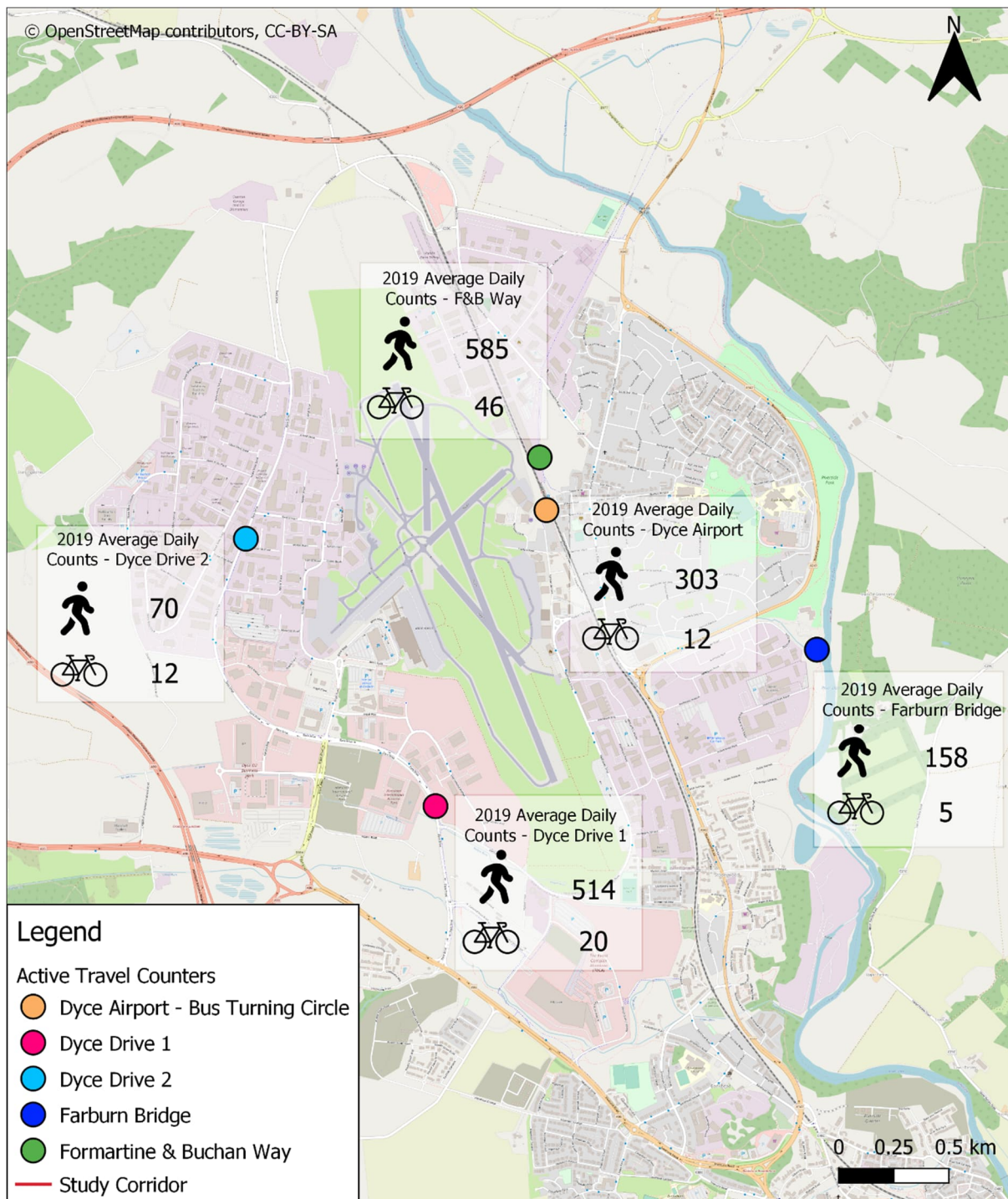


Figure 2.5: Active Travel Counters

2.5.3 Public Transport

Bus Priority Infrastructure

There is no bus priority infrastructure on the A947 corridor within the study area. Buses utilise Stoneywood Road, Victoria Street and Riverview Drive but are not given priority over general traffic on any of these routes.

Bus Patronage

In recent years, there has been a trend of ongoing decline in bus use in Scotland, a trend also evident in the North East, albeit not to the same extent as in some other parts of the country. To provide a baseline of bus patronage along the corridor that can be monitored in future years to assess the impact of any interventions that are implemented, data was provided by the two main bus operators that service the A947 corridor. Given commercial sensitivities, numbers have been presented as an index. FY2019/20 has been taken as the base year, as shown in [Table 2.2](#).

Table 2.2: Index of Year Patronage on A947 Corridor (19/20-21/22)

Financial Year	Index of Year Patronage on A947 Corridor	
	First Bus	Stagecoach
2019/20 (Base Year)	100	100
2020/21	38.4	35.7
2021/22	70.3	66.8

The significant decline in patronage in 2020/21 on the 2019/20 base year is attributed to the COVID-19 pandemic which placed significant restrictions on movement and discouraged use of public transport; consequently, contributing to a large decline in bus use. As shown in the table, bus use has recovered to an extent during 2021/22 although it remains significantly below that recorded during the 2019/20 base year.

Bus Journey Time Variability

A high-level analysis of bus stop reliability (delay and dwell times) has been conducted across ten stops serving First Bus services along the A947 corridor. [Figure 2.6](#) illustrates the location of these stops with the average recorded delay at each. [Table 2.3](#) shows a summary of the average length of delay as well as the dwell times at each stop.

It should be noted that:

- All times are in seconds;
- The data is for March to June 2019 (inclusive) and the data presents both delay and dwell times as day averages, therefore the average delay/dwell figures have been calculated subsequent to this across all months;
- There are eight bus services recorded as serving the stops (Service 17, 17A, 17B, N17, 18, 18A, 117 and 172) – the analysis has not been split by service number;
- A negative delay value at a stop is assumed to indicate that previously delayed services are generally (i.e. on average) able to recoup time at that stop;
- Victoria Street at McIntosh Crescent (ATCO639004751) is associated only with service #N17, a night only service and Stoneywood Road at Riverview Drive (ATCO639004702) is associated only with service #117, an airport service; and
- Services 17B, N17, 18A and 117 were subsequently cancelled or suspended as a result of COVID-19.

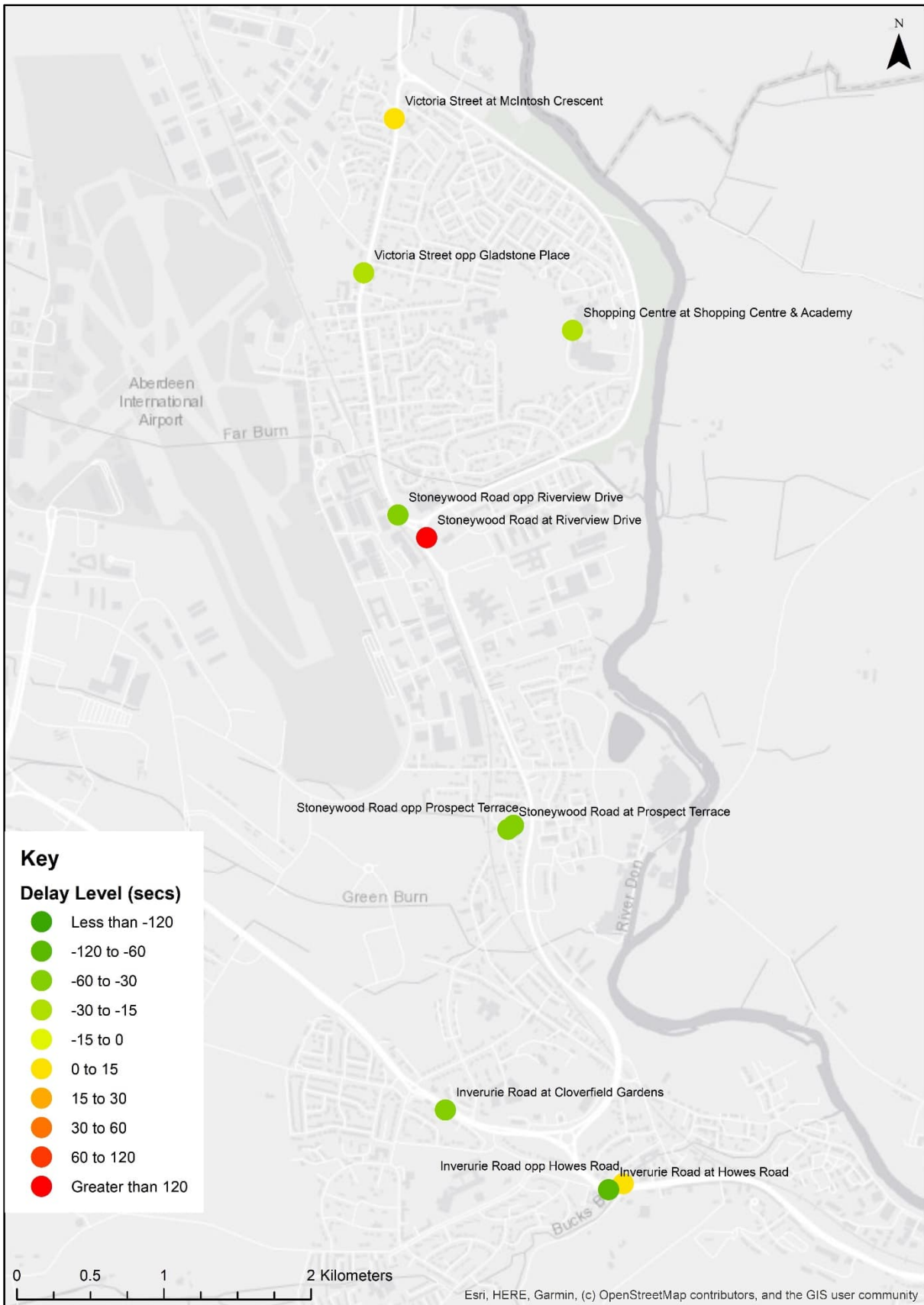


Figure 2.6: Average Delay at Bus Stops on A947 Corridor

Table 2.3: Average Length of Delay and Dwell Time at Bus Stops on A947 Corridor

Stop Name / Location	Delay		Dwell	
	Direction(s)	Average Delay (seconds)	Direction(s)	Average Dwell (seconds)
Inverurie Road opp Howes Road	Inbound	6	Inbound	16
Inverurie Road at Howes Road	Both	-83	Both	32
Inverurie Road at Cloverfield Gardens	Outbound	-46	Outbound	0
Stoneywood Road at Prospect Terrace	Outbound	-41	Outbound	27
Stoneywood Road opp Prospect Terrace	Inbound	-56	Inbound	26
Stoneywood Road opp Riverview Drive	Inbound	-57	Both	20
Stoneywood Road at Riverview Drive ³³	Inbound	170	Inbound	21
Victoria Street opp Gladstone Place	Outbound	-29	Outbound	29
Victoria Street at McIntosh Crescent ³⁴	Inbound	1	Both	17
Shopping Centre & Academy	Inbound	-22	Inbound	102

Stoneywood Road at Riverview Drive (located on the southbound carriageway of Stoneywood Road) is recorded as having the most significant delays on average across the bus stops. This stop serves only Service 117, routing from the airport via Wellheads Drive – Farburn Terrace – A947 Victoria Street. The level of delay at this location could therefore be an indicator of frequent congested traffic southbound along Victoria Street or it might be indicative of a more general pattern of delays coming from the airport. The dwell time at this location is broadly average across the stops.

Inverurie Road at Howes Road (located on the westbound carriageway of the A96) is recorded as having the least delays across the stops. This could be an indicator that time is generally able to be recouped at this location due to the relatively higher traffic flows along the dualled A96 westbound. The dwell time at this location is very slightly higher than the average across the stops. There is no correlation between the length of delay at each stop and the dwell time at that stop.

The variance in delay times between the months ranges from five seconds at the Shopping Centre & Academy to 42 seconds at Stoneywood Road opposite Riverview Drive. The variance in dwell times ranges from two seconds at Inverurie Road opposite Howes Road to 10 seconds at Victoria Street at McIntosh Crescent.

Rail Services

Within the study area, Dyce Rail Station is located on the Aberdeen to Inverness line. Dyce is a stop on the Aberdeen to Inverness service, Montrose to Inverurie service and services further south can be accessed via Aberdeen. The table below shows the approximate frequency of each of these services.

Table 2.4: Frequency of Services from Dyce Rail Station (Source: National Rail)

Destination	Frequency
Aberdeen	Approximately 40 services daily
Inverness	Approximately 10 services daily
Inverurie	Approximately 35 services daily
Montrose	Approximately 30 services daily

³³ Airport service #117 only – now withdrawn

³⁴ Night only service #N17 only – now withdrawn

2.5.4 Road Network

The A947 study corridor between the AWPR Parkhill Junction and the A96/A947 Junction is comprised of three key road links, as shown in **Figure 2.7** below.

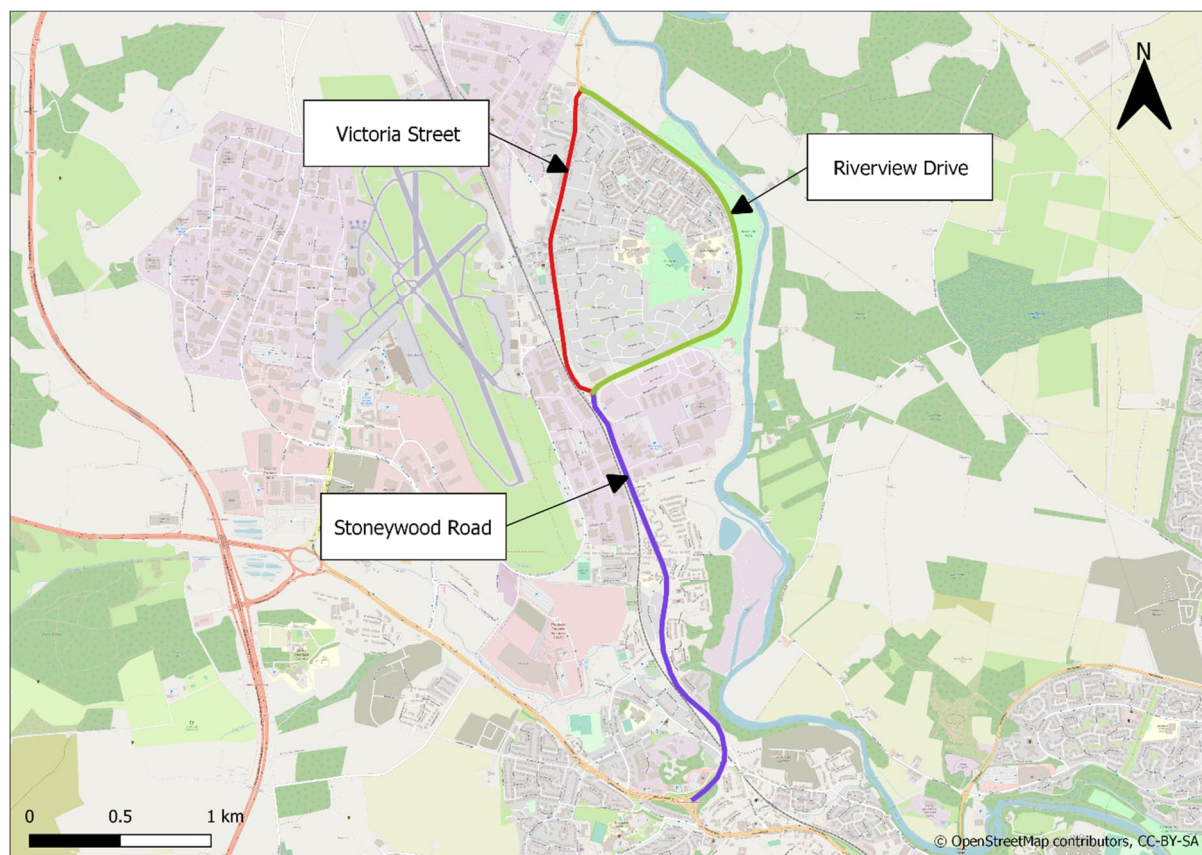


Figure 2.7: A947 Study Corridor Road Network

Stonewood Road comprises the section of the corridor between the A96/A947 Junction and the Stonewood Road/Riverview Drive roundabout. This section is approximately 2.5km long and is a two-lane single carriageway for the majority, with the exception of a short dual carriageway section at its southern end. This section has a speed limit of 40mph at its southern end which changes to 30mph approximately 500m north of the A96/A947 roundabout. This section provides access to the residential areas in the south of Dyce, as well as retail space and offices, including the Dyce headquarters of BP.

Riverview Drive is a two-lane single carriageway section of the study corridor which forms a loop around the east of Dyce, bypassing Victoria Street. It has a speed limit of 40mph and, as well as serving as a bypass of Dyce, provides access to Dyce Shopping Centre and to the residential areas in the east of Dyce. Riverside Park, a popular area for leisure activities, is also accessed from Riverview Drive. The road was redesignated as the A947 in the update to the ACC roads hierarchy in 2020.

Victoria Street forms the main thoroughfare through Dyce, containing a mix of retail units, restaurants and residential properties fronting onto the street. It is a two-lane single carriageway with a speed limit of 30mph and provides access to a number of key destinations in the area including Dyce Rail Station, the F&B Way and Aberdeen Heliport. Additionally, this section connects to Pitmedden Road and Wellheads Drive both of which facilitate movements to the business parks and industrial estates to the west of Dyce. Victoria Street was declassified from an A-class route (i.e. the A947) in the update to the ACC roads hierarchy and is now a tertiary route.

Traffic Volumes

There is an automatic traffic counter (ATC) located on Stoneywood Road. The table below provides a monthly summary from the counter for 2019, 2020 and 2021. The effects of the COVID-19 pandemic on traffic movements are evident, particularly throughout 2020.

Table 2.5: Traffic Count Data from Stoneywood Road (Source: ACC)

Month	Average Daily Traffic Flows in Both Directions				
	2019	2020	2021	% Change (2020-2021)	% Change (2019-2021)
January	14,707	14,068	8,977	-36%	-39%
February	15,434	14,578	10,026	-31%	-35%
March	15,081	11,709	11,345	-3%	-25%
April	14,894	6,153	12,045	96%	-19%
May	15,001	7,596	12,489	64%	-17%
June	15,001 (est.)	9,983	12,883	29%	-14%
July	15,001 (est.)	11,112	12,198	10%	-19%
August	14,886	10,814	12,652	17%	-15%
September	14,825	11,941	12,750 (est.)	7%	-14%
October	14,484	12,039	12,167 (est.)	1%	-16%
November	15,079	12,172	12,968 (est.)	7%	-14%
December	13,934	11,768	12,123 (est.)	3%	-13%

Road Safety

The table below shows the number of slight, serious and fatal road incidents involving pedestrians, pedal cycles, and buses as well as all vehicles between 2016 and 2020 along the study corridor.

Table 2.6: Road Safety Incidents along Study Corridor (2016-2020)³⁵

	Pedestrians			Pedal Cycles			Buses			All Vehicles		
	Slight	Serious	Fatal	Slight	Serious	Fatal	Slight	Serious	Fatal	Slight	Serious	Fatal
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	1	0	1	0	0	0	0	0	0	2	0	1
2018	0	0	0	1	1	0	0	0	0	1	1	0
2019	0	0	0	0	1	0	0	0	0	2	1	0
2020	0	2	0	0	0	0	0	0	0	0	2	0

One fatal incident occurred during the 2016-2020 time period which involved a pedestrian in 2017. The incident occurred just north of the A96/A947 Junction. Seven incidents were recorded and marked as "slight" in nature and four were marked as "serious" in nature over the five-year period.

³⁵ Created using information from CrashMap - <https://www.crashmap.co.uk/>

2.5.6 Freight

Freight Routes

The diagram below provides an overview of the freight routes on the study corridor. There are multiple industrial estates which are a key origin and destination for freight including Kirkhill Industrial Estate to the north-west and Wellheads Industrial Estate to the west of the study corridor. There are restrictions in place on Victoria Street, banning vehicles over 7.5 tonnes in weight. There are height restrictions on Farburn Terrace caused by a low bridge, which prevents vehicles over 4.7m high from using the route.

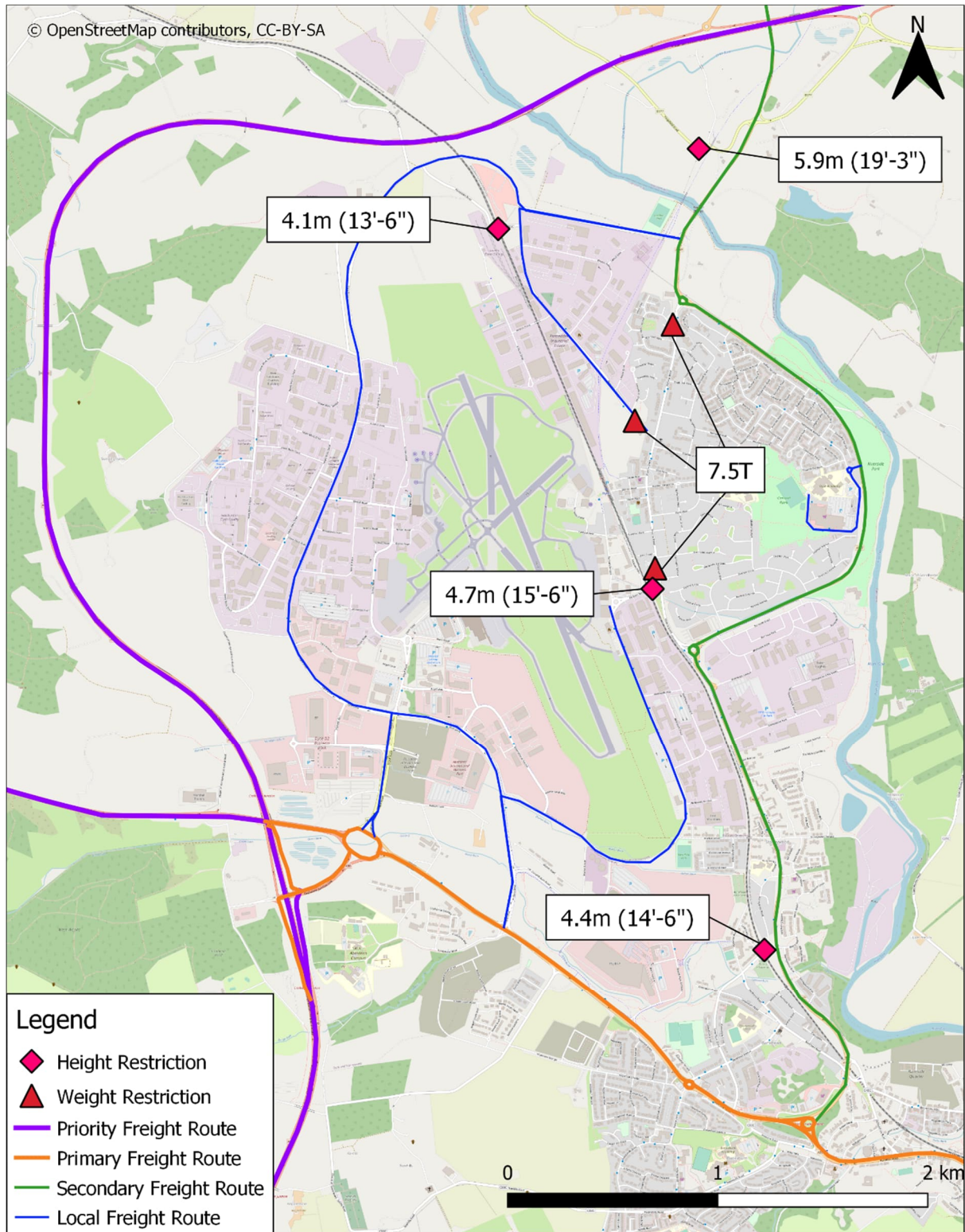


Figure 2.8: Freight Routes

Freight Counts

Data has been obtained from ACC on two-way HGV movements from the automatic traffic counter on Stonewood Road between March 2020 and September 2021. **Figure 2.9** below shows freight movement trends through this period.

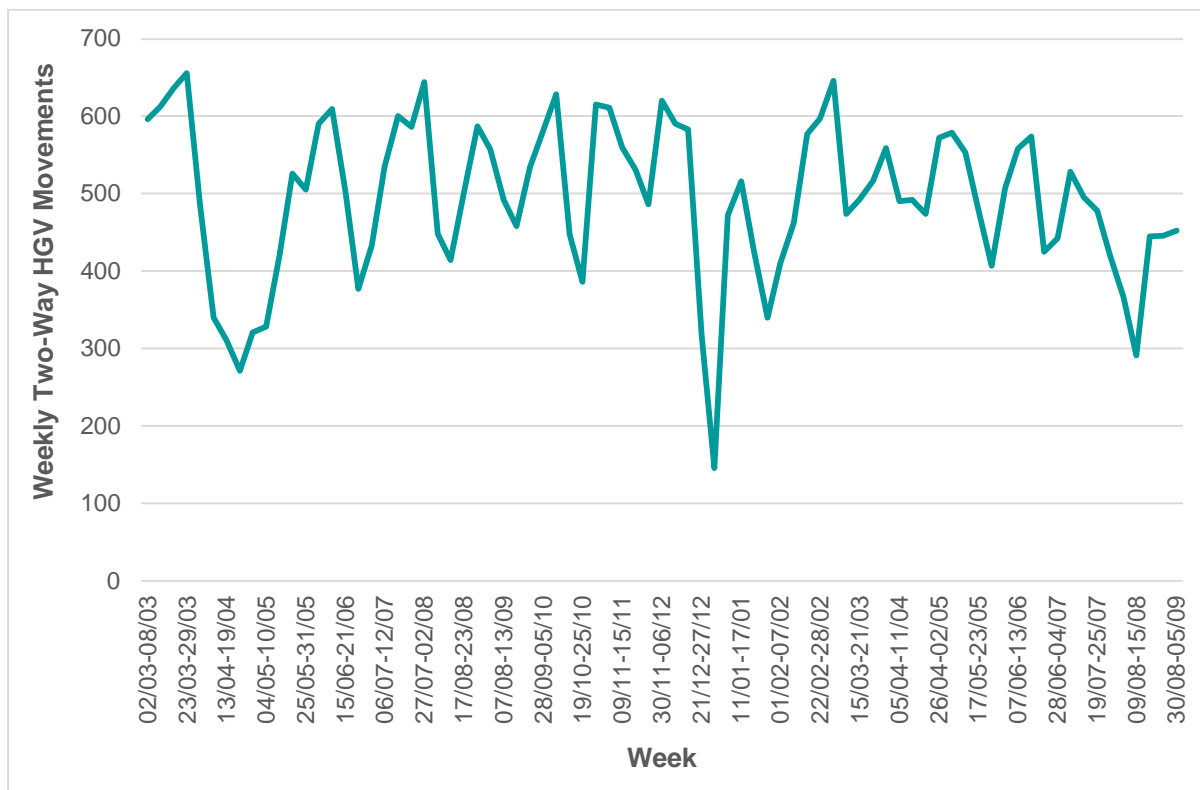


Figure 2.9: Freight Counts

The data is slightly limited given it is only available between 2020 and 2021 meaning that the majority of the data is from during the COVID-19 pandemic. It can be seen that there was a significant decline in HGV traffic immediately after COVID-19 restrictions were introduced in March 2020, however this recovered relatively quickly.

Other than the period immediately following the introduction of COVID-19 restrictions, the HGV numbers follow a pattern of relatively consistent peaks and troughs throughout the year other than a large decrease during the week of Christmas.

2.5.7 Electric Vehicles

The diagram below shows the location of EV charging infrastructure in relation to the study corridor and ACC area based on ChargePlace Scotland data.

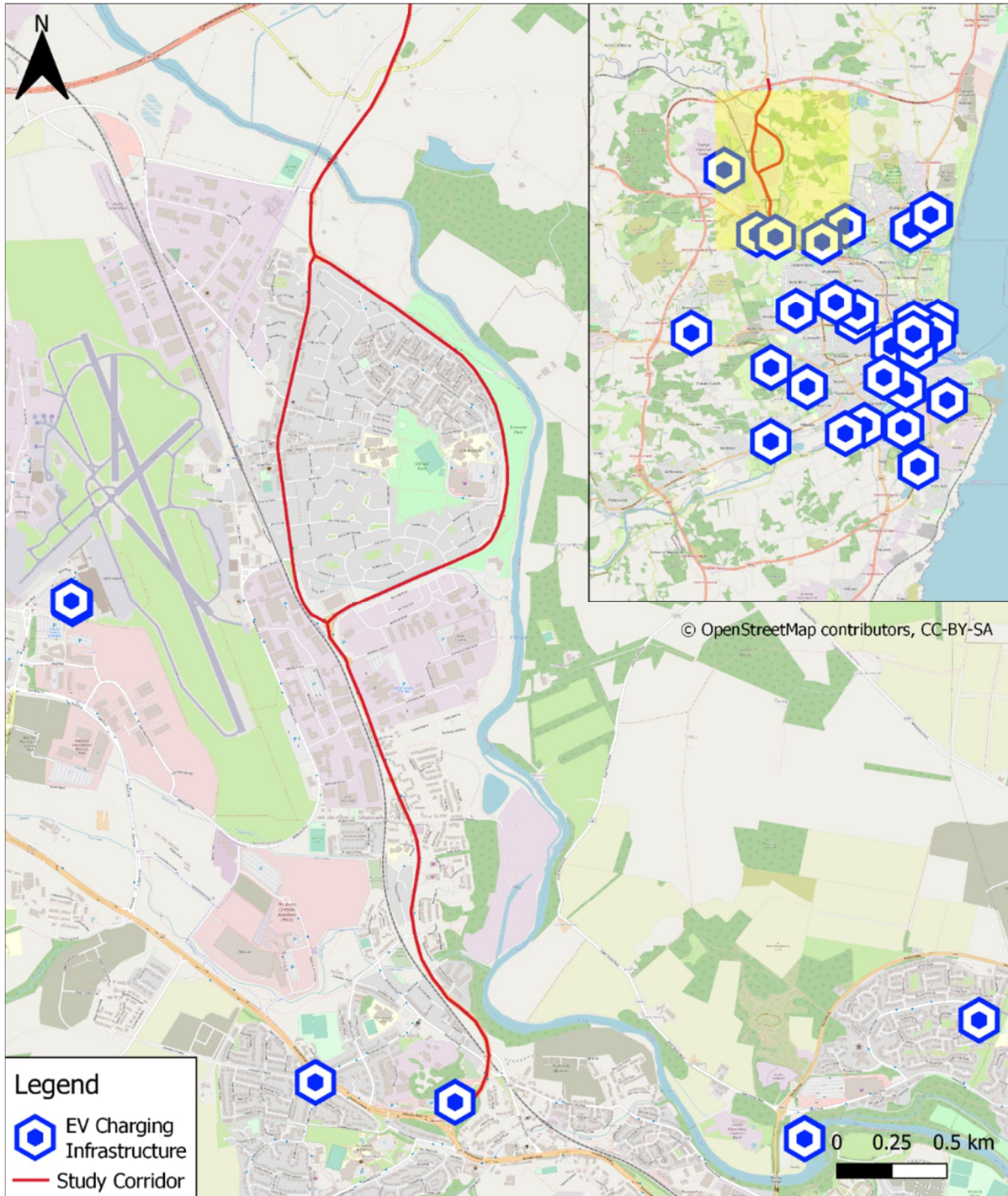


Figure 2.10: EV Charging Infrastructure

As shown, there is limited EV charging infrastructure on the study corridor. There are EV charging points in the south of the study corridor, close to its junction with the A96 and at Aberdeen International Airport. It is noted that in January 2022, the Scottish Government published a new draft vision statement for public electric vehicle charging in Scotland. This notes a "new public electric vehicle charging fund will be launched in Scotland which seeks to attract investment from the private sector. This fund will provide up to £60 million to local authorities over the next four years with approximately half of this funding anticipated to be invested from the private sector. This step has the potential to double the size of the public charging network in Scotland."³⁶

³⁶ [A new vision for electric vehicle charging infrastructure in Scotland | Transport Scotland](#)

2.6 Planning Context

The review of the planning context included a review of the Proposed Local Development Plans (LDPs) of ACC and Aberdeenshire Council and a review of relevant planning applications along the corridor. This section provides a summary of the key findings from this review, with full details provided as part of [Appendix A](#).

2.6.1 Development in Aberdeenshire

The Proposed LDP includes housing allocations for a number of settlements to the north of the study area within Aberdeenshire, including in Newmachar (505 homes), Oldmeldrum (413 homes), Turriff (784 homes), Banff (600 homes) and Macduff (22 homes). There are two relevant planning applications within the vicinity of the study corridor in Aberdeenshire as follows:

- APP/2012/3943 – This application refers to the OP1 allocation in Newmachar within the Proposed LDP 2020. It is for a residential development, primary education provision and associated infrastructure. The application was approved in 2015 for 140 houses; however, there has been no build out at the site to date.
- APP/2021/2089 – This application refers to the erection of 34 houses and associated infrastructure on the land of Meldrum House, Oldmeldrum. The application was submitted in September 2021 and approved in July 2022.

2.6.2 Development in Aberdeen City

Within the ACC local authority area, there are 13 allocations within the Proposed LDP 2020 which are of relevance to the A947 Multi-Modal Corridor Study. The most significant allocation for housing in the area is OP9 at Grandhome, with plans for 4,700 homes. Overall, the Proposed LDP 2020 includes allocations for 9,345 homes and 101ha employment land within the vicinity of the A947 corridor.

There are two relevant planning applications within the Aberdeen City section of the study corridor as follows:

- 181050/DPP – This application refers to a residential development comprising 283 flats over five storeys, associated infrastructure, access roads and landscaping to the east of Stonewood Road south of Riverview Drive.
- 210665/DPP – This application refers to the erection of an energy storage facility with associated works to the west of Victoria Street north of Farburn Terrace. The application was approved in September 2021.

2.7 Environmental Context

The *Problems, Issues, Constraints and Opportunities Technical Note* included in [Appendix A](#) includes a detailed overview of the environmental considerations which are present along and in the vicinity of the A947 corridor and is supported by Environmental Constraints Mapping. The review provides consideration of the following:

- Ecology and Biodiversity – identifying designated ecological interests within the study area;
- Landscape Character – describing the landscape character within the study area;
- Land Use – providing an overview of the existing use of the land within the study area;
- Cultural Heritage and Archaeology – identifying designated heritage and archaeological interests within the study area;
- Water Resources and Flood Risk – identifying key waterbodies/quality and the risk of flooding within the study area;
- Outdoor Access and Recreation – identifying outdoor recreational resources within the study area; and
- Air Quality – identifying any Air Quality Management Areas (AQMAs) within the study area.

The key points emerging from the review of the environmental context include:

- There are segments of the A947 with a high likelihood of river flooding where they cross the River Don and its tributaries, and along the course of the river which runs adjacent to the study corridor;
- There are no environmental or landscape designations within the study area;
- There are listed buildings within the study area but no other designations for cultural heritage or archaeology; and
- There are several core paths which intersect or share the A947.

3. Public and Stakeholder Engagement

3.1 Introduction

This chapter provides an overview of the public and stakeholder engagement exercises that were undertaken as part of this study. Further detail on the first phase of engagement is provided in the *Problems, Issues, Constraints and Opportunities Technical Note* included in [Appendix A](#) and further detail on the second phase of engagement is provided in the *Part 2 Consultation Outcomes* included in [Appendix E](#).

3.2 Part 1 (Autumn 2021)

The purpose of the initial stage of engagement, undertaken in Autumn 2021, was to determine the problems, issues, constraints and opportunities along the study corridor. A number of steps were involved in delivering the first stage of the engagement process, as outlined below.

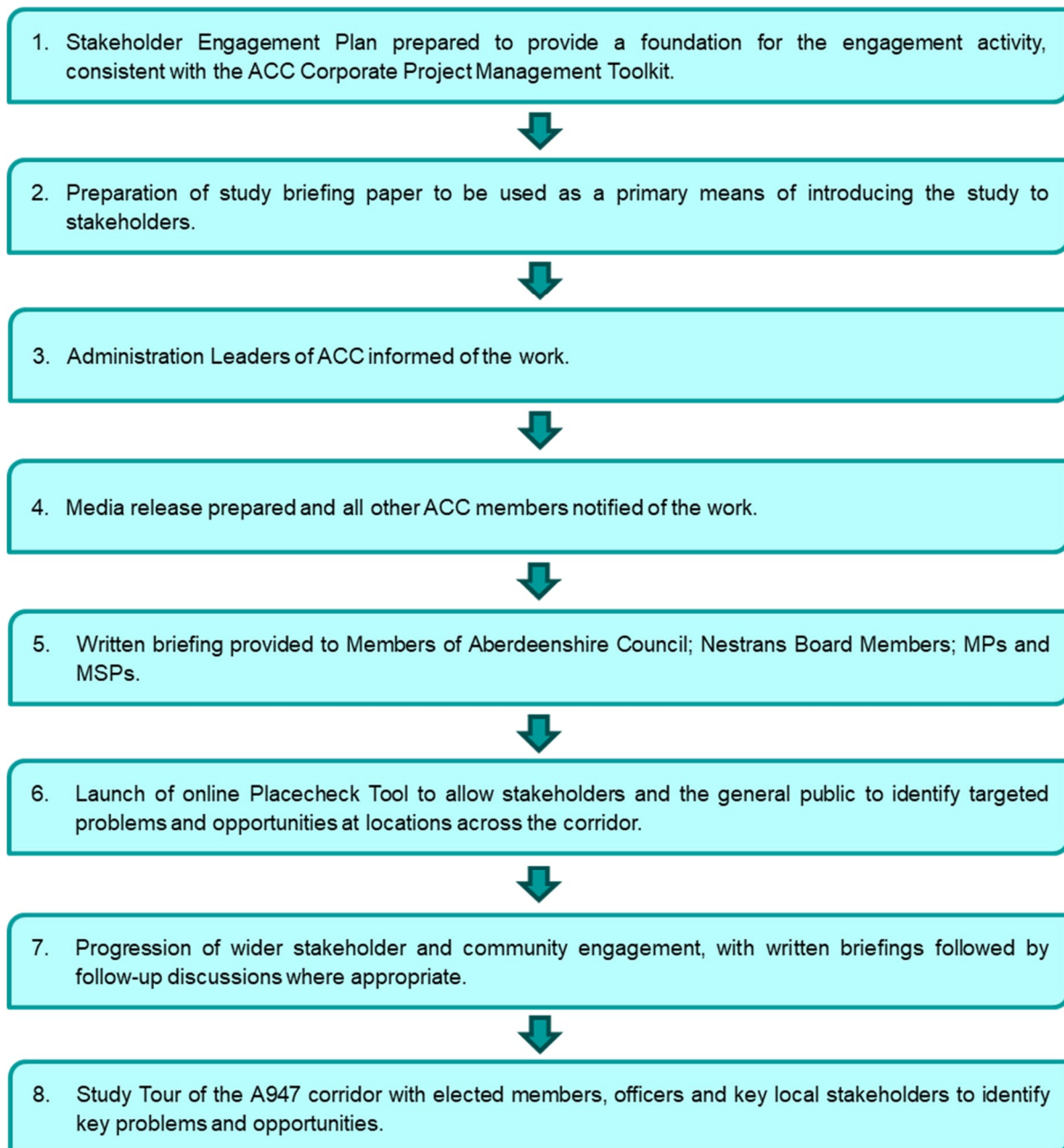


Figure 3.1: Part 1 Engagement Activities

3.2.1 Stakeholder Discussions

The table below presents the key findings from this phase of stakeholder engagement.

Table 3.1: Key Outcomes from Part 1 Stakeholder Engagement

Stakeholder	Key Findings
Aberdeen Cycle Forum	<ul style="list-style-type: none"> • There is a general lack of wayfinding signage for cyclists on the study corridor. • It was noted that access controls are not suitable for all bike types e.g. adapted bikes, cargo bikes, bikes with trailers etc. • There is a lack of cycle lane lead-ins ahead of advanced stop lines at box junctions.
ACC, AC and Nestrans Officers	<ul style="list-style-type: none"> • Options on the Riverside Path are constrained by ownership and wildlife habitats. • There is an opportunity to influence drivers to use Riverview Drive rather than Victoria Street. • There is variable quality of infrastructure for active travel on Victoria Street. • There are limited crossing opportunities on Victoria Street, and few dropped kerbs for those with mobility issues. • The rail service is good but access to the station is difficult for all users, particularly active travel users. • Issues noted with overspill at the Dyce Rail Station car park. • It was noted that congestion issues affecting car users and public transport on the corridor have been alleviated through the opening of the AWPR and the majority of issues on the corridor are now relating to active travel. • There are opportunities to improve east to west connectivity on the study corridor.
Aberdeen International Airport	<ul style="list-style-type: none"> • It was noted that car travel is the dominant mode of travel to the airport, despite staff often living in close proximity. • There are issues for accessing the airport sustainably as shift times are often outwith the operation times of public transport and weather and darkness creates the perception of being unsafe for active travel. • There is an opportunity for a direct bus service between Dyce Rail Station and the airport, which could also integrate with TECA. • It was noted that there is potential for improved active travel links between the study corridor and the airport.
First Aberdeen	<ul style="list-style-type: none"> • The COVID-19 pandemic has had a particularly significant impact on bus service use within the study area, partly due to much lower demand for travel to Aberdeen International Airport. • The width of Victoria Street was noted as a constraint on the route. • Increased use of Riverview Drive for private car journeys would better facilitate bus movements on Victoria Street. • On-street parking on Mugiemoss Road can cause delays for buses.
Newmachar Community Council	<ul style="list-style-type: none"> • Introducing lighting between the AWPR Parkhill junction and the Victoria Street/ Riverview Drive Roundabout could improve safety and pedestrian comfort and improve consistency of lighting for drivers.
Scottish Enterprise	<ul style="list-style-type: none"> • Scottish Enterprise support a focus on sustainable options which contribute to the transition to a net zero economy in the North East. They are actively engaged with regional partners to deliver transformational economic projects in the North East and sustainable transport could have a positive impact on promoting these projects.

3.2.2 Study Tours

To aid identification of problems and opportunities along the study corridor, AECOM led a Study Tour which representatives from ACC, Nestrans and other key stakeholders attended. An additional Study Tour was held with elected members. A summary of the key findings is presented in the table below.

Table 3.2: Key Findings from A947 Study Tours

Location	Problems/Opportunities
Dyce Rail Station	Problems
	<ul style="list-style-type: none"> • Lack of wayfinding signage for active travel users.

Location	Problems/Opportunities
	<ul style="list-style-type: none"> Route to access the F&B Way from the rail station is through the car park. Station access is poor for active travel.
	<p>Opportunities</p> <ul style="list-style-type: none"> Potential to create active travel route through car park. Potential to formalise link between Dyce Rail Station and Union Row.
A947/Dyce Drive Junction	<p>Problems</p> <ul style="list-style-type: none"> No direct cycling provision (alternative route via underpass is convoluted – underpass to connect to F&B Way requires cyclists to dismount and there are perceived personal security issues due to a lack of lighting). Lack of wayfinding signage for equestrian users. Overgrown vegetation on approach to F&B Way.
	<p>Opportunities</p> <ul style="list-style-type: none"> Opportunity to improve wayfinding signage. Potential to create a direct active travel link between Dyce Drive and Riverview Drive.
Victoria Street/Pitmedden Road Junction	<p>Problems</p> <ul style="list-style-type: none"> Width of junction encourages increased vehicle speeds. Guardrails present safety issues for cyclists and affect placemaking opportunities.
	<p>Opportunities</p> <ul style="list-style-type: none"> Wide junction has potential to be reduced in footprint. Opportunity to reconnect Dyce Parish Church and Dyce Church Hall via improved crossings.
Victoria Street	<p>Problems</p> <ul style="list-style-type: none"> Bus laybys cause difficulties for buses rejoining carriageway. Footway surfacing is poor. History of issues at the zebra crossing near Tesco including conflicts relating to parking and cash machine use.
	<p>Opportunities</p> <ul style="list-style-type: none"> Opportunity to improve placemaking on the route. Opportunity to widen footways. Potential to introduce restrictions on traffic movement. Potential to introduce segregated cycle lanes. Potential to reduce access widths to improve facilities for pedestrians. Opportunity to prevent through traffic movements on Victoria Street.
Victoria Street/Station Road/Gordon Terrace	<p>Problems</p> <ul style="list-style-type: none"> Lack of cohesion at junction and space is severed by the main road. Lack of crossing facilities. Lack of infrastructure to connect the station to community facilities and green space near Dyce Primary and Central Park.
	<p>Opportunities</p> <ul style="list-style-type: none"> Opportunity to create quieter streets through traffic management and enhance placemaking. Opportunity for greater placemaking around the war memorial which currently acts as a mini roundabout.
Riverview Drive	<p>Problems</p> <ul style="list-style-type: none"> Discontinuous footway provision and lack of crossing points. Variable surfacing on Riverside Path as well as narrowing of the path. Limited linkages between the Riverside Path and housing developments.
	<p>Opportunities</p> <ul style="list-style-type: none"> Opportunity to provide segregated cycle facilities as part of NCN1. Potential to narrow some junctions to reduce vehicle speeds.

Location	Problems/Opportunities
	<ul style="list-style-type: none"> Further enhancements could be made to the Riverside Path. Potential for a formalised crossing point at the northern end of Riverview Drive.
Stoneywood Road	Problems <ul style="list-style-type: none"> Inconsistent advisory cycle lanes. Pinch point at Stoneywood Terrace/Stoneywood Road junction resulting in a break in footway provision.
	Opportunities <ul style="list-style-type: none"> Potential for segregated cycle facilities on Stoneywood Road. Opportunity to review movements on Stoneywood Road and reduce junction radii where possible to reallocate space for active travel. Opportunity to increase footway provision to match pedestrian desire lines.
General	Problems <ul style="list-style-type: none"> Limited provision for horse riders. Bus routes are limited by width of some roads. Long bus journey times to the city centre. Speed of general traffic off-putting to cyclists. Some issues with drainage meaning paths can be flooded. Instances of rat-running through areas of Dyce such as the Dandara Scheme in Stoneywood.
	Opportunities <ul style="list-style-type: none"> Provide wayfinding signage for the F&B Way. Provide more consistent bus stop provision. Potential to reconfigure existing bus routes to include the new housing development on Mugiemooss Road. Potential to adopt the 20-minute neighbourhood concept in Dyce.

3.2.3 Placecheck

To allow stakeholders and the general public to identify targeted problems and opportunities at locations throughout the corridor, an online 'Placecheck' was available from Wednesday 17th November 2021 until Tuesday 11th January 2022. Placecheck is an online map-based exercise that allows the user to highlight the location of specific issues/problems by placing a point at the location and adding the detail of the problem. Placecheck asks three questions: what do we like about a place; what do we dislike about a place; and what do we need to work on?

A total of 121 comments were received from 28 different participants, with the split across response categories shown below.

Table 3.3: Split of Responses to the Online Placecheck

Category	Number	Percentage
Things I like	13	11%
Things I don't like	60	50%
Things to work on	48	40%

An initial cleaning of responses was undertaken to identify any comments that did not require further analysis. 24 comments were identified as not requiring further analysis. Common reasons included positive statements about the study corridor (8), issues being considered as part of other ongoing studies (6), comments relating to areas outwith the study area (5), repeated comments from the same user (3), and lack of clarity regarding the content of the comment (2).

The remaining 97 comments were categorised into themes to determine the key problems and opportunities emerging from this element of the consultation exercise. The table below provides a summary of the themes raised. It should be noted that comments could cover a number of themes and therefore numbers do not total 97.

Table 3.4: Description of Themes Emerging from Placecheck Exercise

Theme	Description	No. of Times Raised
Cycling Infrastructure	Comments relating to lacking infrastructure (21) particularly dropped kerbs, opportunities for new cycling infrastructure (8), poor quality of existing advisory lanes (4), opportunities for new cycling infrastructure along the River Don (5), opportunities for upgrades to existing cycling infrastructure (3) and opportunities for realignment of NCN1 route along the River Don (3).	44
Pedestrian Infrastructure	Comments relating to lacking pedestrian infrastructure (7), upgrades to existing paths to enhance pedestrian connectivity (6) and opportunities for new footpaths along the River Don (6).	19
Maintenance	Comments relating to maintenance of overgrown trees (6), maintenance of cycle infrastructure on Riverview Drive (2), maintenance of footways along Victoria Street (1), maintenance of road surface on Stonewood Road (1) and maintenance of the underpass at Millhill Brae (1).	11
Driver Behaviour	Comments relating to vehicles travelling in excess of the speed limit (3), vehicles ignoring cycle provision (3), vehicles flouting 'no entry' signs (2), vehicles ignoring double yellow line restrictions (1) and vehicles failing to stop at informal crossing points (1).	10
General Traffic	Comments relating to volume of traffic (4), safety concerns when vehicles reverse onto Victoria Street (2), congestion at car parks (2) and high volume of through-traffic on Victoria Street (1). One comment proposed opening barriers on Market Street during times when Farburn Terrace is temporarily closed.	10
Active Travel Priority	Comments relating to priority for active travel modes at junctions (3), traffic light sensitivity to oncoming cyclists (2), early release for cyclists at traffic lights (1), enhanced priority for sustainable modes on Victoria Street (1) and access for cyclists through barriers on Market Street (1).	8
Surfacing	Comments relating to poor quality of surface for cycling (4), poor quality of footways (2) and poor quality of surface along the F&B Way (2).	8
Accessibility	Comments relating to issues with accessing the F&B Way (3), barriers blocking access for recumbent cycles and cargo bikes (2) and steps preventing access by cycle (1).	6
Crossing Facilities	Comments include locations that are considered dangerous for crossing (2), locations where new active travel crossing facilities would be beneficial (1), issues with existing crossing facilities (1) and the potential for upgrade of existing crossing facilities (1).	5
Junction Layout	Junction locations along the corridor that are problematic and would benefit from review include the B977 slip road (1), Skene Place (1), Netherview Avenue (1), Bankhead Avenue (1) and the access road to McDonald's (1).	5
Signage and Information	Comments relating to lack of consistent wayfinding signage for active travel users to path facilities along River Don (2) and Stonewood Drive (1), lack of information signage regarding other users (1) and lack of directional signage at key junctions for vehicle drivers (1).	5
Lighting	Comments relating to the lack of lighting provision increasing security concerns (2), lighting being obstructed by overgrown trees and vegetation due to its location (1) and opportunity to increase the use of the F&B Way through an increase in lighting provision (1).	4
Width	Comments relating to narrow path on the F&B Way (1), at the access to Dyce Rail Station (1) and on the footway along Stonewood Road (1). Further comment relating to the narrow width of Mugiemoos Road for larger vehicles and buses (1).	4

Theme	Description	No. of Times Raised
Parking	Comment relating to on-street parking on Victoria Street creating a dangerous environment for pedestrians and a comment regarding parked cars impeding visibility for pedestrians when crossing the road.	2
Conflict Between Users	Problem relating to conflict between users on footway designated as shared use.	1
Environment	Problem relating to sections of footways prone to flooding.	1

3.2.4 A947 Corridor – School Engagement

A workshop session was carried out on 20th May 2022 with one Primary 7 class at Stoneywood School. Pupils were given a presentation on the role of a Transport Planner and then were asked to think about what they like and don't like with the transport network in their local area using large maps and sticky notes. Approximately 25 pupils took part in the workshop, allowing them to consider how the transport network in Dyce could be improved.

The table below provides a summary of the key points of feedback from the workshop with pupils.

Table 3.5: Key Findings from School Engagement Workshop

Things I like	Things I don't like	Things to work on
<ul style="list-style-type: none"> Riverside Path The underpass of the A96 providing access to TECA The paths around TECA provide good access to this facility 	<ul style="list-style-type: none"> Pot holes that make it hard to cycle Vehicles travelling too fast Vehicles parking on double yellow lines at the school Noise concerns due to the volume of traffic Not enough safe crossing facilities 	<ul style="list-style-type: none"> Provision of additional crossing facilities Addition of scooter facilities on the corridor

3.3 Part 2 (Summer 2022)

The second stage of consultation was undertaken in Summer 2022 and focused on gaining public and stakeholder feedback on the six devised option packages for the corridor as outlined in Section 6.8.2. The feedback received will help to inform the appraisal of each option package in terms of public acceptability. The consultation period lasted four weeks between 22nd July 2022 and 19th August 2022.

3.3.1 Virtual Consultation Room

Consultees accessed study information through the AECOM-hosted Virtual Consultation Room which was linked through the ACC website. This interactive platform, as shown in Figure 3.2, displayed materials related to the study Transport Planning Objectives (TPOs), problems, issues, constraints and opportunities and option packages showing indicative layouts, benefits, design considerations and precedent images. The online feedback form was also linked through this platform.

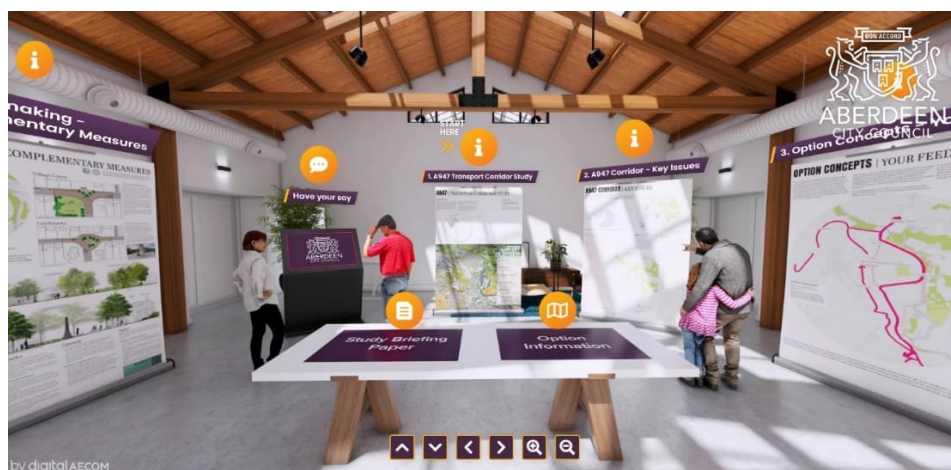


Figure 3.2: Virtual Consultation Room

3.3.2 Feedback Form

A feedback form was developed to collate responses to inform the appraisal. It sought views on:

- Current use of the A947 corridor;
- Option concepts, including anticipated future behaviour;
- Prioritisation of option packages, in form of a ranking; and
- The accessibility of the consultation process, to inform the planning of future consultations.

Respondents were additionally asked a series of 'About You' questions to assess the representativeness of the sample.

Two versions of the questionnaire were available depending if the respondent was a member of the public or responding on behalf of an organisation. The questionnaire structure and topics were consistent but while the public version asked about potential changes to mode choice as a result of the implementation of option packages, the organisation version asked about potential impacts on the operation of the organisation.

The questionnaire was hosted on the Microsoft Forms platform and directly linked to the online consultation room. Printed versions of the questionnaire were available for those attending the in-person drop-in events to submit their responses.

3.3.3 Public Drop-In Events

The second phase of consultation also included both an in-person drop-in event and online live Q&A sessions (hosted through the Virtual Consultation Room). The drop-in event took place in Dyce Church Hall on Wednesday 27th July between 16:00-20:00 and the online live Q&A sessions took place on Wednesday 10th August and Wednesday 17th August, both from 19:00-20:00.



Figure 3.3: Public Drop-In Event at Dyce Church Hall

During the in-person event, attendees were provided with the opportunity to look at hard copies of the consultation materials available online and discuss the study in greater depth with members of the project team. The overall feedback for the option packages was positive, with a summary of the key points of feedback as follows:

- A member of a cycling group supported the plans to introduce segregated cycling facilities throughout Dyce, especially along Victoria Street due to their past experiences cycling along this route.
- Local residents welcomed the proposed placemaking improvements along Gordon Terrace at the existing war memorial as this would improve the aesthetics of their local area.
- Current vehicle speeds throughout large parts of Dyce were thought to be currently too high and not observed by the majority of road users. One member of the public raised Riverview Drive as a specific section where vehicle speeds are a problem.

3.3.4 Consultation Promotion

In order to inform people about the consultation, several methods were used to promote the Virtual Consultation Room, public drop-in event and online Q&A including:

- Social media posts from ACC and Nestrans;
- Emails direct to key stakeholders; and
- Emails direct to Community Councils.

Local Elected Members, MSPs and MPs were also contacted to raise awareness of the consultation and support its promotion.

3.3.5 Responses

Table 3.6 below provides a summary of the responses received at this stage of the consultation.

Table 3.6: Type of Respondent by Response Mechanism

	Online Questionnaire	Online Q&A	Direct Email	Total	%
General Public	17	1	0	18	95%
Organisations	0	0	0	0	0%
Elected Members	0	0	1	1	5%
Total	17	1	1	19	100%

Detailed findings from the consultation are presented in *Part 2 Consultation Outcomes* (**Appendix E**) and relevant feedback has been incorporated within the Public Acceptability section of the Deliverability Appraisal of each option package in **Chapter 8**.

4. Problems and Opportunities

4.1 Introduction

This chapter identifies actual and perceived PICO within the study area. Within STAG, PICO are described as follows:

- **Problem:** existing and future problems within the transport and land use system;
- **Issues:** uncertainty that the study may not be in a position to resolve, but must work within the context of;
- **Constraints:** representing the bounds within which a study is being undertaken;
- **Opportunity:** changes to improve the transport and land use system to realise opportunities.

Throughout this chapter, localised PICO are presented along various sections of the corridor before consideration is given to non-location specific issues and wider issues that should be borne in mind as the study progresses. The key below is used across the PICO diagrams in the following sections.

Problem
Issue
Constraint
Opportunity
Other

4.2 Localised Corridor Review

4.2.1 AWPR to Dyce Drive (North)



Figure 4.1: Location-Specific Issues between the AWPR and Dyce Drive (North) (Image Source: Google Earth)

4.2.2 Riverview Roundabout (North)



Figure 4.2: Location-Specific Issues at Riverview Roundabout (North) (Image Source: Google Earth)

4.2.3 Riverview Drive (North)



Figure 4.3: Location-Specific Issues on Riverview Drive (North) (Image Source: Google Earth)

4.2.4 Riverview Drive (South)



Figure 4.4: Location-Specific Issues on Riverview Drive (South) (Image Source: Google Earth)

4.2.5 Victoria Street (North)



Figure 4.5: Location-Specific Issues on Victoria Street (North) (Image Source: Google Earth)

4.2.6 Pitmedden Road Junction



Figure 4.6: Location-Specific Issues at the Pitmedden Road Junction (Image Source: Google Earth)

4.2.7 Victoria Street (South)



Figure 4.7: Location-Specific Issues on Victoria Street (South) (Image Source: Google Earth)

4.2.8 Riverview Roundabout (South)

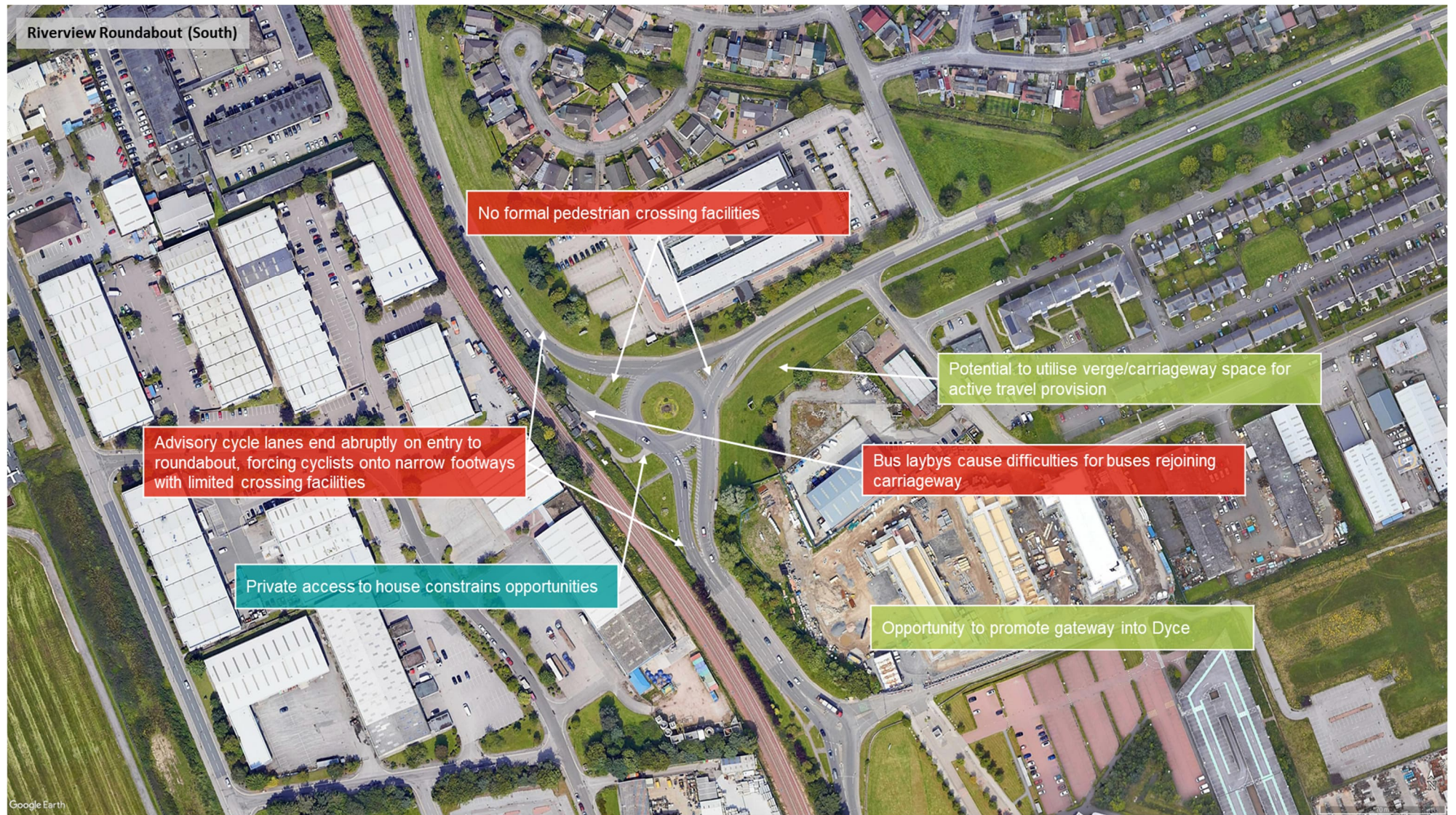


Figure 4.8: Location-Specific Issues at Riverview Roundabout (South) (Image Source: Google Earth)

4.2.9 Stoneywood Road (North)

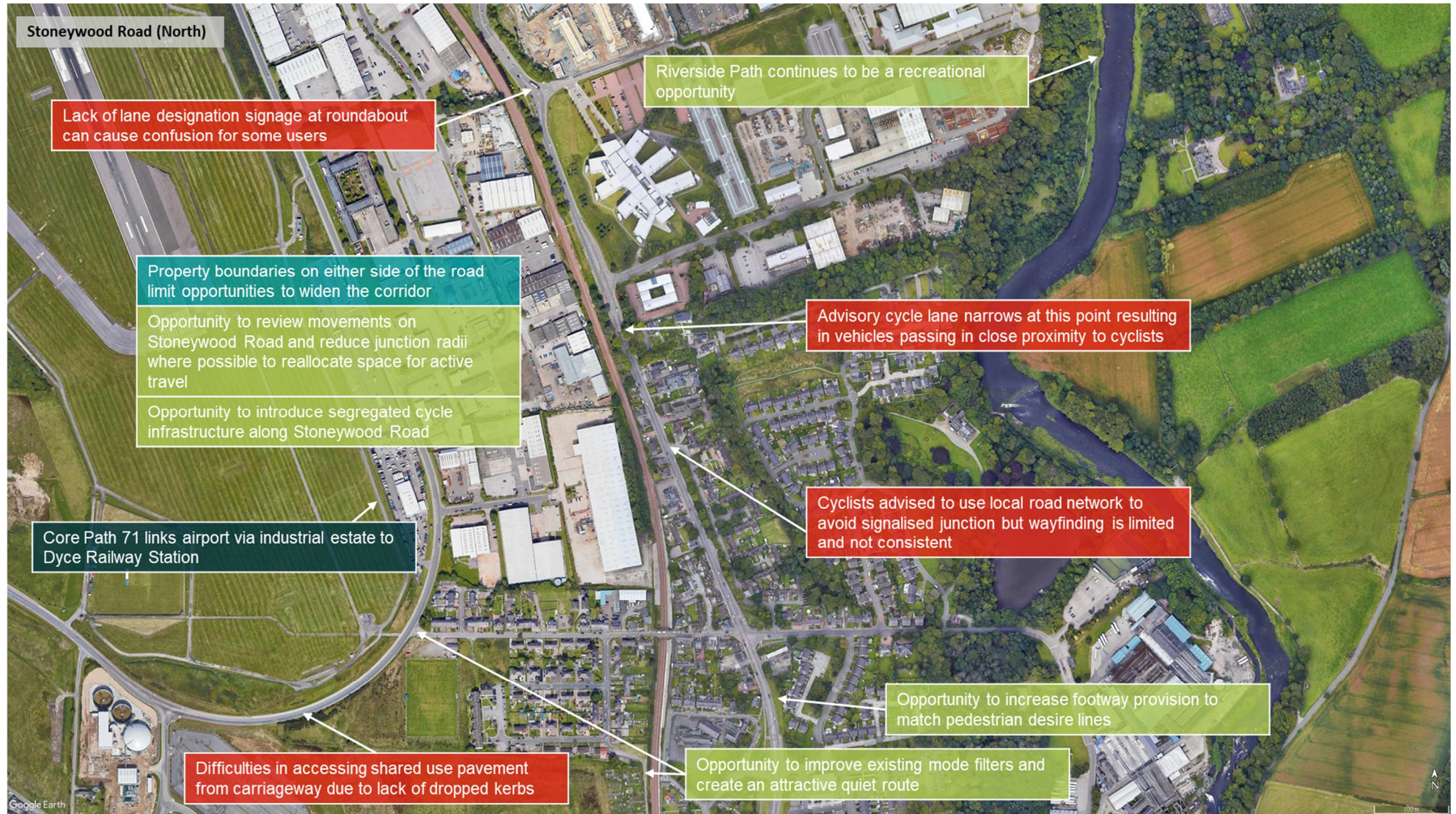


Figure 4.9: Location-Specific Issues on Stoneywood Road (North) (Image Source: Google Earth)

4.2.10 Stoneywood Road (South)



Figure 4.10: Location-Specific Issues on Stoneywood Road (South) (Image Source: Google Earth)

4.3 Strategic Corridor Review

In addition to the localised PICOs set out in the preceding sections, consideration has been given to strategic issues that will be important to consider as the study progresses.

4.3.1 Problems

The strategic problems identified along the study corridor include:

- **F&B Way:** the PICOs work has identified a number of problems along this route:
 - **Maintenance** – there is a lack of maintenance, evidenced by encroaching vegetation.
 - **Signage** – there is generally a lack of signage associated with the route.
 - **Accessibility** – many access points along the F&B Way are not accessible due to gates and barriers.
- **Declining Bus Patronage:** Declining bus patronage in the region in recent years has been exacerbated by the COVID-19 pandemic. The consultation exercise highlighted a number of barriers to increased bus usage for people living along the study corridor:
 - **Journey times** – the consultation exercise highlighted that bus users feel journey times are long given the distance to the city centre from Dyce.
 - **Frequency/Timetabling** – difficulties accessing the airport by bus as shift patterns are outwith bus operation times.
- **Active Travel Infrastructure:** Whilst there is generally good provision of pedestrian infrastructure within the study area, the PICOs work has identified a number of areas where there is a lack of footway provision to match pedestrian desire lines. Further problems identified included advisory cycle lanes being narrow and inconsistent and a limited number of appropriate crossings for pedestrians and cyclists throughout the study area.
- **Driver behaviour:** Outcomes of the consultation highlighted anecdotal evidence of driver behaviour issues including vehicles travelling in excess of speed limits, ignoring cycling provision, flouting 'no entry' signs and parking on double yellow lines. This can impact on the safety and perceptions of safety for other road users, particularly cyclists.
- **Maintenance of Active Travel Infrastructure:** As highlighted from Placecheck feedback, there is a lack of maintenance of active travel infrastructure including the surfaces of advisory cycle lanes, footways and the underpass at Millhill Brae. The Riverside Path was highlighted as a particular problem area in terms of maintenance.
- **Signage:** There is generally a lack of active travel signage along the corridor.
- **Monitoring:** There appears to be issues with the active travel counters in the study area. Counter validation may support further understanding of active travel movements on the corridor. It is understood that this is under consideration by ACC as part of a separate workstream.

4.3.2 Opportunities

The strategic opportunities identified along the study corridor include:

- **Locking in the Benefits of the AWPR:** The opening of the AWPR has significantly changed travel patterns and journey times, reducing delays in many areas throughout the network. There is therefore an opportunity to incentivise public transport use along the corridor, locking in the benefits of reduced congestion and journey time savings.
- **Policy Context:** The study aims strongly align with the national, regional and local policy context, including support for more trips to be undertaken using sustainable modes of travel.
- **Bus Service Partnerships:** The Transport (Scotland) Act 2019 has provided new powers for Councils to enable greater control and operation of local bus services as well as enhanced partnership working arrangements under Bus Service Improvement Partnerships (BSIPs). A Quality Partnership Agreement was signed by parties in the region in 2018 to form the North East Bus Alliance, providing renewed impetus to the identification of measures that can enhance the attractiveness of bus services in the region.
- **Funding:** In 2020, The Scottish Government announced funding for active travel and bus priority. The 2020/21 Programme for Government outlines a commitment towards delivering on health, economic and environment goals by investing £500m over the next five years in active travel infrastructure, access to bikes and behaviour

change schemes to promote walking, wheeling and cycling. It also outlines a reaffirmed commitment to a £500m BPF to support authorities' ambitions around tackling congestion so that bus journeys are quicker and more reliable, and more people make the choice to take the bus. The BPF was officially launched in November 2020, with funding awarded to eight partnerships in June 2021, including £12m for the North East Bus Alliance.

- **Distances to Work:** The vast majority of those living within the study area travel less than 10km for work. This presents opportunities to encourage active travel use for journeys to work from these settlements.
- **20-minute Neighbourhood:** potential to adopt the 20-minute neighbourhood concept in Dyce, capitalising on its walkability.

4.3.3 Issues

The strategic issues identified along the study corridor include:

- **Future Attitudes to Travel and Travel Behaviour:** There are significant uncertainties regarding future attitudes to travel and travel behaviour given the unprecedented times brought about by the COVID-19 pandemic. Significant changes were observed in the short-term, with a shift to working from home and flexible working, a reduction in overall travel demand and an increased uptake of active travel. While it has been shown that there is evidence of travel demand returning to pre-2020 patterns, it is unclear whether some of the observed changes will be short-term or result in a structural change in how society operates.
- **Climate Change:** In May 2019, the Scottish Government declared a 'Climate Emergency'. The Climate Change (Scotland) Act 2019 sets a legally binding net zero target for all greenhouse gases by 2045. It is likely that climate change will have an increasing impact on the region in future years, bringing rising sea levels and a potential increase in extreme weather events.
- **Technology:** There is uncertainty about the impact that advances in EV technology and autonomous vehicle technology will have on travel behaviour and vehicle ownership. There is a risk that advances in EV technology and improved affordability/availability of EVs could result in an increase in single occupancy car use. Advances in autonomous vehicle technology could result in an increase in travel demand, due to more usable travel time. However, it could encourage other changes in travel behaviour such as increased car sharing or reduced car ownership/increased use of Mobility as a Service (MaaS).
- **Policy:** Demand management measures in the city centre could result in a shift away from private car to public transport and active travel for journeys to the city centre. This could also have longer term implications for land use, shifting to a denser population in the city centre and around major public transport nodes.
- **High Car Usage:** Car mode share for travel to work along the corridor is high, with the study area recording rates of driving to work above the national average. This has implications in terms of national, regional and local objectives to reduce carbon emissions, meet air quality objectives and deliver reliable bus services.

4.3.4 Constraints

The strategic constraints identified along the study corridor include:

- **Political Will:** Due to the historic prevalence of private car travel in much of the study area, measures focused on enhancing walking, wheeling, cycling and public transport use may not be supported by the public, which could reduce political support for such measures.
- **Funding:** While the availability of increased funding at a national level provides an opportunity for investment in sustainable modes, funding streams will be competitive. Furthermore, a 2019 report by Audit Scotland found that Scottish Government revenue funding to local authorities has been increasingly constrained in recent years, with national policy initiatives making up an increasing proportion of Council budgets, which limits flexibility for local authorities to plan how to allocate funds.
- **Environment:** There are a number of environmental constraints that will require consideration as the study develops. There are segments of the A947 with a high likelihood of river flooding where they cross the River Don and its tributaries, and along the course of the river which runs adjacent to the study corridor. Options along the River Don are also constrained by wildlife habitats.
- **Trunk Road Contracts (AWPR/B-T):** The AWPR operator Aberdeen Roads Limited have a design, build and operate contract for the AWPR. Therefore, any design changes at AWPR junctions may be more complex to bring forward than at other locations on the corridor and any alteration to infrastructure may require consideration of contractual arrangement at these locations, in consultation with Aberdeen Roads Limited, Transport Scotland and the Local Roads Authorities.

5. Transport Planning Objectives

5.1 Introduction

This chapter presents the TPOs that have been developed for the A947 Multi-Modal Corridor Study. Central to the appraisal of options using STAG is that the process should be objective-led rather than solution-led. A number of TPOs have been developed to reflect the identified problems, issues, constraints, and opportunities within the study area. The TPOs reflect the outcomes sought from the study and will play an integral role in the appraisal process when assessing the performance of each option.

5.2 Approach

As outlined in the recently published STAG Managers Guide³⁷, the analysis of problems and opportunities is crucial in supporting the setting of robust TPOs. The objective must express the change sought in the study area without indicating potential solutions. A bottom-up, top-down approach has been taken to the development of TPOs for the A947 Multi-Modal Corridor Study, using the 'Theory of Change' concept to demonstrate how problems and opportunities inform the TPOs and how the TPOs developed align with the national, regional and local policy and strategy framework.

The objectives included within relevant policy and strategy documents were collated and those of direct relevance to the study were themed. The draft TPOs that were developed were mapped against the finalised list of problems and opportunities for each section of the study corridor. The results of these reviews are presented in the *Transport Planning Objectives Technical Note* included in **Appendix B**.

5.3 Final Transport Planning Objectives

The TPOs developed for the A947 Multi-Modal Corridor Study are presented in the table below. For each TPO, an accompanying design-focused objective has been developed to assist a focused option development approach as recommended by design guidance, such as Cycling by Design.

Table 5.1: A947 Multi-Modal Corridor Study TPOs

Ref	Transport Planning Objective	Design-Focused Objective
TPO1	Increase the modal share of walking on the A947 corridor for all journey types	Improve the level of service for walking and wheeling on the A947 corridor to complement and enhance the existing strategic active travel network
TPO2	Increase the modal share of cycling on the A947 corridor for all journey types	Improve the level of service for cycling on the A947 corridor to complement and enhance the existing strategic active travel network
TPO3	Increase the modal share of public transport on the A947 corridor for all journey types	Improve the attractiveness of bus services along the A947 corridor
TPO4	Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	Improve active travel network access to local facilities in Dyce, with enhanced opportunities to access and cross the A947 corridor by walking, wheeling and cycling with an improved level of service
TPO5	Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	Improve the level of service for non-motorised users to the key transport hubs and key destinations in Dyce
TPO6	Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	Improve the distribution of movements by all modes to routes appropriate to their Roads Hierarchy classification, including motorised vehicles travelling through or outwith Dyce.

³⁷ <https://www.transport.gov.scot/media/50895/scottish-transport-appraisal-guidance-managers-guide.pdf>

5.4 SMART Objectives

STAG notes that TPOs should be developed with 'SMART' principles in mind, which will enable the TPOs to be sharpened and refined as the study progresses and more information becomes available. A SMART objective is:

- **Specific** – it says in precise terms what is sought;
- **Measurable** – there exists means to establish to stakeholders' satisfaction whether or not the objective has been achieved;
- **Attainable** – there is general agreement that the objectives set can be reached;
- **Relevant** – the objective is a sensible indicator or proxy for the change which is sought; and
- **Timed** – the objective is associated with an agreed future point by which it will have been met.

The table below highlights how the developed TPOs relate to the SMART principles.

Table 5.2: A947 Multi-Modal Corridor Study SMART Objectives

TPO	Specific	Measurable	Attainable	Relevant	Timed
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	TPO identifies the need to facilitate improvements for pedestrians along the study corridor.	<p>Surveys (such as Census or Scottish Household Survey) to measure proportion of walking trips for journeys to work and education and for leisure journeys.</p> <p>Citizens Panel surveys to assess changing perceptions.</p> <p>Pedestrian counts along the corridor can monitor changes in those travelling actively.</p>	Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>Consultation highlighted a lack of consistent footway provision in the study area.</p> <p>Study tour identified sections of study area with substandard footways, limited crossing points and lack of provision to meet desire lines.</p> <p>The study area has a higher mode share for private car for travel to work than the national average.</p>	Within the next 5 years.

TPO	Specific	Measurable	Attainable	Relevant	Timed
<p>TPO2: Increase the modal share of cycling on the A947 corridor for all journey types</p>	<p>TPO identifies the need to facilities improvements for cyclists along the study corridor.</p>	<p>Surveys (such as Census or Scottish Household Survey) to measure proportion of cycling trips for journeys to work and education and for leisure journeys.</p> <p>Citizens Panel surveys to assess changing perceptions.</p> <p>Cycle counts along the corridor can monitor changes in those travelling actively.</p>	<p>Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.</p>	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>Consultation raised issues such as narrow and poorly maintained cycle lanes.</p> <p>The study area has a higher mode share for private car for travel to work than the national average.</p>	<p>Within the next 5 years.</p>
<p>TPO3: Increase the modal share of public transport on the A947 corridor for all journey types</p>	<p>TPO identifies the need to make public transport more attractive through service and infrastructure improvements.</p>	<p>Surveys (such as Census or Scottish Household Survey) to measure proportion of public transport trips for journeys to work and education and for leisure journeys.</p> <p>Citizens Panel surveys to assess changing perceptions.</p> <p>Satisfaction of bus passengers.</p> <p>Scottish Access to Bus Index (SABI) can be monitored to assess changes in accessibility to bus services.</p> <p>TRACC accessibility tool can be used to measure changes in connectivity.</p> <p>Fares can be monitored in line with rates of inflation and real cost of living and can be benchmarked against other areas and the costs of city centre parking.</p>	<p>Delivery of TPO may require collaboration between ACC, partners and bus operators.</p>	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>Consultation highlighted perceived issues with bus service journey times and bus stop infrastructure which reduces the attractiveness of public transport as mode choice along the corridor.</p> <p>The study area has a higher mode share for private car for travel to work than the national average.</p>	<p>Within the next 5 years.</p>

TPO	Specific	Measurable	Attainable	Relevant	Timed
<p>TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements</p>	<p>TPO identifies the need to provide placemaking interventions on Victoria Street and build on opportunities of 20 minute neighbourhoods to enhance the walkability of Dyce.</p>	<p>Surveys (such as Census or Scottish Household Survey) to measure proportion of active travel trips for short journeys.</p> <p>Citizens Panel surveys and targeted community engagement (e.g. community councils) to assess changing perceptions.</p>	<p>Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.</p>	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>Problems and opportunities analysis highlighted issues associated with on-street parking and narrow footways. Victoria Street has been identified as having the potential for placemaking interventions.</p>	<p>Within the next 5 years.</p>
<p>TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes</p>	<p>TPO identifies the need to facilitate improvements to connections to transport interchanges and key destinations in the study area by sustainable travel.</p>	<p>Surveys (such as Census or Scottish Household Survey) to measure proportion of active travel trips and public transport for journeys to work and education and for leisure journeys.</p> <p>Citizens Panel surveys to assess changing perceptions.</p> <p>Accessibility improvements can be gauged by user feedback e.g. via local community groups, Grampian Cycle Partnership and Aberdeen Cycle Forum.</p> <p>Scottish Access to Bus Index (SABI) can be monitored to assess changes in accessibility to bus services.</p>	<p>Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.</p>	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>Problems and opportunities analysis highlighted the potential to enhance access to transport hubs and key destinations in the vicinity of the study corridor by active travel and public transport.</p> <p>Key issues have been identified regarding lack of infrastructure around Dyce rail station to support active travel access.</p>	<p>Within the next 5 years.</p>
<p>TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy</p>	<p>TPO identifies the need to distribute trips by all modes to their most appropriate route within the revised Roads Hierarchy.</p>	<p>Pedestrian counts along the corridor can monitor changes in those travelling actively.</p> <p>Cycle counts along the corridor can monitor changes in those travelling actively.</p> <p>Junction turning counts and/or models or Automatic Number Plate Recognition (ANPR) counts and traffic counters along the corridor can monitor changes in travel patterns for vehicles.</p>	<p>Delivery of TPO will require further feasibility work to assess potential interventions that can assist in the distribution of journeys to appropriate routes more effectively.</p>	<p>TPO is consistent with the overall aim of the A947 Multi-Modal Corridor Study.</p> <p>TPO is consistent with local and regional transport policy objectives.</p>	<p>Within the next 5 years.</p>

6. Option Generation, Sifting and Development

6.1 Introduction

This chapter presents an overview of the option generation, sifting and development process that has been undertaken to arrive at a set of options for appraisal for the A947 Multi-Modal Corridor Study. The aim is to identify a set of options that could potentially deliver the TPOs and in turn, help to address the problems, issues and constraints identified while helping to realise the opportunities on the corridor. Further detail is provided in the *Option Generation, Sifting & Development Technical Note* included in [Appendix C](#).

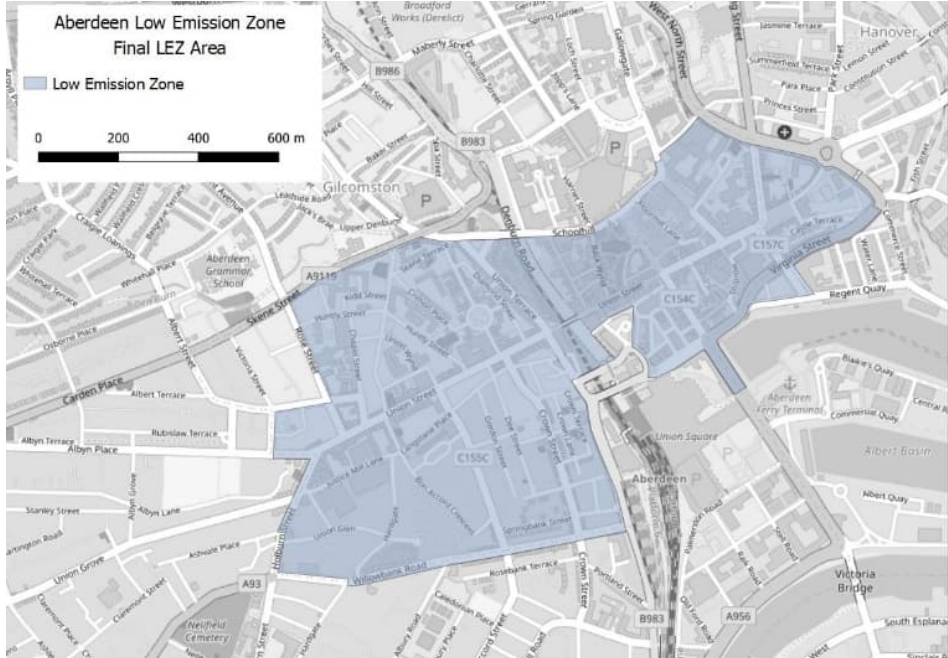
6.2 Do-Minimum Scenario

In line with Scottish Transport Appraisal Guidance (STAG), all generated options must be appraised against a Do-Minimum scenario. Transport Scotland define the Do-Minimum in STAG as:

‘the most likely transport situation over the course of the appraisal period if no intervention were to occur... The do-minimum should also include minor changes which can be expected to be carried out as conditions deteriorate, should the proposed interventions not go ahead. These improvements should not be significant, with any significant changes considered as an option in their own right as part of Option Generation, Sifting and Development.’³⁸

The Do-Minimum for the A947 Multi-Modal Corridor Study assumes the interventions presented in the table below are in place.

Table 6.1: Committed Transport Projects included within the A947 Multi-Modal Corridor Study

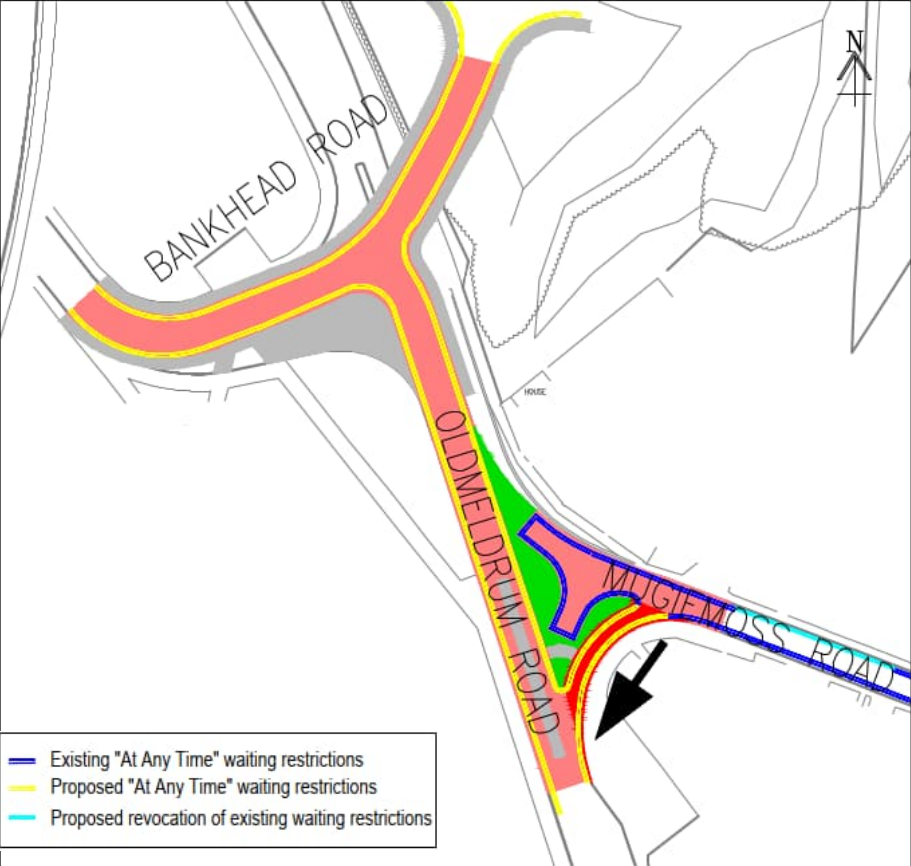
Scheme	Description
<p>Low Emission Zone (LEZ)</p>	<ul style="list-style-type: none"> ACC introduced an LEZ in May 2022, where only certain vehicles can enter based on their emissions standards. It has been introduced with a two year ‘grace’ period meaning that between 2022 and May 2024, drivers will not be fined for entering the LEZ with a non-compliant vehicle. The LEZ will then come into full effect in June 2024. The LEZ area³⁹ is shown in the diagram below. 
<p>A92/A96 Haudagain Improvement</p>	<ul style="list-style-type: none"> The A92/A96 Haudagain Improvement Project includes approximately 500m of new dual carriageway connecting the A92 North Anderson Drive and the A96 Auchmill Road to assist in reducing traffic congestion and improving journey time reliability. The Haudagain Junction is located approximately 2km east of the southern extent of the A947 corridor and therefore may affect travel patterns within the study area. The Haudagain Improvement Project was formally opened by the Transport Minister in May 2022.

³⁸ <https://www.transport.gov.scot/publication/stag-technical-database/section-2/#s23>

³⁹ <https://www.aberdeencity.gov.uk/services/roads-transport-and-parking/low-emission-zone>

Scheme	Description
<p>Farburn Terrace Cycle and Pedestrian Improvements</p>	<ul style="list-style-type: none"> As part of ACC's Active Travel Action Plan, ACC is progressing improvements in accessibility for pedestrians and cyclists to and from Dyce Rail Station, Aberdeen International Airport and the surrounding business and residential areas of Dyce. Farburn Terrace and in particular its roundabout with Wellheads Drive, have been identified as a missing link for active travel between the existing cycleway on Wellheads Drive and Dyce Rail Station. ACC has secured funding from Sustrans and Nestrans to develop a detailed design for shared use cycleways along Wellheads Drive, around the existing roundabout and along Farburn Terrace to Victoria Street. It is understood that land acquisition is now underway and due to be concluded within 2022. Construction is anticipated to start in 2023, subject to appropriate funding. An overview plan of the scheme is shown below⁴⁰. 
<p>Oldmeldrum Road/Mugiemoss Road Junction</p>	<ul style="list-style-type: none"> A planning application (110786) for 900 residences, business and community facilities and associated infrastructure to the north of Mugiemoss Road was approved in December 2011. One of the conditions of the development stated that, subsequent to the completion of the 375th residential property, no subsequently completed residential property shall be occupied unless restricted movements at the Mugiemoss Road/Oldmeldrum Road

⁴⁰ [Farburn Terrace Proposed Cyclist & Pedestrian Improvements - Aberdeen City Council - Citizen Space](#)

Scheme	Description
	<p>junction or the A947 junction and associated spine road are implemented. A modification to this condition was applied for in 2018 and approved conditionally in March 2021 to increase this threshold to 470 units.</p> <ul style="list-style-type: none"> The intervention will make the western end of Mugiemoos Road one-way westbound and prohibit right-turning movements from Mugiemoos Road to Oldmeldrum Road. It will also revoke the ban on right-turning movements from Bankhead Road to Oldmeldrum Road. This is shown in the diagram below.  <p>The diagram illustrates the proposed changes to waiting restrictions at the junction of Bankhead Road, Oldmeldrum Road, and Mugiemoos Road. Bankhead Road is shown as a grey road curving from the top left. Oldmeldrum Road runs vertically through the center. Mugiemoos Road branches off to the right from Oldmeldrum Road. A black arrow points to the junction of Oldmeldrum Road and Mugiemoos Road. A legend in the bottom left corner identifies the colors: blue for existing 'At Any Time' waiting restrictions, yellow for proposed 'At Any Time' waiting restrictions, and cyan for proposed revocation of existing waiting restrictions. A north arrow is located in the top right corner of the diagram area.</p>

6.3 City Centre Masterplan

The Aberdeen City Centre Masterplan (CCMP) is a regeneration blueprint that is transforming the city centre whilst conserving its proud heritage. The goal is greater prosperity and a better quality of life for all. The Masterplan was shaped following extensive public consultation and unanimously approved by ACC in June 2015.

Eight objectives feed through the Masterplan as follows:

- Changing perceptions;
- Growing the city centre employment base;
- A metropolitan outlook;
- A living city for everyone;
- Made in Aberdeen;
- Revealing waterfronts;
- Technologically advanced and environmentally responsible; and
- Culturally distinctive.

A review of the CCMP was undertaken during 2021, with a number of changes for the city centre agreed at ACC's City Growth and Resources Committee in August 2021. Further changes were agreed at ACC's City Growth and Resources Committee in November 2021 for the city centre, former market and beach front area. The Draft

Beachfront Development Framework was approved at Full Council on 29th June 2022, with a key focus on improving active travel provision within the central beach area and active travel linkage through to the city centre.

6.4 Formartine and Buchan Way

It has been agreed with the Client Group that the A947 Multi-Modal Study will not generate options for the F&B Way due to other studies being progressed on the route – the F&B Way Health Check and the Core Path Network Survey. Whilst options for the route itself will not be developed as part of this study, options focused on connections to the F&B Way and access onto the route will be included.

The F&B Way Health Check was undertaken to survey the sections of the F&B Way within the Aberdeenshire Council boundary and to identify recommendations for future maintenance and improvement. The survey was undertaken on foot and by cycling in December 2021. The recommendations emerging from the study focus on addressing health and safety issues, drainage, barrier removal, signage and waymarking, surfacing, vegetation control, information and interpretation and improvements to the southern terminus of the route.

The Core Path Network Survey was undertaken to carry out condition surveys of ACC's core paths network, identify options for improvements and develop and apply a prioritisation framework for these options. It is understood that this will include options for the F&B Way within Aberdeen City.

6.5 Other Ongoing Studies

6.5.1 A96 Multi-Modal Study

ACC is currently undertaking a STAG-based appraisal of options for improving transport connections (particularly active travel and public transport) on the A96 between Inverurie and Aberdeen. The study area for this study overlaps with the A947 study area at the A947/A96 roundabout at Bucksburn. The A96 study has recently completed initial option appraisal – and as the A947 study progresses, close liaison with the ACC client teams will ensure options developed in the study are complementary of those being promoted for the A96.

6.5.2 Cross-City Connections

ACC is currently undertaking a review of the STAG Part 2 appraisal for Cross-City Connections. The study aims to identify priority schemes for development along with a programme of delivery that considers development build out, connections with the internal links of development sites as well as the general feasibility and affordability of each option.

There were three routes developed as part of the Cross-City Connections Study that are of relevance for the A947 corridor and the review recommended that all are progressed to the concept design stage:

- Route 7:
 - Provide a new connection between Grandhome and Stoneywood, including a new bridge crossing over the River Don; and
 - Provide a new connection between new bridge of the River Don and Stoneywood Terrace.
- Route 8:
 - Upgrade and extend CP101 to meet new bridge (Route 7) and Stoneywood development.
- Route 9
 - Stop up Millhill Brae on western side of A947 before the underpass and prior to the residential property and allow residential access only;
 - Upgrade section of CP4 through park; and
 - Upgrade on-road section of CP4 on Waterton Road.

Due to the ongoing work on the Cross-City Connections Study, such options have not been included within the remit of the A947 Multi-Modal Study. However, given the interaction with the A947 corridor, options developed as part of the Cross-City Connections Study will be kept under review and referenced appropriately as the study progresses.

6.5.3 A96 Corridor Review

In August 2021, the Scottish Government and Scottish Green Party Parliamentary Group agreed a Cooperation Agreement and a shared policy programme. As part of this shared policy programme, various agreed principles regarding investment in the transport network were set out. In relation to the A96, the Scottish Government committed to take forward a transport enhancements programme on the A96 corridor that will improve connectivity between surrounding towns, tackle congestion and address safety and environmental issues. This includes reviewing the A96 corridor with a view to implementing appropriate bus priority measures.

The A96 Corridor Review covers the transport corridor from Raigmore Interchange at Inverness to Craibstone Junction at Aberdeen. The review findings will be used to test current plans for dualling outwith the Inverness to Nairn scheme. The review is considering transport problems and opportunities, the changing policy context and other key considerations, such as development and growth aims for the corridor and surrounding area. This review is being carried out in line with STAG and is considering all relevant transport modes within the A96 corridor, including road, rail, public transport and active travel.

6.6 Option Generation

6.6.1 Approach

A long list of options has been developed based on a number of sources including:

- Consultation with ACC, Aberdeenshire Council and Nestrans officers, stakeholders, Community Council groups and members of the public;
- A review of previous studies to identify historical proposals that remain viable options;
- A review of statutory planning and policy documents; and
- Outputs from the evidence-led process followed by the team undertaking the appraisal.

6.6.2 Active Travel Options

The active travel options that have been generated are presented in the table below.

Table 6.2: Active Travel Options

Ref	Title	Source
AT1	Provide protected junction for active travel users at the A947/A90 slip road junction	Study Team
AT2	Improve visibility for cyclists at the B977/A90 slip road roundabout	Study Team
AT3	Review layout of Victoria Street/Pitmedden Road junction for pedestrians	Consultation, Study Team
AT4	Implement measures to give active travel users priority over Burnside Drive when using the shared use path on Riverview Drive	Consultation
AT5	Increase pedestrian phasing at the Market Street/Stoneywood Terrace Junction	Consultation
AT6	Implement early release signals for cyclists at the Market Street/Stoneywood Terrace Junction	Consultation
AT7	Review signals at Forrit Burn Road bus gate to allow cyclists access	Consultation
AT8	Reconfigure the Auchmill Road/Oldmeldrum Road junction to improve connections for pedestrians and cyclists	Consultation
AT9	Conduct a maintenance review of existing cycling infrastructure within the study area	Consultation
AT10	Widen on-road advisory cycle lane on Riverview Drive	Consultation
AT11	Implement missing sections of on-road advisory cycle lane on Riverview Drive	Consultation
AT12	Widen on-road advisory cycle lane on Stoneywood Road at Stoneywood Park junction	Consultation
AT13	Provide a formal pedestrian crossing point to the north of the A947/Riverview Drive Roundabout to facilitate movements to the F&B Way	Study Team
AT14	Provide a formal pedestrian crossing point to the east of the A947/Riverview Drive Roundabout	Study Team
AT15	Remove one of the two signalised pedestrian crossing points in the south of Riverview Drive	Study Team
AT16	Implement formal pedestrian crossing facilities on the arms of the Riverview Drive/Stoneywood Road Roundabout	Study Team
AT17	Implement signalised crossing facility on Victoria Street adjacent to Tesco	Consultation

Ref	Title	Source
AT18	Implement a pedestrian crossing facility on Dyce Avenue	Previous Work
AT19	Implement pedestrian crossing facilities at the Oldmeldrum Road/Mugiemoss Road Junction	Study Team
AT20	Conduct a footway review throughout the study area, identifying gaps in provision and considering the width and surfacing of existing footways	Consultation
AT21	Implement cycle parking at key trip attractors in the study area	Consultation
AT22	Promote Craibstone Park & Ride as a Park & Pedal facility	Previous Work
AT23	Implement a bike hire scheme within Dyce	Previous Work
AT24	Improve active travel connectivity between the A947 study area and Aberdeen Airport/Heliport	Consultation, Study Team
AT25	Improve active travel connectivity between the A947 study area and Craibstone Park & Ride	Consultation, Study Team
AT26	Improve active travel connectivity between the A947 study area and TECA	Consultation, Study Team
AT27	Improve active travel connectivity between the A947 study area and Kirkhill Industrial Estate	Consultation, Study Team
AT28	Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don	Consultation
AT29	Improve the underpass between the shared use path to the east of the A947 and the F&B Way access	Consultation, Study Team
AT30	Provide direct active travel link between Dyce Drive and Riverview Drive	Study Team
AT31	Improve active travel links between the Riverside Path and housing within Dyce	Study Team
AT32	Implement footways on the south side of the carriageway on Pitmedden Road	Consultation
AT33	Provide improved active travel links between Dyce Rail Station and the A947 and the eastern section of Dyce, particularly along Station Road	Consultation, Study Team
AT34	Implement an active travel bridge over the railway line	Consultation, Study Team
AT35	Implement quiet route measures on the local road network to the west of the A947 via Bankhead Road, Wellheads Drive and Farburn Terrace to Dyce Rail Station	Consultation, Study Team
AT36	Improve active travel connections between Wellheads Drive and the A947	Previous Work
AT37	Implement dropped kerbs between Wellheads Drive shared use path and the carriageway	Consultation
AT38	Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles	Consultation
AT39	Remove access controls on off-road path between Waterton Road and Ruthriehill Road	Consultation
AT40	Improve drainage at underpass between Millhill Brae and Stoneywood Brae	Consultation
AT41	Improve active travel access to the retail park at the Bucksburn Roundabout	Consultation
AT42	Review access to the F&B Way from within Dyce	Consultation, Study Team
AT43	Implement active travel connection between the A947 and the B977, utilising a section of the old A947 (pre-AWPR)	Consultation
AT44	Develop path connections from Dyce to east of the River Don towards Seaton Park and Donmouth, through implementation of aspirational Core Path AP6	Consultation, Previous work
AT45	Upgrade the Riverside Path to a high quality active travel route, including improvements to the surfacing of the route	Consultation, Study Team
AT46	Implement lighting on the Riverside Path	Consultation

Ref	Title	Source
AT47	Implement with-flow segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction	Consultation, Study Team
AT48	Implement two-way segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction	Consultation, Study Team
AT49	Implement with-flow segregated cycleway on Victoria Street	Consultation, Study Team
AT50	Implement two-way segregated cycleway on Victoria Street	Consultation, Study Team
AT51	Implement with-flow segregated cycleway on Oldmeldrum Road	Consultation
AT52	Implement two-way segregated cycleway on Oldmeldrum Road	Consultation
AT53	Implement with-flow segregated cycleway on Mugiemoos Road	Consultation
AT54	Implement two-way segregated cycleway on Mugiemoos Road	Consultation
AT55	Implement with-flow segregated cycleway on Gilbert Road	Consultation
AT56	Implement two-way segregated cycleway on Gilbert Road	Consultation
AT57	Implement shared use path on the A947 between AWPR Junction and A947/A96 Junction	Consultation, Study Team
AT58	Implement shared use path on Dyce Drive between the A947 and Kirkhill Industrial Estate to the north of Aberdeen International Airport	Consultation
AT59	Widen the shared use path on the east side of the A947 to the north of Riverview Drive	Study Team
AT60	Provide continuous footways on Riverview Drive for the duration of the route	Study Team
AT61	Implement shared use path on Victoria Street	Consultation, Study Team
AT62	Widen the shared use path on the east side of the A947 between the A96 and Beech Manor	Consultation
AT63	Review alignment of the A947 shared use path to the north of the Oldmeldrum Road Junction where the safety barrier constrains the width of the path	Consultation
AT64	Implement shared use path on Oldmeldrum Road	Consultation
AT65	Implement shared use path on Mugiemoos Road	Consultation
AT66	Implement shared use path on Gilbert Road	Consultation
AT67	Widen the shared use path on the west side of Howe Moss Drive	Previous Work
AT68	Conduct a review of wayfinding signage throughout the study area	Consultation

6.6.3 Public Transport Options

The public transport options that have been generated are presented in the table below.

Table 6.3: Public Transport Options

Ref	Title	Source
PT1	Implement Aberdeen Rapid Transit along the study corridor	Consultation
PT2	Conduct a traffic signal review to consider bus priority at all traffic signals along the A947 corridor	Study Team

Ref	Title	Source
PT3	Introduce bus priority on the southbound approach to the A96 between Stoneywood Brae and the Bucksburn Roundabout	Consultation
PT4	Conduct a route wide review of bus stop provision and infrastructure	Study Team
PT5	Implement real time passenger information at key bus stops along the study corridor	Previous Work
PT6	Implement bus lay by at northbound stop on Victoria Street outside Aberdein Considine	Consultation
PT7	Undertake a review of fares on public transport	Consultation
PT8	Conduct a marketing campaign with the aim of increasing public transport awareness and use	Consultation
PT9	Improve public transport connectivity between the A947 study area and Aberdeen Airport/Heliport	Consultation, Study Team
PT10	Improve public transport connectivity between the A947 study area and Craibstone Park & Ride	Consultation, Study Team
PT11	Improve public transport connectivity between the A947 study area and TECA	Consultation, Study Team
PT12	Improve public transport connectivity between the A947 study area and Kirkhill Industrial Estate	Consultation, Study Team
PT13	Provide integrated ticketing between bus and rail	Consultation
PT14	Review the layout of the Oldmeldrum Road/Mugiemoss Road Junction for bus manoeuvrability	Consultation

6.6.4 Other

The other options that have been generated are presented in the table below.

Table 6.4: Other Options

Ref	Title	Source
O1	Increase enforcement of stopping restrictions on Victoria Street, specifically adjacent to Tesco	Consultation, Study Team
O2	Review the layout of the Victoria Street/Skene Place Junction	Consultation
O3	Review the layout of the Riverview Drive/Balloch Way Junction	Study Team
O4	Review the layout of the Riverview Drive/Todlaw Walk Junction	Study Team
O5	Review the layout of the Riverview Drive/Netherview Avenue Junction	Consultation
O6	Improve clarity of lane designation at the Stoneywood Road/Wellheads Avenue Junction	Consultation
O7	Review the layout of the A947/Stoneywood Junction at Co-Op/M&S	Consultation
O8	Review the layout of the A947/Stoneywood Brae Junction	Consultation
O9	Review the layout of the Bankhead Road/Oldmeldrum Road Junction	Consultation
O10	Review layout of the A947/McDonalds access road junction	Consultation
O11	Undertake a review of parking arrangements on Victoria Street	Consultation
O12	Implement signage to encourage reverse parking at the shops on Victoria Street	Consultation

Ref	Title	Source
O13	Reassess the feasibility of expanding car parking provision at Dyce Rail Station to provide additional opportunities for multi-modal journeys involving rail on the A947 corridor	Consultation, Previous Work
O14	Review parking arrangements on Mugiemoss Road	Consultation
O15	Introduce placemaking and gateway features on Victoria Street	Study Team
O16	Implement package of measures to support implementation of a 20-minute neighbourhood in Dyce	Study Team
O17	Reduce the speed limit along the A947 to support active travel improvements	Consultation
O18	Consider options to reduce vehicle speeds on Bankhead Road	Consultation
O19	Upgrade Riverview Drive to a dual carriageway	Consultation
O20	Review the layout of the access road into Asda car park	Consultation
O21	Reopen Market Street to vehicles	Consultation
O22	Widen carriageway at the western extent of Mugiemoss Road where narrow carriageway causes delay for buses	Consultation
O23	Promote car sharing schemes within Dyce	Previous Work
O24	Implement electric vehicle charging points at key locations within Dyce	Previous Work
O25	Implement access only restrictions for general traffic on Victoria Street	Study Team
O26	Implement one-way restrictions for general traffic on Victoria Street	Study Team
O27	Restrict access on Mugiemoss Road to resident access only	Consultation

6.7 Option Sifting

STAG states that: *“The Option Sifting process should be undertaken when an unmanageably large number of options have been generated or where there is general consensus that a particular option or options generated will clearly not achieve the intended objectives or meet the identified problems and/or opportunities.”* The guidance also highlights that: *“There are a number of ways in which options can be sifted and practitioners should agree the approach with stakeholders (and, where appropriate, decision makers).”*

A multi-criteria approach has been adopted in agreement with the Client Group which sifts options based on their high-level performance against TPOs, Deliverability Criteria, Position in the Sustainable Investment Hierarchy and Identified Problems and Opportunities in the study area. Based on the high-level performance of options against these criteria, it is recommended that the options presented in the table below are sifted from further consideration at this stage.

Table 6.5: Options to be Sifted from Further Consideration

Ref	Title	Rationale
AT5	Increase pedestrian phasing at the Market Street/Stoneywood Terrace Junction	The Market Street/Stoneywood Terrace Junction is being considered through the ongoing Cross City Connections work and measures have been recommended for progression. Therefore, whilst this option does not require further consideration as part of the A947 Multi-Modal Study, it will continue to be referenced as appropriate throughout the study.

Ref	Title	Rationale
AT6	Implement early release signals for cyclists at the Market Street/Stoneywood Terrace Junction	The Market Street/Stoneywood Terrace Junction is being considered through the ongoing Cross City Connections work and measures have been recommended for progression. Therefore, whilst this option does not require further consideration as part of the A947 Multi-Modal Study, it will continue to be referenced as appropriate throughout the study.
AT9	Conduct a maintenance review of existing cycling infrastructure within the study area	Option is unlikely to have any significant impact on the study TPOs and could be considered "business as usual" for ACC.
AT15	Remove one of the two signalised pedestrian crossing points in the south of Riverview Drive	Option should not be progressed on the basis that this would have negative impacts on pedestrians and walkability within Dyce. However, it would allow Riverview Drive to function as per role in the revised Roads Hierarchy. Crossing rationalisation will be considered by ACC Committee in Autumn 2022.
AT18	Implement a pedestrian crossing facility on Dyce Avenue	Option is not required as there is an existing crossing at the junction with Dyce Drive.
AT19	Implement pedestrian crossing facilities at the Oldmeldrum Road/Mugiemoss Road Junction	There is a temporary crossing facility located just to the north of the Oldmeldrum Road/Mugiemoss Road Junction which has been on-site since 2018. It is understood that a permanent facility is due to be provided at this location as part of the works associated with the adjacent housing development on the Davidsons Mill site.
AT29	Improve the underpass between the shared use path to the east of the A947 and the F&B Way access	Option should not be progressed due to significant deliverability risks. Option AT13 may provide an alternative and more deliverable solution to address a similar problem. It is also understood that ACC have funding committed to improve the lighting in the underpass.
AT34	Implement an active travel bridge over the railway line	Option should not be progressed due to significant deliverability risks.
AT36	Improve active travel connections between Wellheads Drive and the A947	Option is covered by AT24, AT35 and AT38.
AT40	Improve drainage at underpass between Millhill Brae and Stoneywood Brae	Option is unlikely to have any significant impact on the study TPOs and could be considered "business as usual" for ACC.
AT44	Develop path connections from Dyce to east of the River Don towards Seaton Park and Donmouth, through implementation of aspirational core path AP6	While contributing to TPO1 and TPO2, this option is outwith the scope / sphere of influence of the A947 corridor study. However, it should be reserved for ACC to consider within other workstreams.
AT49	Implement with-flow segregated cycleway on Victoria Street	Option should not be progressed due to significant deliverability risks. Other solutions are available using the hierarchy of provision which looks at removing or calming traffic to permit people to use the carriageway with people driving. In addition, this could be combined with placemaking solutions.
AT50	Implement two-way segregated cycleway on Victoria Street	Option should not be progressed due to significant deliverability risks. Other solutions are available using the hierarchy of provision which looks at removing or calming traffic to permit people to use the carriageway with people driving. In addition, this could be combined with placemaking solutions.
AT53	Implement with-flow segregated cycleway on Mugiemoss Road	Option is not achievable without land take due to the narrow width of Mugiemoss Road.
AT54	Implement two-way segregated cycleway on Mugiemoss Road	Option is not achievable without land take due to the narrow width of Mugiemoss Road.

Ref	Title	Rationale
PT1	Implement Aberdeen Rapid Transit along the study corridor	While contributing to TPO3 and TPO5, this option is outwith the scope of the A947 corridor study. However, as ART is developed (including on the A96 corridor), cognisance should be given to how the A947 corridor can directly benefit from associated interventions.
PT3	Introduce bus priority on the southbound approach to the A96 between Stoneywood Brae and the Bucksburn Roundabout	Option should not be progressed on the basis that it would not address identified problems and opportunities on the A947 corridor.
PT4	Conduct a route wide review of bus stop provision and infrastructure	Option is unlikely to have any significant impact on the study TPOs and could be considered "business as usual" for ACC.
PT6	Implement bus lay by at northbound stop on Victoria Street outside Aberdeen Considine	Option has the potential to have a (minor) negative impact on the flow of buses along Victoria Street, therefore, on this basis, it should be sifted out from further consideration.
PT7	Undertake a review of fares on public transport	Option is unlikely to have any significant impact on the study TPOs. However, fares reviews could be considered as part of strategic discussions relating to bus service delivery in the North East, which is within the remit of the North East Bus Alliance.
PT8	Conduct a marketing campaign with the aim of increasing public transport awareness and use	Option has limited impacts on the TPOs developed for this study. Option should be considered on a region-wide basis through initiatives such as Smarter Choices Smarter Places and Getabout - which has a forthcoming new campaign.
PT13	Provide integrated ticketing between bus and rail	Option is unlikely to have any significant impact on the study TPOs. However, integrated ticketing could be considered as part of strategic discussions relating to transport integration in the North East, which could be facilitated by Nestrans and ACC. PlusBus ticketing is also available and it is understood that integrated ticketing is being considered nationally.
PT14	Review the layout of the Oldmeldrum Road/Mugiemoss Road Junction for bus manoeuvrability.	Option is superseded by planned changes at the Oldmeldrum Road/Mugiemoss Road Junction associated with the development to the north of Mugiemoss Road.
O6	Improve clarity of lane designation at the Stoneywood Road/Wellheads Avenue Junction	Option is unlikely to have any significant impact on the study TPOs and could be considered "business as usual" for ACC.
O9	Review the layout of the Bankhead Road/Oldmeldrum Road Junction.	Option is superseded by planned changes at the Oldmeldrum Road/Mugiemoss Road Junction associated with the development to the north of Mugiemoss Road.
O13	Reassess the feasibility of expanding car parking provision at Dyce Rail Station to provide additional opportunities for multi-modal journeys involving rail on the A947 corridor	Option is likely to have negative impacts across the majority of the TPOs given the key focus of the study on active travel and bus travel. However, it is recognised that providing further opportunities to access Dyce Rail Station by car will enable an increase in (rail) modal share along the corridor. On this basis, this option should be considered by Nestrans/ACC outwith the scope of the A947 Multi-Modal Study.
O19	Upgrade Riverview Drive to a dual carriageway	Option is likely to have negative impacts across the majority of the TPOs. Therefore, on this basis, it should be sifted out from further consideration.
O20	Review the layout of the access road into Asda car park	Option is unlikely to have any significant impact on the study TPOs. Therefore, on this basis, it should be sifted out from further consideration.
O21	Reopen Market Street to vehicles	Option is likely to have negative impacts across the majority of the TPOs. Therefore, on this basis, it should be sifted out from further consideration.
O22	Widen carriageway at the western extent of Mugiemoss Road where narrow carriageway causes delay for buses	Option should not be progressed due to significant deliverability risks.
O27	Restrict access on Mugiemoss Road to resident access only.	Option is superseded by planned changes at the Oldmeldrum Road/Mugiemoss Road Junction associated with the development to the north of Mugiemoss Road.

6.8 Option Development and Packaging

6.8.1 Option Development

For the purposes of Option Development, the remaining options were grouped into categories as outlined in the table below.

Table 6.6: Grouping of Remaining Options

Active Travel Groupings
Active Travel Provision at Junctions
Advisory Cycling Infrastructure
Crossing Facilities (outwith junctions)
Dyce Permeability
Other Connections
Segregated Cycling Infrastructure
Shared Use Path Infrastructure
Signage
Public Transport Groupings
Bus Priority Infrastructure
Bus Stop Review
Public Transport Connectivity
Junction Reviews
Other Groupings
Enforcement
Junction Reviews
Parking Reviews
Placemaking
Reduced Speeds
Sustainable Transport Initiatives
Vehicle Restrictions

An extensive Option Development process was undertaken, with full detail provided in the *Option Generation, Sifting & Development Technical Note* included in [Appendix C](#).

6.8.2 Option Packaging

Following the option development process, options were grouped into six packages for the purposes of appraisal as follows:

- Active Travel – Strategic Routes;
- Active Travel – Leisure Route;
- Active Travel – Quiet Route Measures;
- Public Transport – Priority Interventions;
- Placemaking – Living Streets; and
- Placemaking – Complementary Measures.

The options included within each package are detailed in the following sections.

Active Travel – Strategic Routes

Table 6.7: Active Travel – Strategic Routes Options

Ref	Description
AT1	Provide protected junction for active travel users at the A947/A90 slip road junction
AT2	Improve visibility for cyclists at the B977/A90 slip road roundabout
AT4	Implement measures to give active travel users priority over Burnside Drive when using the shared use path on Riverview Drive
AT8	Reconfigure the Auchmill Road/Oldmeldrum Road junction to improve connections for pedestrians and cyclists
AT10	Widen on-road advisory cycle lane on Riverview Drive
AT11	Implement missing sections of on-road advisory cycle lane on Riverview Drive
AT12	Widen on-road advisory cycle lane on Stoneywood Road at Stoneywood Park junction
AT13	Provide a formal pedestrian crossing point to the north of the A947/Riverview Drive Roundabout to facilitate movements to the F&B Way
AT14	Provide a formal pedestrian crossing point to the east of the A947/Riverview Drive Roundabout
AT16	Implement formal pedestrian crossing facilities on the arms of the Riverview Drive/Stoneywood Road Roundabout
AT20	Conduct a footway review throughout the study area, identifying gaps in provision and considering the width and surfacing of existing footways
AT28	Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don
AT30	Provide direct active travel link between Dyce Drive and Riverview Drive
AT47	Implement with-flow segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction
AT48	Implement two-way segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction
AT51	Implement with-flow segregated cycleway on Oldmeldrum Road
AT52	Implement two-way segregated cycleway on Oldmeldrum Road
AT55	Implement with-flow segregated cycleway on Gilbert Road
AT56	Implement two-way segregated cycleway on Gilbert Road
AT57	Implement shared use path on the A947 between AWPR Junction and A947/A96 Junction
AT58	Implement shared use path on Dyce Drive between the A947 and Kirkhill Industrial Estate to the north of Aberdeen International Airport
AT59	Widen the shared use path on the east side of the A947 to the north of Riverview Drive
AT60	Provide continuous footways on Riverview Drive for the duration of the route
AT62	Widen the shared use path on the east side of the A947 between the A96 and Beech Manor
AT63	Review alignment of the A947 shared use path to the north of the Oldmeldrum Road Junction where the safety barrier constrains the width of the path
AT64	Implement shared use path on Oldmeldrum Road
AT66	Implement shared use path on Gilbert Road
O3	Review the layout of the Riverview Drive/Balloch Way Junction
O4	Review the layout of the Riverview Drive/Todlaw Walk Junction
O5	Review the layout of the Riverview Drive/Netherview Avenue Junction
O7	Review the layout of the A947/Stoneywood Junction at Co-Op/M&S
O8	Review the layout of the A947/Stoneywood Brae Junction
O10	Review layout of the A947/McDonalds access road junction
O17	Reduce the speed limit along the A947 to support active travel improvements

Active Travel – Leisure Route

Table 6.8: Active Travel – Leisure Route Options

Ref	Description
AT31	Improve active travel links between the Riverside Path and housing within Dyce
AT45	Upgrade the Riverside Path to a high quality active travel route, including improvements to the surfacing of the route
AT46	Implement lighting on the Riverside Path

Active Travel – Quiet Route Measures

Table 6.9: Active Travel – Quiet Route Measures Options

Ref	Description
AT7	Review signals at Forrit Burn Road bus gate to allow cyclists access
AT24	Improve active travel connectivity between the A947 study area and Aberdeen Airport/Heliport
AT25	Improve active travel connectivity between the A947 study area and Craibstone Park & Ride
AT26	Improve active travel connectivity between the A947 study area and TECA
AT27	Improve active travel connectivity between the A947 study area and Kirkhill Industrial Estate
AT32	Implement footways on the south side of the carriageway on Pitmedden Road
AT35	Implement quiet route measures on the local road network to the west of the A947 via Bankhead Road, Wellheads Drive and Farburn Terrace to Dyce Rail Station
AT37	Implement dropped kerbs between Wellheads Drive shared use path and the carriageway
AT38	Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles
AT39	Remove access controls on off-road path between Waterton Road and Ruthriehill Road
AT41	Improve active travel access to the retail park at the Bucksburn Roundabout
AT43	Implement active travel connection between the A947 and the B977, utilising a section of the old A947 (pre-AWPR)
AT65	Implement streetscape improvements and widened pavements along Mugiemoss Road
AT67	Widen the shared use path on the west side of Howe Moss Drive
O14	Review parking arrangements on Mugiemoss Road
O18	Consider options to reduce vehicle speeds on Bankhead Road

Public Transport – Priority Interventions

Table 6.10: Public Transport – Priority Interventions Options

Ref	Description
PT2	Conduct a traffic signal review to consider bus priority at all traffic signals along the A947 corridor
PT5	Implement real time passenger information at key bus stops along the study corridor
PT9	Improve public transport connectivity between the A947 study area and Aberdeen Airport/Heliport
PT10	Improve public transport connectivity between the A947 study area and Craibstone Park & Ride
PT11	Improve public transport connectivity between the A947 study area and TECA
PT12	Improve public transport connectivity between the A947 study area and Kirkhill Industrial Estate
AT22	Promote Craibstone Park & Ride as a Park & Pedal facility

Placemaking – Living Streets

Table 6.11: Placemaking – Living Streets Options

Ref	Description
AT3	Review layout of Victoria Street/Pitmedden Road junction for pedestrians
AT17	Implement signalised crossing facility on Victoria Street adjacent to Tesco
AT33	Provide improved active travel links between Dyce Rail Station and the A947 and the eastern section of Dyce, particularly along Station Road
AT61	Implement shared use path on Victoria Street
O1	Increase enforcement of stopping restrictions on Victoria Street, specifically adjacent to Tesco
O2	Review the layout of the Victoria Street/Skene Place Junction
O11	Undertake a review of parking arrangements on Victoria Street
O12	Implement signage to encourage reverse parking at the shops on Victoria Street
O15	Introduce placemaking and gateway features on Victoria Street
O16	Implement package of measures to support implementation of a 20-minute neighbourhood in Dyce
O25	Implement access only restrictions for general traffic on Victoria Street
O26	Implement one-way restrictions for general traffic on Victoria Street

Placemaking – Complementary Measures

Table 6.12: Placemaking – Complementary Measures Options

Ref	Description
AT21	Implement cycle parking at key trip attractors in the study area
AT23	Implement a bike hire scheme within Dyce
AT42	Review access to the F&B Way from within Dyce
AT68	Conduct a review of wayfinding signage throughout the study area
O24	Implement electric vehicle charging points at key locations within Dyce

7. Option Appraisal Approach

7.1 Scale of Impacts

In line with STAG, a seven-point scale assessment has been undertaken for each option against the TPOs and STAG Criteria. This considers the relative size and scale of the likely impacts, in qualitative terms.

Table 7.1: STAG Seven-Point Scale

Impact	Description
Major positive impact (+3)	These are positive impacts which, depending on the severity of impact, should be a principal consideration when assessing an option.
Moderate positive impact (+2)	The option is anticipated to have a moderate positive impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Minor beneficial impact (+1)	The option is anticipated to have a minor positive impact. Minor positive impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
Neutral impact (0)	The option is anticipated to have a neutral impact.
Minor negative impact (-1)	The option is anticipated to have a small negative impact. Small impacts are those which are worth noting but are not likely to contribute materially to determining whether an option is taken forward.
Moderate negative impact (-2)	The option is anticipated to have a moderate negative impact which, when taken in isolation may not determine the appraisal of an option but would form a key consideration when considered alongside other factors.
Major negative impact (-3)	There are negative impacts which, depending on the severity of impact, should be a principal consideration when assessing an option.

7.2 Transport Planning Objectives

Each option will be subject to a qualitative appraisal against each of the TPOs.

Table 7.2: TPOs

TPO	Description
TPO1	Increase the modal share of walking on the A947 corridor for all journey types
TPO2	Increase the modal share of cycling on the A947 corridor for all journey types
TPO3	Increase the modal share of public transport on the A947 corridor for all journey types
TPO4	Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements
TPO5	Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes
TPO6	Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy.

7.3 STAG Criteria

Each option will be subject to a qualitative appraisal against each of the STAG Criteria.

Table 7.3: STAG Criteria

STAG Criteria	Description
Environment	The Environment Criterion includes eight sub-criteria, although some may not be relevant to the study area or the options proposed. The Environment sub-criteria are biodiversity and habitats; geology and soils; land use (including agriculture and forestry); water, drainage and flooding; air quality; historic environment; landscape; and noise and vibration.
Climate Change	The Climate Change Criterion comprises three sub criteria: greenhouse gas emissions; vulnerability to the effects of climate change; and potential to adapt to the effects of climate change.
Health, Safety & Wellbeing	The Health, Safety and Wellbeing Criterion comprises five sub-criteria: accidents; security; health outcomes; access to health and wellbeing infrastructure; and visual amenity.

STAG Criteria	Description
Economy	The Economy Criterion comprises two sub-criteria: Transport Economic Efficiency (TEE) and Wider Economic Impacts (WEIs). TEE covers the benefits ordinarily captured by standard cost-benefit analysis including traffic volumes, journey times, driver frustration, travel time reliability etc. WEIs refer to any economic impacts which are additional to transport user benefits.
Equality & Accessibility	The Equality and Accessibility Criterion comprises five sub-criteria: public transport network coverage; active travel network coverage; comparative access by people group; comparative access by geographic location; and affordability.

7.4 Implementability Criteria

Options will also be assessed in terms of their implementability, covering Feasibility, Affordability and Public Acceptability. The Implementability Criteria have been assessed based on the extent of risk (low, medium and high). Affordability takes account of the anticipated cost of the option; whilst high-level cost estimates have been provided as part of the option appraisal, further work will be required to develop costs during further stages of option development.

STAG Criteria	Description
Feasibility	The feasibility of construction or implementation and operation of an option and the status of its technology (e.g. proven, prototype, in development, etc.) as well as any cost, timescale or deliverability risks associated with the construction or operation of the option, including consideration of the need for any departure from design standards that may be required.
Affordability	The scale of the financing burden on the promoting authority and other possible funding organisations and the risks associated with these. The level of risk associated with an option's ongoing operating or maintenance costs and its likely operating revenues (if applicable).
Public Acceptability	An assessment of the likely public response to an option, including consideration of the outcomes of consultation.

8. Option Appraisal

8.1 Introduction

This chapter outlines the findings of the appraisal of option packages. A high-level appraisal of individual options has also been carried out and the findings of this exercise are presented in *Individual Option Appraisal* included in **Appendix D**.

As set out in **Section 6.8.2**, six option packages were developed for the purposes of appraisal as follows:

- Active Travel – Strategic Routes;
- Active Travel – Leisure Route;
- Active Travel – Quiet Route Measures;
- Public Transport – Priority Interventions;
- Placemaking – Living Streets; and
- Placemaking – Complementary Measures.

The options included within each package are detailed within the tables in the following sections.

8.2 Active Travel – Strategic Routes

8.2.1 Overview

Table 8.1: Active Travel – Strategic Routes Overview

Active Travel – Strategic Routes Package	
Package Description	Segregated cycling infrastructure along the A947 between the AWPR Junction and Bucksburn Roundabout (A947/A96 Junction). This would provide a safer cycling environment on the main route through Dyce to help encourage cycling for everyday journeys.
Package Components	<p>The Active Travel – Strategic Routes package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • AT1: Provide protected junction for active travel users at the A947/A90 slip road junction • AT2: Improve visibility for cyclists at the B977/A90 slip road roundabout • AT4: Implement measures to give active travel users priority over Burnside Drive when using the shared use path on Riverview Drive • AT8: Reconfigure the Auchmill Road/Oldmeldrum Road junction to improve connections for pedestrians and cyclists • AT10: Widen on-road advisory cycle lane on Riverview Drive • AT11: Implement missing sections of on-road advisory cycle lane on Riverview Drive • AT12: Widen on-road advisory cycle lane on Stonewood Road at Stonewood Park junction • AT13: Provide a formal pedestrian crossing point to the north of the A947/Riverview Drive Roundabout to facilitate movements to the F&B Way • AT14: Provide a formal pedestrian crossing point to the east of the A947/Riverview Drive Roundabout • AT16: Implement formal pedestrian crossing facilities on the arms of the Riverview Drive/Stonewood Road Roundabout • AT20: Conduct a footway review throughout the study area, identifying gaps in provision and considering the width and surfacing of existing footways • AT28: Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don • AT30: Provide direct active travel link between Dyce Drive and Riverview Drive • AT47: Implement with-flow segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction • AT48: Implement two-way segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction • AT51: Implement with-flow segregated cycleway on Oldmeldrum Road • AT52: Implement two-way segregated cycleway on Oldmeldrum Road • AT55: Implement with-flow segregated cycleway on Gilbert Road

Active Travel – Strategic Routes Package	
	<ul style="list-style-type: none"> • AT56: Implement two-way segregated cycleway on Gilbert Road • AT57: Implement shared use path on the A947 between AWPR Junction and A947/A96 Junction • AT58: Implement shared use path on Dyce Drive between the A947 and Kirkhill Industrial Estate to the north of Aberdeen International Airport • AT59: Widen the shared use path on the east side of the A947 to the north of Riverview Drive • AT60: Provide continuous footways on Riverview Drive for the duration of the route • AT62: Widen the shared use path on the east side of the A947 between the A96 and Beech Manor • AT63: Review alignment of the A947 shared use path to the north of the Oldmeldrum Road Junction where the safety barrier constrains the width of the path • AT64: Implement shared use path on Oldmeldrum Road • AT66: Implement shared use path on Gilbert Road • O3: Review the layout of the Riverview Drive/Balloch Way Junction • O4: Review the layout of the Riverview Drive/Todlaw Walk Junction • O5: Review the layout of the Riverview Drive/Netherview Avenue Junction • O7: Review the layout of the A947/Stoneywood Junction at Co-Op/M&S • O8: Review the layout of the A947/Stoneywood Brae Junction • O10: Review layout of the A947/McDonalds access road junction • O17: Reduce the speed limit along the A947 to support active travel improvements
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>The cost of delivering each of the individual options within the Active Travel – Strategic Routes package ranges between the three cost bands outlined above due to the variety of different options which have been included.</p>

8.2.2 Context

Table 8.2: Active Travel – Strategic Routes Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Active Travel Infrastructure – Sections where footway provision is lacking and cycle infrastructure consists of advisory cycle lanes that are narrow and inconsistent. There is also a lack of pedestrian crossings in the study area. • Maintenance of Active Travel Infrastructure – There is a lack of maintenance of active travel infrastructure including the surfaces of advisory cycle lanes, footways, the underpass at Millhill Brae and the Riverside Path. • Distances to Work – The vast majority of those living within the study area travel less than 10km for work, presenting opportunities to encourage active travel use for journeys to work. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel. • Funding – Opportunity to take advantage of Scottish Government funding for active travel infrastructure.
Interdependencies	<p>This package has potential overlap with other option packages being considered through this study, most notably the 'Active Travel – Leisure Route' and 'Active Travel – Quiet Route Measures' packages which both contain measures to support a significantly improved environment for active travel users on the corridor.</p>

8.2.3 Transport Planning Objectives

Table 8.3: Active Travel – Strategic Routes TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	+1	It would be anticipated that this option package would provide a minor positive impact in terms of TPO1, by providing measures supporting an increase in the modal share of walking. Some of the options contained within the package segregate cyclists from pedestrians as well as vehicular traffic, improving their safety and minimising conflict between modes, potentially increasing the mode share of walking as a result.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	+3	It is considered that this package would provide a major positive impact in terms of TPO2, as dedicated infrastructure would overcome a key barrier to the uptake of cycling – the lack of infrastructure and safety concerns of having to share road space with vehicles. The package of measures largely includes on-line provision and would therefore be anticipated to increase the modal share of cycling for commuting purposes in particular.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	0	It would not be anticipated that this package would impact the mode share of public transport in the study area and therefore this package has been assessed to have a neutral impact on TPO3.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	+1	It would be expected that this package would have a minor positive impact against TPO4. The package promotes accessibility improvements across the study area. This improved accessibility would be expected to enhance the ability of residents to undertake local movements more sustainably.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	+1	Whilst this package does not include any options to directly provide access to key transport hubs, it contains options which will improve interchange for cyclists between the A947 and A96, therefore improving access to TECA and Aberdeen Airport relative to existing provision and connections.
TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	+1	This package will support a revision in the function of the main routes in the study area in accordance with the revised Roads Hierarchy by providing segregated cycling infrastructure on the main A947 priority route, with the reallocation of Victoria Street as a tertiary route opening up opportunities to provide space for active travel.

8.2.4 STAG Criteria

Table 8.4: Active Travel – Strategic Routes STAG Criteria Appraisal

STAG Criteria:		
Environment	-1	Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the Active Travel – Strategic Routes package will have both positive and negative impacts on the Environment Criterion. The creation of a bound shared use path in existing grass verge space on the east side of the A947 to the north of Riverview Drive for example may negatively impact biodiversity and habitats. Drainage and water run-off may also negatively impact the existing environment, with the area currently prone to high likelihood of flooding (10%). In addition to a detailed environmental assessment at any subsequent appraisal stage, careful design considerations that are sensitive to the natural environment will be required to mitigate any potential negative impacts.

STAG Criteria:		
Climate Change	0	<p>Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, would generate significant modal shift towards active travel and, as a result, would lead to a reduction in greenhouse gas emissions. On this basis, the Active Travel – Strategic Routes package has been assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – There is high likelihood of flooding (10% chance of flooding) along a number of the River Don’s tributaries which intersect with the A947 namely Goyal Burn, Far Burn and Green Burn, which measures in this package lie in the vicinity of. The proposed options also cross the point of the River Don (Parkhill Bridge) which is susceptible to flood risk. Elements of the proposals within the Active Travel – Strategic Routes package are therefore vulnerable to the effects of climate change in respect of increased flood risk.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Active Travel – Strategic Routes package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>
Health, Safety and Wellbeing	+2	<p>Accidents – It would be anticipated that the options included within the Active Travel – Strategic Routes package would result in reduced accident risk, particularly for non-motorised users. This is due to the package including active travel infrastructure enhancements such as segregated facilities, reduced crossing widths / tightened corner radii, formal crossing facilities, and shared use facilities and speed limit reductions.</p> <p>By encouraging and facilitating more active travel trips to be undertaken, safety benefits would also be anticipated due to the 'safety in numbers' effect. This principle suggests an inverse relationship between the number of active travel trips and rate of accidents i.e. more pedestrians and cyclists results in safer walking and cycling.</p> <p>Security – By encouraging and facilitating more active travel trips to be undertaken, natural surveillance will increase; this would have a minor positive impact on personal security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023. <p>The measures contained within the Active Travel – Strategic Routes package which have a focus on enabling and facilitating active travel are anticipated to contribute significantly to the above Physical Health aims for the Aberdeen North area. Therefore, it is anticipated that this package will result in a moderate positive impact on Health Outcomes.</p> <p>Access to Health and Wellbeing Infrastructure – It would be anticipated that the options included within the Active Travel – Strategic Routes package would result in improved access to health and wellbeing infrastructure. This would be enabled through enhancements to direct access such as to the Riverside Park area and adjacent Dyce Health Centre.</p>

STAG Criteria:		
		<p>Visual Amenity – By encouraging and facilitating mode shift from motorised modes of transport, the number of private car trips would be anticipated to reduce and so too would the negative impact on visual amenity, although this would not be to any significant extent.</p>
Economy	+2	<p>Transport Economic Efficiency – Active travel schemes which provide enhanced infrastructure have the potential to yield high economic benefits and return good value for money. Serving multiple trip and destination types including local retail and services, local key employment at Kirkhill and Wellheads Industrial Estates, and linking to A947 north and the A96, the measures contained in the Active Travel – Strategic Routes package would be anticipated to generate economic benefits including, but not limited to improved journey ambience; reduced greenhouse gas emissions; reduced risk of premature death; and reduced work absenteeism. Therefore, this package is anticipated to have a major positive impact on the TEE sub-criterion.</p> <p>Wider Economic Impacts – Research shows that people who walk, wheel or cycle to shops spend more money. Connecting to Dyce Shopping Centre and Co-op / M&S, the measures contained in the Active Travel – Strategic Routes package would be anticipated to enable and facilitate active travel journeys to local shops and services. The measures also include improved access to the long-distance F&B Way route which would be anticipated to result in increased recreational use and in turn increased spending at local retailers / services from recreational users. Therefore, it is anticipated that this package would have a minor positive impact on the WEI sub-criterion.</p>
Equality and Accessibility	+2	<p>Public Transport Network Coverage – The measures proposed in the Active Travel – Strategic Routes package do not directly impact public transport network coverage. On this basis, this package is anticipated to have a neutral impact on this sub-criterion.</p> <p>Active Travel Network Coverage – The measures included in the Active Travel – Strategic Routes package including the implementation of shared use facilities between the A947 and Kirkhill Industrial Estate and segregated cycleway on the A947 between the AWPR junction and A947/A96 junction, are anticipated to provide a major positive impact in terms of Active Travel Network Coverage.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%) compared to Aberdeen City (64%), and a higher proportion of people aged 65 and over (22% and 16% respectively). For the working age majority of the local population, the measures contained within the Active Travel – Strategic Routes package will enable improved active travel accessibility to major local employment opportunities within locations such as Kirkhill and Wellheads Industrial Estates. For the over 65 population, measures will enhance accessibility of key local services including Dyce Shopping Centre. School aged children will also benefit from the measures including continuous footways on Riverview Drive and shared use path on the A947 between A947 junction and A947/A96 junction which will result in improved access to Dyce Academy, Stonewood Primary and Bucksburn Academy. It is anticipated therefore that this package would provide a major positive impact in terms of Comparative Access by People Group.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. The measures contained in the Active Travel - Strategic Routes package which have a focus on enabling and facilitating active travel would be anticipated to provide suitable</p>

STAG Criteria:	
Feasibility	<p>active travel options for predominantly short to middle distance trips, as an alternative to motorised transport. It is anticipated therefore that this package would provide a moderate positive impact in terms of Comparative Access by Geographic Location.</p> <p>Affordability – With no cost payable by the individual, walking and wheeling are the most equitable forms of transport. The cost barrier to cycling is also significantly lower than for private motor vehicles. The measures contained within the Active Travel – Strategic Routes package which have a focus on enabling and facilitating active travel are therefore anticipated to result in a moderate positive impact in terms of Affordability.</p>

8.2.5 Established Policy Objectives

Table 8.5: Active Travel – Strategic Routes Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of active travel and make travel more effective. • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and zero fatalities on the road network. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030.

8.2.6 Deliverability

Table 8.6: Active Travel – Strategic Routes Deliverability Criteria Appraisal

Deliverability	
Feasibility	<p style="text-align: center;">Medium risk</p> <p>The feasibility of the improvements outlined in the Active Travel – Strategic Routes package has been assessed to identify any potential risks to deliverability. The majority of options within this package have been appraised to have low deliverability risk and are considered to be achievable as part of the study, assisting in the improvement of active travel links throughout the study area.</p> <p>Options considered to have high risk in terms of the Implementability Criteria were some of the corridor-wide active travel improvements within the Active Travel – Strategic Routes package. Assessment of these options highlighted that any improvements over the full length would not be achievable due to physical constraints at various points throughout the route. Further work will be needed to determine the scope of interventions at specific pinch-points.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>

Deliverability		
Affordability	Medium risk	<p>The affordability of the options within this package were also assessed on the extent of their affordability risk. With the large number of options included in this package, the extent of risk varied between low, medium, and high. Options were assessed to have a higher risk in terms of affordability due to factors such as acquisition of third-party land, major earthworks and large infrastructure works. Options which were evaluated as low risk involved minimal works such as updating road markings, vegetation management and new kerbing layouts.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further</p>
Public Acceptability	Low risk	<p>Overall, consultation comments were generally supportive of this option concept with many welcoming the proposals to segregate cyclists and vehicles and make it easier for cyclists to navigate existing bottlenecks such as roundabouts and Victoria Street. Emphasis was placed on 'hard' segregation measures with many noting that advisory cycle lanes would not make them feel any safer or encourage modal change. Negative comments received were generally in relation to the cost of implementing the infrastructure.</p>

8.2.7 Appraisal Summary and Recommendations

Table 8.7: Active Travel – Strategic Routes Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs, particularly in terms of increasing the modal share of cycling on the A947 corridor for all journey types and ensuring the main routes through the study area function in accordance with their role in the revised Roads Hierarchy. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • The majority of options within this package have been appraised to have low deliverability risk and are considered to be achievable as part of the study, assisting in the improvement of active travel links throughout the study area. The options classified to create a high risk to the Implementability Criteria were some of the corridor-wide active travel improvements within the package. Assessment of these options highlighted that any improvements over the full length would not be achievable due to physical constraints at various points throughout the route. • Options were assessed to have a higher risk in terms of affordability due to factors such as acquisition of third-party land, major earthworks and large infrastructure works. Options which were evaluated as low risk involved minimal works such as updating road markings, vegetation management and new kerbing layouts. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> Overall, consultation comments were generally supportive of this option concept with many welcoming the proposals to segregate cyclists and vehicles and make it easier for cyclists to navigate existing bottlenecks such as roundabouts and Victoria Street. Emphasis was placed on 'hard' segregation measures with many noting that advisory cycle lanes would not make them feel any safer or encourage modal change. Negative comments received were generally in relation to the cost of implementing the infrastructure.
Recommendations:	<p>A full breakdown of the options under consideration as part of this package, including the rationale for any specific options recommended to be removed from consideration at this stage of the appraisal is presented below:</p> <p><u>Select for further consideration</u></p> <ul style="list-style-type: none"> AT1: Provide protected junction for active travel users at the A947/A90 slip road junction AT2: Improve visibility for cyclists at the B977/A90 slip road roundabout AT4: Implement measures to give active travel users priority over Burnside Drive when using the shared use path on Riverview Drive AT8: Reconfigure the Auchmill Road/Oldmeldrum Road junction to improve connections for pedestrians and cyclists AT13: Provide a formal pedestrian crossing point to the north of the A947/Riverview Drive Roundabout to facilitate movements to the F&B Way AT14: Provide a formal pedestrian crossing point to the east of the A947/Riverview Drive Roundabout AT16: Implement formal pedestrian crossing facilities on the arms of the Riverview Drive/Stoneywood Road Roundabout AT20: Conduct a footway review throughout the study area, identifying gaps in provision and considering the width and surfacing of existing footways AT28: Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don AT30: Provide direct active travel link between Dyce Drive and Riverview Drive AT47: Implement with-flow segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction AT48: Implement two-way segregated cycleway on the A947 between AWPR Junction and A947/A96 Junction AT51: Implement with-flow segregated cycleway on Oldmeldrum Road AT52: Implement two-way segregated cycleway on Oldmeldrum Road AT55: Implement with-flow segregated cycleway on Gilbert Road AT56: Implement two-way segregated cycleway on Gilbert Road AT58: Implement shared use path on Dyce Drive between the A947 and Kirkhill Industrial Estate to the north of Aberdeen International Airport AT59: Widen the shared use path on the east side of the A947 to the north of Riverview Drive AT60: Provide continuous footways on Riverview Drive for the duration of the route AT64: Implement shared use path on Oldmeldrum Road AT66: Implement shared use path on Gilbert Road O3: Review the layout of the Riverview Drive/Balloch Way Junction O4: Review the layout of the Riverview Drive/Todlaw Walk Junction O5: Review the layout of the Riverview Drive/Netherview Avenue Junction O7: Review the layout of the A947/Stoneywood Junction at Co-Op/M&S O8: Review the layout of the A947/Stoneywood Brae Junction O10: Review layout of the A947/McDonalds access road junction <p><u>Remove from consideration</u></p> <ul style="list-style-type: none"> AT10: Widen on-road advisory cycle lane on Riverview Drive – see Section 8.8. AT11: Implement missing sections of on-road advisory cycle lane on Riverview Drive – see Section 8.8. AT12: Widen on-road advisory cycle lane on Stoneywood Road at Stoneywood Park junction – see Section 8.8.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> • AT57: Implement shared use path on the A947 between AWPR Junction and A947/A96 Junction – it is considered that segregated cycling infrastructure should be promoted as part of this study. • AT62: Widen the shared use path on the east side of the A947 between the A96 and Beech Manor – it is considered that segregated cycling infrastructure should be promoted as part of this study. • AT63: Review alignment of the A947 shared use path to the north of the Oldmeldrum Road Junction where the safety barrier constrains the width of the path – it is considered that segregated cycling infrastructure should be promoted as part of this study. • O17: Reduce the speed limit along the A947 to support active travel improvements – it is not considered appropriate to reduce the speed limit on a priority route in accordance with the Roads Hierarchy.

8.3 Active Travel – Leisure Route Appraisal

8.3.1 Overview

Table 8.8: Active Travel – Leisure Route Overview

Active Travel – Leisure Route Package	
Package Description	The Active Travel – Leisure Route Package is formed of three active travel options with the aim of creating a quality active travel route along the existing Riverside Path which runs close to the River Don.
Package Components	<p>The Active Travel – Leisure Route package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • AT31: Improve active travel links between the Riverside Path and housing within Dyce • AT45: Upgrade the Riverside Path to a high quality active travel route, including improvements to the surfacing of the route • AT46: Implement lighting on the Riverside Path
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>The three active travel improvement options which form the Active Travel – Leisure Route package have been initially categorised between the low and medium cost bands outlined above. The large-scale improvements to the Riverside Path and its links to the local area will require substantial work to be carried out. Further design and costing work during a later stage of the study may result in the classification being moved to the high-cost band.</p>

8.3.2 Context

Table 8.9: Active Travel – Leisure Route Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Active Travel Infrastructure – Providing missing links between the Riverside Path and potentially crossing facilities will address gaps identified by the study. • Maintenance of Active Travel Infrastructure – There is a lack of maintenance of active travel infrastructure including the surfaces of advisory cycle lanes, footways, the underpass at Millhill Brae and the Riverside Path. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel.

Context:	
	<ul style="list-style-type: none"> Funding – Opportunity to take advantage of Scottish Government funding for active travel infrastructure.
Interdependencies	This package has potential overlap with other option packages being considered through this study, most notably the 'Active Travel – Strategic Routes' and 'Active Travel – Quiet Route Measures' packages which both contain measures to support a significantly improved environment for active travel users on the corridor.

8.3.3 Transport Planning Objectives

Table 8.10: Active Travel – Leisure Route TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	+1	It would be anticipated that this option package would provide a minor positive impact in terms of TPO1. Given the location of the route and the options proposed, this route would likely see increased use as a leisure route. The path also provides onward connections to Seaton Park and Aberdeen City Centre via NCN1 and therefore could see an uptake in walking.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	+1	It would be anticipated that this option package would provide a minor positive impact in terms of TPO2. Given the location of the route and the options proposed, this route would likely see increased use as a leisure route. The path also provides onward connections to Seaton Park and Aberdeen City Centre via NCN1 and therefore could see an uptake in cycling.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	0	It would not be anticipated that this package would impact the mode share of public transport in the study area and therefore this package has been assessed to have a neutral impact on TPO3.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	+1	This option package is considered to have a minor positive impact against TPO4. Although the package largely concerns the north to south route of the Riverside Path, Option AT31 within the package connects the path to housing areas in Dyce which would enhance east to west connectivity and potentially connect these housing areas to active travel infrastructure.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	0	It would not be anticipated that this package would directly improve accessibility to key transport hubs and key destinations by non-car modes and therefore this package has been assessed to have a neutral impact on TPO5.
TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	0	This option package consists of largely off-road active travel routes and therefore there will be a neutral impact on route function in the context of the revised Roads Hierarchy.

8.3.4 STAG Criteria

Table 8.11: Active Travel – Leisure Route STAG Criteria Appraisal

STAG Criteria:		
Environment	-1	Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the Active Travel – Leisure Route package will have both positive and negative impacts on the Environment Criterion. The creation of a bound surface route may negatively impact biodiversity and

STAG Criteria:		
		habitats, as may the implementation of lighting. Drainage and water run-off may also negatively impact the existing environment, with the area currently prone to high likelihood of flooding (10%). In addition to a subsequent detailed environmental assessment at any subsequent appraisal stage, careful design considerations that are sensitive to the natural environment will be required to mitigate any potential negative impacts.
Climate Change	0	<p>Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, would generate significant modal shift towards active travel and as a result, would lead to a reduction in greenhouse gas emissions. On this basis, the Active Travel – Leisure Route package has been assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – There is high likelihood of flooding (10% chance of flooding) along a number of the River Don's tributaries which intersect with the A947 namely Goyal Burn, Far Burn and Green Burn, which measures in this package lie in the vicinity of. The measures would also lie adjacent to the banks of the River Don, some points of which are susceptible to flood risk. Elements of the proposals within the Active Travel – Leisure Route package are therefore highly vulnerable to the effects of climate change in respect of increased flood risk.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Active Travel – Leisure Route package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>
Health, Safety and Wellbeing	+2	<p>Accidents – It would be anticipated that the options included within the Active Travel – Leisure Route package would result in reduced accident risk, particularly for non-motorised users. This is due to the implementation of a continuous, lit, 4m width, bound surface path, which would reduce trip hazards and risks of cyclists coming off their bikes.</p> <p>By encouraging and facilitating more active travel trips to be undertaken, safety benefits would also be anticipated due to the 'safety in numbers' effect. This principle suggests an inverse relationship between the number of active travel trips and rate of accidents i.e. more pedestrians and cyclists results in safer walking and cycling.</p> <p>Security – It would be anticipated that the options included within the Active Travel – Leisure Route package would result in a positive impact on security due to the implementation of lighting along the route. Additionally, by encouraging and facilitating more active travel trips to be undertaken, natural surveillance will increase; this would have a minor positive impact on personal security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023. <p>The measures contained within the Active Travel – Leisure Route package which have a focus on enabling and facilitating active travel are anticipated to contribute significantly to the above Physical Health aims</p>

STAG Criteria:		
		<p>for the Aberdeen North area. Therefore, it is anticipated that this package will result in a moderate positive impact on Health Outcomes.</p> <p>Access to Health and Wellbeing Infrastructure – It would be anticipated that the options included within the Active Travel – Leisure Route package would result in improved access to health and wellbeing infrastructure. This would be enabled through enhancements to the Riverside Park area, River Don path network and adjacent Dyce Health Centre.</p> <p>Visual Amenity – It would be anticipated that the options included within the Active Travel – Leisure Route package would result in improved visual amenity. This would be enabled through sensitive design and choice of materials to ensure Riverside Path infrastructure is in keeping with the natural environment, enhancing it where possible. Users would also be anticipated to consider a continuous path of consistent width and material to be more visually appealing than a path of visibly mixed standard, material and width.</p> <p>By encouraging and facilitating mode shift from motorised modes of transport, the number of private car trips would be anticipated to reduce and so too would the negative impact on visual amenity, although not to any significant extent.</p>
Economy	0	<p>Transport Economic Efficiency – In isolation, the relatively short-distance Active Travel – Leisure route package, with a focus on leisure trips, would be anticipated to have a neutral impact on the TEE sub-criterion.</p> <p>Wider Economic Impacts – Tourism is a vital part of the Scottish economy. Within this, 'cycle tourism' is a growing sector. The measures contained in the Active Travel – Leisure Route package which centre on improved access to and along the Riverside Path would be anticipated to result in increased recreational use and, in turn, potentially increased spending at local retailers / services from recreational users. However, these WEIs would not be expected to be significant.</p>
Equality and Accessibility	+2	<p>Public Transport Network Coverage – The measures proposed in the Active Travel – Leisure Route package do not directly impact public transport network coverage. On this basis, this package is anticipated to have a neutral impact on this sub-criterion.</p> <p>Active Travel Network Coverage – The measures included in the Active Travel – Leisure Route package are designed to improve access to and along the Riverside Path. Therefore this package is anticipated to result in a moderate positive impact on Active Travel Network Coverage.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%) compared to Aberdeen City (64%), and a higher proportion of people aged 65 and over (22% and 16% respectively). The primary purpose of the Active Travel – Leisure Route package is to improve access to and along the Riverside Path leisure route. All people groups would be anticipated to benefit equally at the individual level, with the package anticipated to provide a moderate positive impact in terms of Comparative Access by People Group.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. This package would support access to onward connections to Seaton Park and Aberdeen City Centre via NCN1, and, on this basis, would provide a minor positive impact in terms of Comparative Access by Geographic Location.</p>

STAG Criteria:	
	<p>Affordability – With no cost payable by the individual, walking and wheeling are the most equitable forms of transport. The cost barrier to cycling is also significantly lower than for private motor vehicles. The measures contained within the Active Travel – Leisure Route package which have a focus on enabling and facilitating active travel for recreation are therefore anticipated to result in a minor positive impact in terms of Affordability.</p>

8.3.5 Established Policy Objectives

Table 8.12: Active Travel – Leisure Route Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of active travel and make travel more effective. • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and zero fatalities on the road network. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030.

8.3.6 Deliverability

Table 8.13: Active Travel – Leisure Route Deliverability Criteria Appraisal

Deliverability	
Feasibility	<p>Medium risk</p> <p>The three active travel improvements included in this package have been assessed in terms of their feasibility to identify what impact this would have on implementability. Creating an active travel link between the leisure route and nearby housing within Dyce is considered a medium feasibility risk. This is due to the work required and environmental impact caused by formalising existing trails or creating new links along the Riverside Path. The other options within this package focus on upgrades to the surface and lighting of the existing Riverside Path – both are considered feasible.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>
Affordability	<p>Medium – High risk</p> <p>The extent of affordability risk was also considered for the three options within the Active Travel – Leisure Route package. The active travel improvements were evaluated to have medium to high risk in terms of affordability. The potential volume and complexity of the work involved to deliver the options within this package resulted in this evaluation.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further</p>

Deliverability		
Public Acceptability	Low risk	Overall, there was strong support for this option concept during consultation, with widespread support for improved surfacing of the Riverside Path and support for better leisure routes in the wider area. Improving connections from Dyce to the Riverside Path were also welcomed through new crossings on Riverview Drive. However, some environmental concerns were raised regarding lighting provision on the Riverside Path.

8.3.7 Appraisal Summary and Recommendations

Table 8.14: Active Travel – Leisure Route Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across some of the TPOs, with minor positive impacts in terms of increasing the modal share of walking and cycling, and on promoting improved accessibility for local movements. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • Creating an active travel link between the leisure route and nearby housing within Dyce is considered a medium feasibility risk. This is due to the work required and environmental impact caused by formalising existing trails or creating new links along the Riverside Path. The other options within this package focus on upgrades to the surface and lighting of the existing Riverside Path – both are considered feasible. • The active travel improvements were evaluated to have medium to high risk in terms of affordability. The potential volume and complexity of the work involved to deliver the options within this package resulted in this evaluation. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, there was strong support for this option concept during consultation, with widespread support for improved surfacing of the Riverside Path and support for better leisure routes in the wider area. Some environmental concerns were raised regarding lighting provision on the Riverside Path.
Recommendations:	It is recommended that all options under consideration as part of this package are progressed for further assessment.

8.4 Active Travel – Quiet Route Measures Appraisal

8.4.1 Overview

Table 8.15: Active Travel – Quiet Route Measures Overview

Active Travel – Quiet Route Measures Package	
Package Description	The Quiet Route Measures Package is a package of options aimed at active travel improvements on routes away from the main A947 and Victoria Street routes around Dyce. The focus of this package is to improve active travel provision on routes away from large volumes of traffic and provide quiet routes which may be more suitable for leisure walking and cycling or cyclists who are less confident to travel adjacent to vehicular traffic.
Package Components	<p>The Active Travel – Quiet Route Measures package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • AT7: Review signals at Forrit Burn Road bus gate to allow cyclists access • AT24: Improve active travel connectivity between the A947 study area and Aberdeen Airport/Heliport • AT25: Improve active travel connectivity between the A947 study area and Craibstone Park & Ride • AT26: Improve active travel connectivity between the A947 study area and TECA • AT27: Improve active travel connectivity between the A947 study area and Kirkhill Industrial Estate • AT32: Implement footways on the south side of the carriageway on Pitmedden Road • AT35: Implement quiet route measures on the local road network to the west of the A947 via Bankhead Road, Wellheads Drive and Farburn Terrace to Dyce Rail Station • AT37: Implement dropped kerbs between Wellheads Drive shared use path and the carriageway • AT38: Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles • AT39: Remove access controls on off-road path between Waterton Road and Ruthriehill Road • AT41: Improve active travel access to the retail park at the Bucksburn Roundabout • AT43: Implement active travel connection between the A947 and the B977, utilising a section of the old A947 (pre-AWPR) • AT65: Implement streetscape improvements and widened pavements along Mugiemoor Road • AT67: Widen the shared use path on the west side of Howe Moss Drive • O14: Review parking arrangements on Mugiemoor Road • O18: Consider options to reduce vehicle speeds on Bankhead Road
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>Following an initial assessment of the active travel improvements within this package, the individual options included would vary between the low and medium cost bands to deliver.</p>

8.4.2 Context

Table 8.16: Active Travel – Quiet Route Measures Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Active Travel Infrastructure – Whilst there is generally good provision of pedestrian infrastructure within the study area, the PICOs work identified a number of areas

Context:	
	<p>where there is a lack of footway provision to match pedestrian desire lines. The PICO's work additionally identified a limited number of appropriate crossings for pedestrians and cyclists throughout the study area.</p> <ul style="list-style-type: none"> • Driver Behaviour – anecdotal evidence of driver behaviour issues including vehicles travelling in excess of speed limits, ignoring cycling provision, flouting 'no entry' signs and parking on double yellow lines. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel. • Funding – Opportunity to take advantage of Scottish Government funding for active travel infrastructure.
Interdependencies	<p>This package has potential overlap with other option packages being considered through this study, most notably the 'Active Travel – Strategic Routes' and 'Active Travel – Leisure Route' packages which both contain measures to support a significantly improved environment for active travel users on the corridor.</p>

8.4.3 Transport Planning Objectives

Table 8.17: Active Travel – Quiet Route Measures TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	+2	Measures included within this package would be anticipated to increase trips made by walking. The package would improve access by walking to key destinations including Aberdeen Airport, Craibstone Park and Ride, TECA, Kirkhill Industrial Estate and the retail park. Measures such as widening of pavements and increased crossing facilities are also designed to improve the experience for pedestrians and provide ease of access.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	+2	Measures included within this package would be anticipated to increase trips made by cycling. By improving connectivity by active travel to key destinations including Aberdeen Airport, Craibstone Park and Ride, TECA, Kirkhill Industrial Estate and the retail park, the modal share of cycling could increase by connecting residential areas to places of employment and leisure.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	0	It would not be anticipated that this package would impact the mode share of public transport in the study area and therefore this package has been assessed to have a neutral impact on TPO3.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	+1	This option package is considered to have a minor positive impact against TPO4. Although the package largely concerns Quiet Route measures north to south, some options promote improved east-west connectivity, with the package overall promoting improved accessibility for local movements.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	+1	It is anticipated that this package would have a minor positive impact against TPO5 as measures are included within the package to improve access to Dyce Rail Station via Bankhead Road, Wellheads Drive and Farburn Terrace by active travel. Additionally, improvements on these routes are likely to improve the accessibility of Aberdeen International Airport by active travel modes.
TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	0	The routes considered in this package are located away from the main A947 and Victoria Street routes and therefore would have little impact on their revised role in the new Roads Hierarchy.

8.4.4 STAG Criteria

Table 8.18: Active Travel – Quiet Route Measures STAG Criteria Appraisal

STAG Criteria:		
Environment	-1	<p>Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the Active Travel – Quiet Route Measures package will have both positive and negative impacts on the Environment Criterion. The creation of a bound footway in existing grass verge space on the south side of the carriageway on Pitmedden Road for example may negatively impact biodiversity and habitats. Drainage and water run-off may also negatively impact the existing environment. Other measures in this package also lie in the vicinity of areas of high likelihood of flooding (10%). In addition to a subsequent detailed environmental assessment at any subsequent appraisal stage, careful design considerations that are sensitive to the natural environment will be required to mitigate any potential negative impacts.</p>
Climate Change	0	<p>Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, would generate significant modal shift towards active travel and, as a result, would lead to a reduction in greenhouse gas emissions. On this basis, the Active Travel – Quiet Route Measures package has been assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – There is high likelihood of flooding (10% chance of flooding) along a number of the River Don's tributaries which intersect with the A947 namely Goval Burn, Far Burn and Green Burn, which measures in this package lie in the vicinity of. The measures also lie in the vicinity of the point of the River Don (Parkhill Bridge) which is susceptible to flood risk. Elements of the proposals within the Active Travel – Quiet Route Measures package are therefore highly vulnerable to the effects of climate change in respect of increased flood risk.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Active Travel – Quiet Route Measures package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>
Health, Safety and Wellbeing	+2	<p>Accidents – It would be anticipated that the options included within the Active Travel – Quiet Route Measures package would result in reduced accident risk, particularly for non-motorised users.</p> <p>By encouraging and facilitating more active travel trips to be undertaken, safety benefits would also be anticipated due to the 'safety in numbers' effect. This principle suggests an inverse relationship between the number of active travel trips and rate of accidents i.e. more pedestrians and cyclists results in safer walking and cycling.</p> <p>Security – By encouraging and facilitating more active travel trips to be undertaken, natural surveillance will increase; this would have a minor positive impact on personal security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023.

STAG Criteria:		
		<p>The measures contained within the Active Travel – Quiet Route Measures package which have a focus on enabling and facilitating active travel are anticipated to contribute significantly to the above Physical Health aims for the Aberdeen North area. Therefore, it is anticipated that this package will result in a moderate positive impact on Health Outcomes.</p> <p>Access to Health and Wellbeing Infrastructure – It would be anticipated that the options included within the Active Travel – Quiet Route Measures package would result in improved access to health and wellbeing infrastructure. This would be enabled through enhancements to direct access to locations such as the Stoneywood Dyce Cricket Club, Dyce Scout Hut and Dyce Boys Club football pitches and indirect access to facilities further afield via Craibstone Park & Ride and Aberdeen International Airport.</p> <p>Visual Amenity – It would be anticipated that the options included within the Active Travel – Quiet Route Measures package would result in improved visual amenity. This would be enabled through streetscape improvements along Mugiemoor Road. By encouraging and facilitating mode shift from motorised modes of transport, the number of private car trips would be anticipated to reduce and so too would the negative impact on visual amenity, although not to any significant extent.</p>
Economy	+2	<p>Transport Economic Efficiency – Active travel schemes which provide enhanced infrastructure have the potential to yield high economic benefits and return good value for money. Serving multiple trip and destination types including local retail and services, local key employment at Kirkhill and Wellheads Industrial Estates, and linking to A947 north and the A96, the measures contained in the Active Travel – Quiet Route Measures package would be anticipated to generate economic benefits including, but not limited to: improved journey ambience; reduced greenhouse gas emissions; reduced risk of premature death; and reduced work absenteeism. Therefore, this package is anticipated to have a major positive impact on the TEE sub-criterion.</p> <p>Wider Economic Impacts – Research shows that people who walk, wheel or cycle to shops spend more money. Connecting to the Bucksburn Roundabout retail park, the measures contained in the Active Travel – Quiet Route Measures package would be anticipated to enable and facilitate active travel journeys to local shops and services. The package also includes measures to improve active travel connectivity to the wider area through improved links to Craibstone Park & Ride and Aberdeen International Airport, thus also providing economic benefit to these connected areas. Therefore, it is anticipated that this package would have a minor positive impact on the WEI sub-criterion.</p>
Equality and Accessibility	+2	<p>Public Transport Network Coverage – Whilst the measures proposed in the Active Travel – Quiet Route Measures package include enhanced accessibility to Aberdeen International Airport and Craibstone Park & Ride, they do not directly impact network coverage. On this basis, this package is anticipated to have a neutral impact on Public Transport Network Coverage.</p> <p>Active Travel Network Coverage – The measures included in the Active Travel – Quiet Route Measures package are designed to remove existing active travel access barriers and improve facilities at various locations. Therefore, this package is anticipated to provide a moderate positive impact in terms of Active Travel Network Coverage.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%)</p>

STAG Criteria:	
	<p>compared to Aberdeen City (64%), and a higher proportion of people aged 65 and over (22% and 16% respectively). For the working age majority of the local population, the measures contained within the Active Travel – Quiet Route Measures package will enable improved active travel accessibility to major local employment opportunities within locations such as Kirkhill and Wellheads Industrial Estates and Aberdeen International Airport. For the over 65 population, measures will enhance accessibility of key local services including Bucksburn Roundabout retail park. Younger people will also benefit from improved access to Dyce Scout Hut and Dyce Boys Club football pitches. It is anticipated therefore that this package will provide a moderate positive impact on Comparative Access by People Group.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. The measures contained in the Active Travel – Quiet Route Measures package which have a focus on enabling and facilitating active travel would be anticipated to provide suitable active travel options for predominantly short to middle distance trips, as an alternative to motorised transport. This package is therefore anticipated to have a minor positive impact on Comparative Access by Geographic Location.</p> <p>Affordability – With no cost payable by the individual, walking and wheeling are the most equitable forms of transport. The cost barrier to cycling is also significantly lower than for private motor vehicles. The measures contained within the Active Travel – Quiet Route Measures package which have a focus on enabling and facilitating active travel are therefore anticipated to result in a moderate positive impact in terms of Affordability.</p>

8.4.5 Established Policy Objectives

Table 8.19: Active Travel – Quiet Route Measures Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of active travel and make travel more effective. • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and zero fatalities on the road network. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030.

8.4.6 Deliverability

Table 8.20: Active Travel – Quiet Route Measures Deliverability Criteria Appraisal

Deliverability		
Feasibility	Low risk	<p>Within this package it is anticipated that the majority of the options included would have a low feasibility risk in terms of their overall implementability. The active travel improvements within the package which present a higher risk are achievable, however, they would require substantial infrastructure interventions.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>
Affordability	Medium risk	<p>The extent of affordability risk for the options in the Active Travel – Quiet Route Measures package ranges between low, medium, and high risk. Many of the active travel improvements which are proposed have a low risk in terms of affordability as they require little financial burden to implement across the study area. However, some of the broader options would require larger scale improvements across the study area and represent potential financial risk as a result.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of affordability to be undertaken.</p>
Public Acceptability	Low risk	<p>Overall, this option concept received strong public support during consultation, with many considering it to be a good alternative to Stonewood Road for cyclists of all abilities and providing a safer route for children. There was general support for making use of existing infrastructure and this was noted to be more cost effective than installing new infrastructure. Concerns were raised around the impact traffic calming measures could have on commercial vehicles, particularly delivery vehicles.</p>

8.4.7 Appraisal Summary and Recommendations

Table 8.21: Active Travel – Quiet Route Measures Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across most of the TPOs, particularly in terms of increasing the modal share of walking and cycling. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • Within this package it is anticipated that the majority of the options included would have a low feasibility risk in terms of their overall implementability. The active travel improvements within the package which present a higher risk are achievable, however, they would require substantial infrastructure interventions.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> • Many of the active travel improvements which are proposed have a low risk in terms of affordability as they require little financial burden to implement across the study area. However, some of the broader options would require larger scale improvements across the study area and represent potential financial risk as a result. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, this option concept received strong public support during consultation, with many considering it to be a good alternative to Stoneywood Road for cyclists of all abilities and providing a safer route for children. There was general support for making use of existing infrastructure and this was noted to be more cost effective than installing new infrastructure. Concerns were raised around the impact traffic calming measures could have on commercial vehicles, particularly delivery vehicles.
Recommendations:	<p>A full breakdown of the options under consideration as part of this package, including the rationale for any specific options recommended to be removed from consideration at this stage of the appraisal is presented below:</p> <p><u>Select for further consideration</u></p> <ul style="list-style-type: none"> • AT7: Review signals at Forrit Burn Road bus gate to allow cyclists access • AT24: Improve active travel connectivity between the A947 study area and Aberdeen Airport/Heliport • AT25: Improve active travel connectivity between the A947 study area and Craibstone Park & Ride • AT26: Improve active travel connectivity between the A947 study area and TECA • AT27: Improve active travel connectivity between the A947 study area and Kirkhill Industrial Estate • AT32: Implement footways on the south side of the carriageway on Pitmedden Road • AT35: Implement quiet route measures on the local road network to the west of the A947 via Bankhead Road, Wellheads Drive and Farburn Terrace to Dyce Rail Station • AT37: Implement dropped kerbs between Wellheads Drive shared use path and the carriageway • AT38: Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles • AT39: Remove access controls on off-road path between Waterton Road and Ruthriehill Road • AT41: Improve active travel access to the retail park at the Bucksburn Roundabout • AT43: Implement active travel connection between the A947 and the B977, utilising a section of the old A947 (pre-AWPR) • AT65: Implement streetscape improvements and widened pavements along Mugiemoos Road • O18: Consider options to reduce vehicle speeds on Bankhead Road <p><u>Remove from consideration</u></p> <ul style="list-style-type: none"> • AT67: Widen the shared use path on the west side of Howe Moss Drive – option has limited impact against the TPOs and STAG Criteria. • O14: Review parking arrangements on Mugiemoos Road – option will be incorporated as part of Option AT65.

8.5 Public Transport – Priority Interventions Appraisal

8.5.1 Overview

Table 8.22: Public Transport – Priority Interventions Overview

Public Transport – Priority Interventions Package	
Package Description	The Public Transport – Priority Interventions Package contains seven options specifically aimed to increase public transport use within the study area. The package contains options to increase connectivity between the study area and transport hubs and key destinations as well as some options to provide bus priority.
Package Components	<p>The Public Transport – Priority Interventions package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • PT2: Conduct a traffic signal review to consider bus priority at all traffic signals along the A947 corridor • PT5: Implement real time passenger information at key bus stops along the study corridor • PT9: Improve public transport connectivity between the A947 study area and Aberdeen Airport/Heliport • PT10: Improve public transport connectivity between the A947 study area and Craibstone Park & Ride • PT11: Improve public transport connectivity between the A947 study area and TECA • PT12: Improve public transport connectivity between the A947 study area and Kirkhill Industrial Estate • AT22: Promote Craibstone Park & Ride as a Park & Pedal facility
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>Each of the public transport improvements would be classified in the medium cost band, prior to any design work being conducted to understand the feasibility of delivering the options.</p>

8.5.2 Context

Table 8.23: Public Transport – Priority Interventions Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Declining Bus Patronage – The package seeks to address the root causes of declining bus patronage by improving journey times and the difficulty in accessing destinations such as Aberdeen International Airport. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel. • Funding – Opportunity to take advantage of Scottish Government funding for bus priority infrastructure including the £500m Bus Partnership Fund. • Bus Service Partnerships – Take advantage of new powers for Councils to enable greater control on the operation of bus services and enhanced partnership working arrangements under BSIPs.
Interdependencies	It is possible that options in the Public Transport – Priority interventions package cannot be implemented in combination with certain active travel or placemaking options due to physical constraints on the A947 corridor and on Victoria Street.

8.5.3 Transport Planning Objectives

Table 8.24: Public Transport – Priority Interventions TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	0	The interventions which form this package would be expected to have a neutral impact on increasing the modal share of walking.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	0	The interventions which form this package would be expected to have a neutral impact on increasing the modal share of cycling.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	+2	It would be expected that this option package would provide a moderate positive impact in terms of TPO3 as it contains a series of measures to connect public transport to key destinations. This would encourage more people to travel by public transport and consequently would support an increase in public transport mode share.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	0	This package would be expected to have a neutral impact on improving east-west connectivity within Dyce.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	+3	This package is considered to have a major positive impact against TPO5. This is due to the measures contained within the package which seek to directly implement public transport connectivity improvements between the study area and the key destinations which surround it. This will provide an alternative to private car use and thus would provide significant support for this objective.
TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	0	This package is considered to have a neutral impact against TPO6 overall, although may provide some minor positive impact where public transport opportunities are introduced on the tertiary route of Victoria Street, for example.

8.5.4 STAG Criteria

Table 8.25: Public Transport – Priority Interventions STAG Criteria Appraisal

STAG Criteria:		
Environment	0	Overall, it is not anticipated that the options contained within this package would have a significant impact against the Environment Criterion.
Climate Change	+1	<p>Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, would generate significant modal shift towards public transport and, as a result, would lead to a reduction in greenhouse gas emissions. On this basis, the Public Transport – Priority Interventions package has been assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – Bus-based public transport is considered to be highly resilient to the effects of climate change, therefore this package is anticipated to have a minor positive impact on the Vulnerability to the Effects of Climate Change sub-criterion.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Public Transport – Priority Interventions package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>

STAG Criteria:		
Health, Safety and Wellbeing	+1	<p>Accidents – It would be anticipated that the options included within the Public Transport – Priority Interventions package would result in a minor reduction in accident risk. This is due to the anticipation that measures would encourage and facilitate more public transport trips to be undertaken. Evidence suggests that public transport trips are inherently safer than private car trips.</p> <p>Security – It would be anticipated that the options included within the Public Transport – Priority Interventions package would result in a neutral impact on security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023. <p>Whilst the main focus of the measures contained within the Public Transport – Priority Interventions package is on promoting increased public transport use, there may be associated health benefits associated, with, for example, increased walking or cycling to access bus services. This package is therefore anticipated to have a minor positive impact on Health Outcomes.</p> <p>Access to Health and Wellbeing Infrastructure – Improved links to key transport hubs will enable improved access to health and wellbeing infrastructure outwith the study area.</p> <p>Visual Amenity – There would be no significant impacts on visual amenity associated with the interventions within the Public Transport – Priority Interventions package.</p>
Economy	+1	<p>Transport Economic Efficiency – The measures contained within the Public Transport – Priority Interventions package are anticipated to result in journey time savings for public transport users. These measures may also be anticipated to result in minor delays for private motorised trips, although further work would be needed to gauge the extent of this. Therefore, this package is anticipated to have a minor positive impact on the TEE sub-criterion overall.</p> <p>Wider Economic Impacts – The measures contained within the Public Transport – Priority Interventions package which include improved connectivity to TECA and transport hubs at Craibstone Park & Ride and Aberdeen International Airport are anticipated to encourage and enable public transport journeys for a range of trip purposes. Therefore this package is anticipated to have a minor positive impact on the WEI sub-criterion.</p>
Equality and Accessibility	+1	<p>Public Transport Network Coverage – With a focus on improving public transport connectivity between the A947 study area and key destinations, this package would have a major positive impact on Public Transport Network Coverage.</p> <p>Active Travel Network Coverage – This package is anticipated to provide a neutral impact on Active Travel Network Coverage overall, though some measures, such as real time passenger information at key bus stops, could support increased walking or cycling to access bus services but network coverage will not be enhanced to any significant degree.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%) compared to Aberdeen City (64%), and a higher proportion of people</p>

STAG Criteria:	
	<p>aged 65 and over (22% and 16% respectively). For the working age majority of the local population, the measures contained within the Public Transport – Priority Interventions package will enable improved public transport accessibility to major local employment opportunities within locations such as Kirkill and Wellheads Industrial Estates. For the over 65 population, measures will directly enhance accessibility of key facilities such as TECA. It is anticipated therefore that this package would have a moderate positive impact in terms of Comparative Access by People Group.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. Improving public transport connectivity to and from the A947 study area would therefore be anticipated to provide a moderate positive impact in terms of Comparative Access by Geographic Location.</p> <p>Affordability – This package would have no direct impact on affordability for users – however, there may be examples of cost savings for individuals who switch from private motorised transport to public transport as a result of the interventions.</p>

8.5.5 Established Policy Objectives

Table 8.26: Public Transport – Priority Interventions Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of public transport and make travel more effective. • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and improved journey efficiencies to enhance connectivity. • North East Bus Alliance – the North East Bus Alliance was formed in 2018 as a voluntary partnership of Nestrans, ACC, Aberdeenshire Council, First Bus Aberdeen, Stagecoach, and Bains Coaches. The overarching aims of the Alliance are to arrest the decline in bus patronage in the North East of Scotland by 2022 and to achieve year on year growth in bus patronage to 2025. Sub-objectives also exist around increasing modal share of bus patronage, improving operational performance and customer satisfaction, reducing bus emissions, and improving service accessibility. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030.

8.5.6 Deliverability

Table 8.27: Public Transport – Priority Interventions Deliverability Criteria Appraisal

Deliverability		
Feasibility	High risk	<p>The feasibility of the options within this package have been assessed to understand any potential risks which may impact their deliverability. The feasibility of five of the package components have been assessed as high risk, creating concerns about their implementability. These are considered as high risk due to the requirement for wider stakeholder consultation to be carried out and potentially having to be delivered in partnership with public transport operators.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further</p>
Affordability	Medium risk	<p>All of the improvements included in this package have been identified as a medium risk in terms of affordability as part of the implementability criteria. The options outlined involve extensive reviews and improvements of existing public transport throughout various sections of the study area and may present a financial burden in order to deliver each of the options.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>
Public Acceptability	Low risk	<p>Consultation highlighted existing poor public transport connections between Dyce and Aberdeen International Airport, TECA and Danestone and some respondents stated they would welcome and directly benefit from better public transport links between Dyce, the airport and TECA. Some respondents felt active travel measures should be prioritised over public transport.</p>

8.5.7 Appraisal Summary and Recommendations

Table 8.28: Public Transport - Priority Interventions Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> With regards the TPOs, this package would provide positive impacts in terms of increasing public transport modal share and improving accessibility to key transport hubs and key destinations. In terms of the STAG criteria, this package would promote minor positive impacts across the majority of the criteria. Within the Equality and Accessibility Criterion, this package would have a major positive impact on Public Transport Network Coverage. The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the overarching aims of the North East Bus Alliance. The feasibility of five of the package components have been assessed as high risk, creating concerns about their implementability. These are considered as high risk due to the requirement for wider stakeholder consultation to be carried out and potentially having to be delivered in partnership with public transport operators. All of the improvements included in this package have been identified as a medium risk in terms of affordability as part of the implementability criteria. The options outlined involve extensive reviews and improvements of existing public transport throughout various sections of the study area and may present a financial burden in order to deliver each of the options.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Consultation highlighted existing poor public transport connections between Dyce and Aberdeen International Airport, TECA and Danestone and some respondents stated they would welcome and directly benefit from better public transport links between Dyce, the airport and TECA. Some respondents felt active travel measures should be prioritised over public transport.
Recommendations:	It is recommended that all options under consideration as part of this package are progressed for further assessment.

8.6 Placemaking – Living Streets Appraisal

8.6.1 Overview

Table 8.29: Placemaking – Living Streets Overview

Placemaking – Living Streets Package	
Package Description	The Placemaking – Living Streets package is formed of 12 options from the active travel and other categories. The focus of this package is to enhance the sense of place within the study area by providing a better environment for active travel, providing better access to key locations by non-car modes and reducing the prominence of private cars in certain places within the study area. This package has a particular focus on Victoria Street given its revised position within the new Roads Hierarchy.
Package Components	<p>The Placemaking – Living Streets package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • AT3: Review layout of Victoria Street/Pitmedden Road junction for pedestrians • AT17: Implement signalised crossing facility on Victoria Street adjacent to Tesco • AT33: Provide improved active travel links between Dyce Rail Station and the A947 and the eastern section of Dyce, particularly along Station Road • AT61: Implement shared use path on Victoria Street • O1: Increase enforcement of stopping restrictions on Victoria Street, specifically adjacent to Tesco • O2: Review the layout of the Victoria Street/Skene Place Junction • O11: Undertake a review of parking arrangements on Victoria Street • O12: Implement signage to encourage reverse parking at the shops on Victoria Street • O15: Introduce placemaking and gateway features on Victoria Street • O16: Implement package of measures to support implementation of a 20-minute neighbourhood in Dyce • O25: Implement access only restrictions for general traffic on Victoria Street • O26: Implement one-way restrictions for general traffic on Victoria Street
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>The options within this package range between the low, medium, and high cost bands. The cost of implementing a shared use path along the full length of Victoria Street is considered in the high cost band due to the number of practical challenges which are recognised in delivering this option.</p>

8.6.2 Context

Table 8.30: Placemaking – Living Streets Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Active Travel Infrastructure – Options contained within this package address the inconsistent pedestrian infrastructure in parts of the study area and add crossing facilities. They also seek to address the lack of quality cycling infrastructure. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel. • Funding – Opportunity to take advantage of Scottish Government funding for active travel infrastructure. • 20-minute Neighbourhood – Package would apply placemaking principles associated with '20-minute Neighbourhoods' to capitalise on the walkability of Dyce.
Interdependencies	<p>This package has potential overlap with other option packages being considered through this study, most notably the 'Placemaking – Complementary Measures' package. There is also significant crossover between this package and the three Active Travel packages as all packages aim to improve active travel provision and facilitate modal shift to active travel.</p>

8.6.3 Transport Planning Objectives

Table 8.31: Placemaking – Living Streets TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	+2	This package would be anticipated to provide a moderate positive impact against TPO1 as it proposes infrastructure upgrades to the walking infrastructure around Victoria Street including shared use paths and improved crossing facilities. Furthermore, the options to reduce the dominance of vehicles on Victoria Street would create a more pleasant environment for encouraging walking trips.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	+2	This package would be anticipated to provide a moderate positive impact against TPO2. The package provides improved infrastructure for active travel including improved paths and crossing facilities and restrictions on vehicle movements would create a more pleasant environment for active travel. Connections to Dyce Rail Station would help to facilitate multi-modal trips, including those involving cycling.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	0	It would not be anticipated that this package would impact the mode share of public transport in the study area and therefore this package has been assessed to have a neutral impact on TPO3.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	+2	This package would be anticipated to provide a moderate positive impact against TPO4. Options included within the package such as improved crossing points on Victoria Street, connections between Dyce Rail Station and the A947 and the implementation of 20-neighbourhoods all enhance east to west connectivity within the area and promote improved accessibility within Dyce.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	+1	This package would be anticipated to provide a minor positive impact against TPO5 due to the improvement in links between the rest of Dyce and Dyce Rail Station by non-car modes. As the placemaking interventions are largely focused around Dyce itself, particularly around Victoria Street, the package would not be anticipated to bring significant enhancements in access to other key transport hubs and key destinations.
TPO6: Ensure the main routes through the Study Area function in accordance	+3	This package is considered to provide a major positive impact against TPO6. Victoria Street has a revised role in the new Roads Hierarchy and placemaking interventions on Victoria Street would promote greater active travel use in the area, with the package components typically

Transport Planning Objectives:	
with their role in the revised Roads Hierarchy	reflective of interventions that may be expected on a tertiary route in the revised hierarchy.

8.6.4 STAG Criteria

Table 8.32: Placemaking – Living Streets STAG Criteria Appraisal

STAG Criteria:	
Environment	0 Overall, it is not anticipated that the options contained within this package would have a significant impact against the Environment Criterion, though there may be some local air quality benefits associated with the removal of vehicular traffic from the Victoria Street area.
Climate Change	0 <p>Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, would generate significant modal shift towards active travel and as a result, lead to a reduction in greenhouse gas emissions. On this basis, the Placemaking – Living Streets package has been assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – There is high likelihood of flooding (10% chance of flooding) along a number of the River Don’s tributaries which intersect with the A947 namely Far Burn, which is centrally located and runs west-east crossing Victoria Street. Elements of the proposals within the Placemaking – Living Streets package are therefore vulnerable to the effects of climate change in respect of increased flood risk.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Placemaking – Living Streets package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>
Health, Safety and Wellbeing	+2 <p>Accidents – It would be anticipated that the options included within the Placemaking – Living Streets package would result in reduced accident risk, particularly for non-motorised users. This is due to the package including active travel infrastructure enhancements such as reduced crossing widths / tightened corner radii, formal crossing facilities and shared use facilities. Traffic management elements such as access restrictions and signage to encourage reverse parking on Victoria Street would further be anticipated to reduce accident risk.</p> <p>By encouraging and facilitating more active travel trips to be undertaken, safety benefits would also be anticipated due to the 'safety in numbers' effect. This principle suggests an inverse relationship between the number of active travel trips and rate of accidents i.e. more pedestrians and cyclists results in safer walking and cycling.</p> <p>Security – By encouraging and facilitating more active travel trips to be undertaken, natural surveillance will increase; this would have a minor positive impact on personal security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023. <p>The measures contained within the Placemaking – Living Streets package which have a focus on enabling and facilitating active travel are anticipated to contribute significantly to the above Physical Health aims for the Aberdeen North area. Therefore, it is anticipated that this package will result in a moderate positive impact on Health Outcomes.</p>

STAG Criteria:		
		<p>Access to Health and Wellbeing Infrastructure – It would be anticipated that the options included within the Placemaking – Living Streets package would result in improved access to health and wellbeing infrastructure. Improved links to Dyce Rail Station would enable access to health and wellbeing infrastructure outwith the study area, as well as enabling access to assets such as the F&B Way for users travelling from outwith the study area.</p> <p>Visual Amenity – It would be anticipated that the options included within the Placemaking – Living Streets package would have a moderate positive impact on visual amenity, specifically through introduction of placemaking and gateway features on Victoria Street. In addition, by encouraging and facilitating mode shift from motorised modes of transport, the number of private car trips would be anticipated to reduce and so too would the negative impact on visual amenity, although not to any significant extent.</p>
Economy	+2	<p>Transport Economic Efficiency – Active travel schemes which provide enhanced infrastructure have the potential to yield high economic benefits and return good value for money. The measures contained in the Placemaking – Living Streets package would be anticipated to generate economic benefits including, but not limited to, improved journey ambience, reduced greenhouse gas emissions, reduced risk of premature death and reduced work absenteeism. Therefore, this package is anticipated to have a moderate positive impact on the TEE sub-criterion.</p> <p>Wider Economic Impacts – Research shows that people who walk, wheel or cycle to shops spend more money. Centred around Victoria Street which represents the high street in Dyce, the measures contained in the Placemaking – Living Streets package would be anticipated to enable and facilitate active travel journeys to local shops and services. Therefore, it is anticipated that this package would have a minor positive impact on the WEI sub-criterion.</p>
Equality and Accessibility	+2	<p>Public Transport Network Coverage – Whilst the measures proposed in the Placemaking – Living Streets package include enhanced accessibility of Dyce Rail Station, they do not directly impact on network coverage. On this basis, this package is anticipated to have a neutral impact on Public Transport Network Coverage.</p> <p>Active Travel Network Coverage – The 20-minute neighbourhood concept allows people to meet most of their everyday needs by a short, convenient, and pleasant 20-minute return walk or cycle from their home. The aim is to reduce the volume and speed of traffic and improve accessibility for local people to walk, wheel and spend time outdoors in their community. This is to be achieved within a 20-minute walk (approximately 800m). In combination with the new and enhanced active travel infrastructure proposed as part of the Placemaking – Living Streets package, this package is anticipated to result in a major positive impact on Active Travel Network Coverage.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%) compared to Aberdeen City (64%), and a higher proportion of people aged 65 and over (22% and 16% respectively). For the working age majority of the local population, the measures contained within the Placemaking – Living Streets package will enable improved active travel accessibility to both local employment opportunities within Dyce and those further afield via improved links to Dyce Rail Station. For the over 65 population, the measures will enhance accessibility of key local services and those further afield via rail. Primary school aged children</p>

STAG Criteria:	
	<p>will also benefit from the measures including improved active travel links between Dyce Rail Station and the eastern section of Dyce which will result in improved access to Dyce Primary School. It is anticipated therefore that this package will result in a moderate positive impact on Comparative Access by People Group.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. The measures contained in the Placemaking – Living Streets package which have a focus on enabling and facilitating active travel would be anticipated to provide suitable active travel options for predominantly local trips, as an alternative to motorised transport. This package is therefore anticipated to have a minor positive impact on Comparative Access by Geographic Location.</p> <p>Affordability – With no cost payable by the individual, walking and wheeling are the most equitable forms of transport. The cost barrier to cycling is also significantly lower than for private motor vehicles. The measures contained within the Placemaking – Living Streets package which have a focus on enabling and facilitating active travel are therefore anticipated to result in a moderate positive impact in terms of Affordability.</p>

8.6.5 Established Policy Objectives

Table 8.33: Placemaking – Living Streets Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of active travel and make travel more effective. • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and zero fatalities on the road network. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030. • National Planning Framework – strongly aligns with the draft NPF4, which promotes the concept of 20-minute neighbourhoods and the adoption of the Place Principle.

8.6.6 Deliverability

Table 8.34: Placemaking – Living Streets Deliverability Criteria Appraisal

Deliverability		
Feasibility	Medium risk	<p>The extent of feasibility risk for options in the Placemaking – Living Streets package ranges between low and medium. Options have been classified as a medium risk for a number of factors such as cross-sectional width constraints and impacts they would have for different road users. Options classified as having a low risk to overall implementability have minor impacts such as upgrading existing features within the study area.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>
Affordability	Medium risk	<p>The affordability risks associated with the options within this package vary between low, medium, and high. The highest risk has been identified as the proposal to implement a shared use path along Victoria Street. Despite being assessed as feasible, the variability of the existing road corridor along Victoria Street presents a number of constraints which may present a financial burden.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of affordability to be undertaken.</p>
Public Acceptability	Low risk	<p>Overall, this option concept received a mixed response with some welcoming improvements in the centre of Dyce, which could make it more attractive, helping encourage active travel and fostering greater community spirit. However, there were concerns raised about access to properties, impact on cross-Dyce journeys and a lack of clarity on what the option concept would entail.</p>

8.6.7 Appraisal Summary and Recommendations

Table 8.35: Placemaking – Living Streets Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a major positive impact in terms of ensuring the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy. • In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4. • The extent of feasibility risk for options in the Placemaking – Living Streets package range between low and medium. Options have been classified as a medium risk for a number of factors such as cross-sectional width constraints and impacts they would have for different road users. Options classified as having a low risk to overall implementability have minor impacts such as upgrading existing features within the study area. • The affordability risks associated with the options within this package vary between low, medium, and high. The highest risk has been identified as the proposal to implement a shared use path along Victoria Street. Despite being assessed as feasible, the variability of the existing road corridor along Victoria Street presents a number of constraints which may present a financial burden.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, this option concept received a mixed response with some welcoming improvements in the centre of Dyce, which could make it more attractive, helping encourage active travel and fostering greater community spirit. However, there were concerns raised about access to properties, impact on cross-Dyce journeys and a lack of clarity on what the option concept would entail.
Recommendations:	It is recommended that all options under consideration as part of this package are progressed for further assessment.

8.7 Placemaking – Complementary Measures Appraisal

8.7.1 Overview

Table 8.36: Placemaking – Complementary Measures Overview

Placemaking – Complementary Measures Package	
Package Description	A series of supporting placemaking measures such as village greens, landmarks and gateway signage within Dyce could help to recognise the area as a community by encouraging a reduction of vehicle speeds, providing areas for residents to socialise and highlighting local areas of significance.
Package Components	<p>The Placemaking – Complementary Measures package comprises a series of potential improvements, as set out below:</p> <ul style="list-style-type: none"> • AT21: Implement cycle parking at key trip attractors in the study area • AT23: Implement a bike hire scheme within Dyce • AT42: Review access to the F&B Way from within Dyce • AT68: Conduct a review of wayfinding signage throughout the study area • O24: Implement electric vehicle charging points at key locations within Dyce
Cost Band	<p>Cost estimates for each of the individual options included in this package have not been carried out at the current stage of the study. As a result, cost bands have been created to offer a preliminary range for the options within the package. Further costing work on each of the individual options will be carried out during a later stage of the study which will then provide an overall costing for the package. The cost bands are as follows:</p> <ul style="list-style-type: none"> • Low cost = <£250,000; • Medium cost = £250,000 - £2,000,000; and • High cost = £2,000,000+. <p>The cost of delivering the options in this package ranges between the low and medium cost bands. The highest costing option is the proposal to introduce electric vehicle charging points at key locations throughout Dyce. Further stakeholder engagement will identify the quantity of charging points to be installed, allowing a more precise cost estimate to be obtained at a later stage.</p>

8.7.2 Context

Table 8.37: Placemaking – Complementary Measures Context

Context:	
Problems & Opportunities	<p>This package could help to address the following problem and opportunity themes identified at the Case for Change stage of the study (see Chapter 4):</p> <ul style="list-style-type: none"> • Active Travel Infrastructure – Options contained within this package include those to address the lack of quality supporting cycling infrastructure. • Policy Context – Aligns with national, regional and local transport policy to support more trips to be undertaken by sustainable modes of travel. • Funding – Opportunity to take advantage of Scottish Government funding for active travel infrastructure.

Context:	
	<ul style="list-style-type: none"> • 20-minute Neighbourhood – Package would apply placemaking principle associated with '20-minute Neighbourhoods' to capitalise on the walkability of Dyce.
Interdependencies	This package has potential overlap with other option packages being considered through this study, most notably the 'Placemaking – Living Streets' package. There is also significant crossover between this package and the three Active Travel package as all packages aim to improve active travel provision and facilitate modal shift to active travel.

8.7.3 Transport Planning Objectives

Table 8.38: Placemaking – Complementary Measures TPO Appraisal

Transport Planning Objectives:		
TPO1: Increase the modal share of walking on the A947 corridor for all journey types	+1	It would be anticipated that this package would have a minor positive impact against TPO1. Improving access to the F&B Way has the potential to increase walking trips for a variety of journey types.
TPO2: Increase the modal share of cycling on the A947 corridor for all journey types	+2	It would be anticipated that this package would have a moderate positive impact against TPO2. The package proposes measures to increase accessibility of cycling such as cycle parking and a bike hire scheme as well as reviewing access to the F&B Way and wayfinding signage in the study area.
TPO3: Increase the modal share of public transport on the A947 corridor for all journey types	0	It would not be anticipated that this package would impact the mode share of public transport in the study area and therefore this package has been assessed to have a neutral impact on TPO3.
TPO4: Improve east-west connectivity within Dyce to enhance walkability within the local area and promote improved accessibility for local movements	+1	This package would be anticipated to have a minor positive impact against TPO4. The implementation of wayfinding signage would promote improved accessibility for local movements. The implementation of cycle parking and a bike hire scheme would also provide greater incentives for those who live in Dyce to access local facilities by cycling.
TPO5: Improve accessibility to the key transport hubs of Dyce Rail Station, Aberdeen Airport and Craibstone Park and Ride and key destinations including TECA by non-car modes	+2	This package would be anticipated to have a moderate positive impact against TPO5. It would provide cycle parking at key trip attractors, improving the accessibility of the sites for cyclists. Wayfinding signage will also aid accessibility to key destinations close to the study area. Electric vehicle charging points will also encourage more sustainable vehicular access to these sites.
TPO6: Ensure the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy	0	The options proposed in this package would have a limited impact on this TPO overall but may complement aspects of the Placemaking – Living Streets package, which performs strongly against this objective.

8.7.4 STAG Criteria

Table 8.39: Placemaking – Complementary Measures STAG Criteria Appraisal

STAG Criteria:		
Environment	0	Overall, it is not anticipated that the options contained within this package would have a significant impact against the Environment Criterion.
Climate Change	0	Greenhouse Gas Emissions – It is considered that the options contained within this package, if implemented in combination, could generate modal shift towards active travel and, as a result, would lead to a minor reduction in greenhouse gas emissions. EV charging facilities at key locations within Dyce would also enable journeys to be shifted from fossil fuel powered private cars, to battery powered electric. On this basis, the Placemaking – Complementary Measures package has been

STAG Criteria:		
		<p>assessed as providing a minor positive impact against the Greenhouse Gas Emissions sub-criterion.</p> <p>Vulnerability to the Effects of Climate Change – There is high likelihood of flooding (10% chance of flooding) along a number of the River Don's tributaries which intersect with the A947 namely Far Burn, which is centrally located and runs west-east crossing Victoria Street. Elements of the proposals within the Placemaking – Complementary Measures package are therefore vulnerable to the effects of climate change in respect of increased flood risk.</p> <p>Potential to Adapt to the Effects of Climate Change – The measures proposed within the Placemaking – Complementary Measures package are anticipated to have a neutral impact on the Potential to Adapt to the Effects of Climate Change sub-criterion.</p>
Health, Safety and Wellbeing	+2	<p>Accidents – By encouraging and facilitating more active travel trips to be undertaken, safety benefits would be anticipated due to the 'safety in numbers' effect. This principle suggests an inverse relationship between the number of active travel trips and rate of accidents i.e. more pedestrians and cyclists results in safer walking and cycling.</p> <p>Security – It would be anticipated that the options included within the Placemaking – Complementary Measures package would result in a minor positive impact on security, due to the implementation of cycle parking facilities at key trip attractors. Additionally, by encouraging and facilitating more active travel trips to be undertaken, natural surveillance will increase; this would have a minor positive impact on personal security.</p> <p>Health Outcomes – The Aberdeen City – North: Locality Plan 2021-26 includes the priority to improve the physical health and wellbeing of people. Within this priority are the aims to:</p> <ul style="list-style-type: none"> • Increase % of people who walk as one mode of travel by 10% by 2023; and • Increase % of people who cycle as one mode of travel by 2% by 2023. <p>The measures contained within the Placemaking – Complementary Measures package which have a focus on enabling and facilitating active travel are anticipated to contribute significantly to the above Physical Health aims for the Aberdeen North area. Therefore, it is anticipated that this package will result in a moderate positive impact on Health Outcomes.</p> <p>Access to Health and Wellbeing Infrastructure – It would be anticipated that the options included within the Placemaking – Complementary Measures package would result in improved access to health and wellbeing infrastructure. This would be enabled through reviewing access to assets such as the long-distance F&B Way.</p> <p>Visual Amenity – By encouraging and facilitating mode shift from motorised modes of transport, the number of private car trips would be anticipated to reduce and so too would the negative impact on visual amenity, although not to any significant extent.</p>
Economy	+1	<p>Transport Economic Efficiency – Active travel schemes which provide enhanced infrastructure have the potential to yield high economic benefits and return good value for money. The measures contained in the Placemaking – Complementary Measures package would be anticipated to generate economic benefits including, but not limited to, improved journey ambience, potentially reduced greenhouse gas emissions, reduced risk of premature death and reduced work absenteeism.</p>

STAG Criteria:		
		<p>Therefore, this package is anticipated to have a minor positive impact on the TEE sub-criterion.</p> <p>Wider Economic Impacts – Tourism is a vital part of the Scottish economy. Within this, 'cycle tourism' is a growing sector. The measures contained in the Placemaking – Complementary Measures package, which include reviewing access to the long-distance F&B Way, would be anticipated to result in increased recreational use and in turn increased spending at local retailers / services from recreational users. Therefore, this package is anticipated to have a minor positive impact on the WEI sub-criterion.</p>
Equality and Accessibility	+2	<p>Public Transport Network Coverage – The measures proposed in the Placemaking – Complementary Measures package do not directly impact public transport network coverage. On this basis, this package is anticipated to have a neutral impact on this sub-criterion.</p> <p>Active Travel Network Coverage – The measures included in the Placemaking – Complementary Measures package including the implementation of cycle parking facilities at key trip attractors in the study area and a bike hire scheme within Dyce are anticipated to result in a moderate positive impact on Active Travel Network Coverage.</p> <p>Comparative Access by People Group – The population profile of the study area has a lower proportion of working age people (62%) compared to Aberdeen City (64%), and a higher proportion of people aged 65 and over (22% and 16% respectively). For the working age majority of the local population, the measures contained within the Placemaking – Complementary Measures package will enable improved active travel accessibility to local employment opportunities within Dyce. For the over 65 population, the measures will enhance accessibility of key local services. It is anticipated therefore that this package would provide a moderate positive impact in terms of Comparative Access by Geographic Location.</p> <p>Comparative Access by Geographic Location – A combined 89% of data zones in the study area are identified to be at medium risk (65%) or high risk (24%) of transport poverty. The measures contained in the Placemaking – Complementary Measures package which have a focus on enabling and facilitating active travel would be anticipated to provide suitable active travel options for predominantly local trips, as an alternative to motorised transport. This package is therefore anticipated to have a minor positive impact on Comparative Access by Geographic Location.</p> <p>Affordability – With no cost payable by the individual, walking and wheeling are the most equitable forms of transport. The cost barrier to cycling is also significantly lower than for private motor vehicles. The measures contained within the Placemaking – Complementary Measures package which have a focus on enabling and facilitating active travel are therefore anticipated to result in a minor positive impact in terms of Affordability.</p>

8.7.5 Established Policy Objectives

Table 8.40: Placemaking – Complementary Measures Established Policy Objectives

Established Policy Objectives
<p>This package aligns with the following areas of local, regional and national policy:</p> <ul style="list-style-type: none"> • Local Transport Strategies – the Aberdeenshire Local Transport Strategy (2012) and Aberdeen City Local Transport Strategy (2016-2021) aim to reduce non-sustainable journeys, increase the modal share of active travel and make travel more effective.

Established Policy Objectives	
<ul style="list-style-type: none"> • Nestrans Regional Transport Strategy 2040 – supports a number of the key priorities contained in the RTS 2040 including reduced carbon emissions to support net zero; a step change in public transport and active travel enabling a 50:50 mode split; air quality that is cleaner than World Health Organisation standards for emissions from transport; and zero fatalities on the road network. • National Transport Strategy – supports the vision of the NTS2 of a sustainable, inclusive, safe and accessible transport system which helps to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS2 also supports the adoption of a Sustainable Travel Hierarchy, which promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use. Furthermore, the NTS Delivery Plan sets out a commitment to develop and implement a coordinated package of policy interventions to support the reduction of car kilometres by 20% by 2030. • National Planning Framework – strongly aligns with the draft NPF4, which promotes the concept of 20-minute neighbourhoods and the adoption of the Place Principle. 	

8.7.6 Deliverability

Table 8.41: Placemaking – Complementary Measures Deliverability Criteria Appraisal

Deliverability		
Feasibility	Medium risk	<p>The extent of feasibility risk for the options in the Placemaking – Complementary Measures package is low to medium. The low-risk options involve improvements to existing features within the study area which are considered achievable. The medium-risk options focus on the implementation of new schemes and infrastructure throughout the A947 study area. The risk to delivering these options is higher due to the wider stakeholder engagement required to deliver them.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of feasibility to be undertaken.</p>
Affordability	Medium risk	<p>The extent of affordability risk in this package varies from low to medium. Similar to feasibility, the options with a low affordability risk involve upgrades to existing locations/features within Dyce. Classification of the medium-risk options is due to the introduction of new infrastructure or schemes.</p> <p>Further detail on individual options is provided in the <i>Option Generation, Sifting & Development Technical Note</i> included in Appendix C. In addition, more detailed appraisal will enable further assessment of affordability to be undertaken.</p>
Public Acceptability	Low risk	<p>There was support for better cycle parking at key trip attractors during consultation. As noted in the Placemaking – Living Streets package appraisal, there was generally strong support for making the centre of Dyce more attractive and easier to access by active travel, which the measures in this package would support.</p>

8.7.7 Appraisal Summary and Recommendations

Table 8.42: Placemaking – Complementary Measures Appraisal Summary and Recommendations

Appraisal Summary and Recommendations:	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a moderate positive impact on increasing the modal share of cycling and improving accessibility to key transport hubs and key destinations by non-car modes.

Appraisal Summary and Recommendations:	
	<ul style="list-style-type: none"> In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4. The extent of feasibility risk for the options in the Placemaking – Complementary Measures package is low to medium. The low-risk options involve improvements to existing features within the study area which are considered achievable. The medium-risk options focus on the implementation of new schemes and infrastructure throughout the A947 study area. The risk to delivering these options is higher due to the wider stakeholder engagement required to deliver them. The extent of affordability risk in this package varies from low to medium. Similar to feasibility, the options with a low affordability risk involve upgrades to existing locations/features within Dyce. Classification of the medium-risk options is due to the introduction of new infrastructure or schemes. More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. There was support for better cycle parking at key trip attractors during consultation. As noted in the Placemaking – Living Streets package appraisal, there was generally strong support for making the centre of Dyce more attractive and easier to access by active travel.
Recommendations:	It is recommended that all options under consideration as part of this package are progressed for further assessment.

8.8 Identification of ‘Quick Wins’

As study options have been developed, and packages assembled, it has become clear that there are several options which, if brought forward for early implementation, could offer ACC ‘quick win’ opportunities on the corridor that complement the overall aims and objectives of the study. These options are shown in the table below.

Table 8.43: ‘Quick Win’ Opportunities on the Corridor

Active Travel – Strategic Routes	
AT1	Provide protected junction for active travel users at the A947/A90 slip road junction
AT2	Improve visibility for cyclists at the B977/A90 slip road roundabout
AT10	Widen on-road advisory cycle lane on Riverview Drive
AT11	Implement missing sections of on-road advisory cycle lane on Riverview Drive
AT12	Widen on-road advisory cycle lane on Stonewood Road at Stonewood Park junction
AT28	Implement dropped kerbs for cyclists to transfer between the carriageway and pavement at the northbound bus stop on the A947, north of the River Don
Active Travel – Quiet Route Measures	
AT7	Review signals at Forrit Burn Road bus gate to allow cyclists access
AT37	Implement dropped kerbs between Wellheads Drive shared use path and the carriageway
AT38	Review access restrictions on Market Street to allow for cargo bikes and recumbent cycles
AT39	Remove access controls on off-road path between Waterton Road and Ruthriehill Road
Public Transport – Priority Interventions	
AT22	Promote Craibstone Park & Ride as a Park & Pedal facility
Placemaking – Living Streets	
O1	Increase enforcement of stopping restrictions on Victoria Street, specifically adjacent to Tesco
O12	Implement signage to encourage reverse parking at the shops on Victoria Street
Placemaking – Complementary Measures	
AT21	Implement cycle parking at key trip attractors in the study area

While Options AT10, AT11 and AT12 could be delivered as ‘quick wins’, on-road cycling infrastructure is not shown to influence modal shift and therefore it is considered that segregated cycling infrastructure should be promoted as

part of this study. However, these options may provide interim opportunities to improve on-road cycling infrastructure in advance of further consideration of segregation in the study area.

A full assessment of the remaining 'quick win' options has not been undertaken in the context of the appraisal criteria. However, each of these options would provide support for the TPOs, and, taking into consideration the scope of each of these options, it is considered that there are early opportunities for ACC to progress these measures to delivery. These measures can be progressed in isolation of any more detailed option development beyond this appraisal. However, in due course, these measures would themselves complement any packages or options ultimately delivered following more detailed work.

9. Summary and Next Steps

9.1 Introduction

This study has set out a Scottish Transport Appraisal Guidance (STAG)-based appraisal of options for improving transport connections (particularly public transport and active travel connections) along the A947 corridor between the Aberdeen Western Peripheral Route (AWPR) Parkhill Junction and the A96/A947 Junction. This report has:

- Set out the background context of the study, including the policy, geographic, socio-economic, transport, development, and environmental context for the work;
- Provided an overview of the public and stakeholder engagement exercises that were undertaken as part of this study in Autumn 2021 and Summer 2022;
- Confirmed the problems, issues, constraints and opportunities providing focus for the study;
- Established the TPOs directing the appraisal;
- Set out the process of option generation, sifting, and development; and
- Appraised the developed packages of options in accordance with the TPOs, established policy objectives and STAG and deliverability criteria.

9.2 Appraisal Outcomes: Active Travel – Strategic Routes

The Active Travel – Strategic Routes package includes segregated cycling infrastructure along the A947 between the AWPR Junction and Bucksburn Roundabout (A947/A96 Junction). This would provide a safer cycling environment on the main route through Dyce to help encourage cycling for everyday journeys.

The Active Travel – Strategic Routes appraisal outcomes are as follows:

Table 9.1: Active Travel – Strategic Routes Appraisal Summary

Appraisal Summary: Active Travel – Strategic Routes	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs, particularly in terms of increasing the modal share of cycling on the A947 corridor for all journey types and ensuring the main routes through the study area function in accordance with their role in the revised Roads Hierarchy. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • The majority of options within this package have been appraised to have low deliverability risk and are considered to be achievable as part of the study, assisting in the improvement of active travel links throughout the study area. The options classified to create a high risk to the Implementability Criteria were some of the corridor-wide active travel improvements within the package. Assessment of these options highlighted that any improvements over the full length would not be achievable due to physical constraints at various points throughout the route. • Options were assessed to have a higher risk in terms of affordability due to factors such as acquisition of third-party land, major earthworks and large infrastructure works. Options which were evaluated as low risk involved minimal works such as updating road markings, vegetation management and new kerbing layouts. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken.

Appraisal Summary: Active Travel – Strategic Routes	
Summary:	<ul style="list-style-type: none"> Overall, consultation comments were generally supportive of this option concept with many welcoming the proposals to segregate cyclists and vehicles and make it easier for cyclists to navigate existing bottlenecks such as roundabouts and Victoria Street. Emphasis was placed on 'hard' segregation measures with many noting that advisory cycle lanes would not make them feel any safer or encourage modal change. Negative comments received were generally in relation to the cost of implementing the infrastructure.

9.3 Appraisal Outcomes: Active Travel – Leisure Route

The Active Travel – Leisure Route Package is formed of three active travel options with the aim of creating a quality active travel route along the existing Riverside Path which runs close to the River Don.

The Active Travel – Leisure Route appraisal outcomes are as follows:

Table 9.2: Active Travel – Leisure Route Appraisal Summary

Appraisal Summary: Active Travel – Leisure Route	
Summary:	<ul style="list-style-type: none"> This package would provide positive impacts across some of the TPOs, with minor positive impacts in terms of increasing the modal share of walking and cycling, and on promoting improved accessibility for local movements. In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. Creating an active travel link between the leisure route and nearby housing within Dyce is considered a medium feasibility risk. This is due to the work required and environmental impact caused by formalising existing trails or creating new links along the Riverside Path. The other options within this package focus on upgrades to the surface and lighting of the existing Riverside Path – both are considered feasible. The active travel improvements were evaluated to have medium to high risk in terms of affordability. The potential volume and complexity of the work involved to deliver the options within this package resulted in this evaluation. More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. Overall, there was strong support for this option concept during consultation, with widespread support for improved surfacing of the Riverside Path and support for better leisure routes in the wider area. Some environmental concerns were raised regarding lighting provision on the Riverside Path.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

9.4 Appraisal Outcomes: Active Travel – Quiet Route Measures

The Quiet Route Measures Package is a package of options aimed at active travel improvements on routes away from the main A947 and Victoria Street routes around Dyce. The focus of this package is to improve active travel provision on routes away from large volumes of traffic and provide quiet routes which may be more suitable for leisure walking and cycling or cyclists who are less confident to travel adjacent to vehicular traffic.

The Active Travel – Quiet Route Measures appraisal outcomes are as follows:

Table 9.3: Active Travel – Quiet Route Measures Appraisal Summary

Appraisal Summary: Active Travel – Quiet Route Measures	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across most of the TPOs, particularly in terms of increasing the modal share of walking and cycling. • In terms of the STAG criteria, this package would promote overall moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility. Whilst a detailed environmental assessment – forming part of a subsequent detailed STAG-based appraisal of options – would be necessary to gauge the extent of environmental impacts, it is considered that elements of the package will have both positive and negative impacts on the Environment Criterion. The package would have a minor positive impact in terms of supporting greenhouse gas emissions reductions, but elements of the proposals within the package would be vulnerable to the effects of climate change in respect of increased flood risk. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040 and NTS2. • Within this package it is anticipated that the majority of the options included would have a low feasibility risk in terms of their overall implementability. The active travel improvements within the package which present a higher risk are achievable, however, they would require substantial infrastructure interventions. • Many of the active travel improvements which are proposed have a low risk in terms of affordability as they require little financial burden to implement across the study area. However, some of the broader options would require larger scale improvements across the study area and represent potential financial risk as a result. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • Overall, this option concept received strong public support during consultation, with many considering it to be a good alternative to Stoneywood Road for cyclists of all abilities and providing a safer route for children. There was general support for making use of existing infrastructure and this was noted to be more cost effective than installing new infrastructure. Concerns were raised around the impact traffic calming measures could have on commercial vehicles, particularly delivery vehicles.

9.5 Appraisal Outcomes: Public Transport – Priority Interventions

The Public Transport – Priority Interventions package contains seven options specifically aimed to increase public transport use within the study area. The package contains options to increase connectivity between the study area and transport hubs and key destinations as well as some options to provide bus priority.

The Active Travel – Public Transport – Priority Interventions appraisal outcomes are as follows:

Table 9.4: Public Transport – Priority Interventions Appraisal Summary

Appraisal Summary: Public Transport – Priority Interventions	
Summary:	<ul style="list-style-type: none"> • With regards the TPOs, this package would provide positive impacts in terms of increasing public transport modal share and improving accessibility to key transport hubs and key destinations. • In terms of the STAG criteria, this package would promote minor positive impacts across the majority of the criteria. Within the Equality and Accessibility Criterion, this package would have a major positive impact on Public Transport Network Coverage. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the overarching aims of the North East Bus Alliance. • The feasibility of five of the package components have been assessed as high risk, creating concerns about their implementability. These are considered as high risk due to the requirement for wider stakeholder consultation to be carried out and potentially having to be delivered in partnership with public transport operators.

Appraisal Summary: Public Transport – Priority Interventions

- All of the improvements included in this package have been identified as a medium risk in terms of affordability as part of the implementability criteria. The options outlined involve extensive reviews and improvements of existing public transport throughout various sections of the study area and may present a financial burden in order to deliver each of the options.
- More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken.
- Consultation highlighted existing poor public transport connections between Dyce and Aberdeen International Airport, TECA and Danestone and some respondents stated they would welcome and directly benefit from better public transport links between Dyce, the airport and TECA. Some respondents felt active travel measures should be prioritised over public transport.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

9.6 Appraisal Outcomes: Placemaking – Living Streets

The Placemaking – Living Streets package is formed of 12 options from the active travel and other categories. The focus of this package is to enhance the sense of place within the study area by providing a better environment for active travel, providing better access to key locations by non-car modes and reducing the prominence of private cars in certain places within the study area. This package has a particular focus on Victoria Street given its revised position within the new Roads Hierarchy.

The Placemaking – Living Streets appraisal outcomes are as follows:

Table 9.5: Placemaking – Living Streets Appraisal Summary

Appraisal Summary: Placemaking – Living Streets

Summary:

- This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a major positive impact in terms of ensuring the main routes through the Study Area function in accordance with their role in the revised Roads Hierarchy.
- In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing, Economy and Equality and Accessibility.
- The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4.
- The extent of feasibility risk for options in the Placemaking – Living Streets package range between low and medium. Options have been classified as a medium risk for a number of factors such as cross-sectional width constraints and impacts they would have for different road users. Options classified as having a low risk to overall implementability have minor impacts such as upgrading existing features within the study area.
- The affordability risks associated with the options within this package vary between low, medium, and high. The highest risk has been identified as the proposal to implement a shared use path along Victoria Street. Despite being assessed as feasible, the variability of the existing road corridor along Victoria Street presents a number of constraints which may present a financial burden.
- More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken.
- Overall, this option concept received a mixed response with some welcoming improvements in the centre of Dyce, which could make it more attractive, helping encourage active travel and fostering greater community spirit. However, there were concerns raised about access to properties, impact on cross-Dyce journeys and a lack of clarity on what the option concept would entail.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

9.7 Appraisal Outcomes: Placemaking – Complementary Measures

The Placemaking – Complementary Measures package contains a series of supporting placemaking measures such as village greens, landmarks and gateway signage within Dyce that could help to recognise the area as a community by encouraging a reduction of vehicle speeds, providing areas for residents to socialise and highlighting local areas of significance.

The Placemaking – Complementary Measures appraisal outcomes are as follows:

Table 9.6: Placemaking – Complementary Measures Appraisal Summary

Appraisal Summary: Placemaking – Complementary Measures	
Summary:	<ul style="list-style-type: none"> • This package would provide positive impacts across the majority of the TPOs. In particular, it would provide a moderate positive impact on increasing the modal share of cycling and improving accessibility to key transport hubs and key destinations by non-car modes. • In terms of the STAG criteria, this package would promote moderate positive impacts in terms of Health, Safety and Wellbeing and Equality and Accessibility. • The package aligns with the aims of the Aberdeenshire and Aberdeen City Local Transport Strategies, the Nestrans RTS 2040, NTS2 and the draft NPF4. • The extent of feasibility risk for the options in the Placemaking – Complementary Measures package is low to medium. The low-risk options involve improvements to existing features within the study area which are considered achievable. The medium-risk options focus on the implementation of new schemes and infrastructure throughout the A947 study area. The risk to delivering these options is higher due to the wider stakeholder engagement required to deliver them. • The extent of affordability risk in this package varies from low to medium. Similar to feasibility, the options with a low affordability risk involve upgrades to existing locations/features within Dyce. Classification of the medium-risk options is due to the introduction of new infrastructure or schemes. • More detailed appraisal will enable further assessment of feasibility and affordability to be undertaken. • There was support for better cycle parking at key trip attractors during consultation. As noted in the Placemaking – Living Streets package appraisal, there was generally strong support for making the centre of Dyce more attractive and easier to access by active travel.

It is recommended that all options under consideration as part of this package are progressed for further assessment.

9.8 Options Sifted from Further Consideration

Following the appraisal, there are a number of options which are not recommended to progress to more detailed appraisal. The rationale for sifting these options at this stage are as follows:

Active Travel – Strategic Routes Package:

- AT10: Widen on-road advisory cycle lane on Riverview Drive – could form part of a ‘quick win’ opportunity for ACC. Further detail on this option is set out in [Section 8.8](#).
- AT11: Implement missing sections of on-road advisory cycle lane on Riverview Drive – could form part of a ‘quick win’ opportunity for ACC. Further detail on this option is set out in [Section 8.8](#).
- AT12: Widen on-road advisory cycle lane on Stonewood Road at Stonewood Park junction – could form part of a ‘quick win’ opportunity for ACC. Further detail on this option is set out in [Section 8.8](#).
- AT57: Implement shared use path on the A947 between AWPR Junction and A947/A96 Junction – it is considered that segregated cycling infrastructure should be promoted as part of this study.
- AT62: Widen the shared use path on the east side of the A947 between the A96 and Beech Manor – it is considered that segregated cycling infrastructure should be promoted as part of this study.
- AT63: Review alignment of the A947 shared use path to the north of the Oldmeldrum Road Junction where the safety barrier constrains the width of the path – it is considered that segregated cycling infrastructure should be promoted as part of this study.

- O17: Reduce the speed limit along the A947 to support active travel improvements – it is not considered appropriate to reduce the speed limit on a priority route in accordance with the Roads Hierarchy.

Active Travel – Quiet Route Measures Package:

- AT67: Widen the shared use path on the west side of Howe Moss Drive – option has limited impact against the TPOs and STAG Criteria.
- O14: Review parking arrangements on Mugiemoos Road – option will be incorporated as part of Option AT65 (Implement streetscape improvements and widened pavements along Mugiemoos Road).

9.9 Next Steps

Going forward, it is noted that the ‘quick wins’ identified in [Section 8.8](#) provide early opportunities for ACC to progress these measures to delivery. These measures can be progressed in isolation of any more detailed option development beyond this appraisal. However, in due course, these measures would themselves complement any packages or options ultimately delivered following more detailed work.

In this regard, in order to fully determine those packages (and options within packages) which have the potential for delivery along the corridor, detailed STAG-based appraisal is required, including more detailed design work, to confirm the package(s) that would move forward into an Outline Business Case (OBC) for delivery.

The work undertaken to date provides the foundation for ACC to take the outcomes of this study forward to further level of study. This will ensure a continued consistency in terms of route corridor appraisal in the city, with the Ellon P&R-Garthdee study now moving to OBC stage, with the A96 corridor to follow. In the case of the latter, there will be a need to ensure a consistent approach is taken to OBC preparation in the context of the A947 corridor, mindful of the interrelationship between these two corridors.

ABERDEEN CITY COUNCIL

COMMITTEE	City Growth & Resources
DATE	21 September 2022
EXEMPT	No Appendices B, C, D and H have a private version which are exempt under paragraph 8. Estimated expenditure on Contracts. 'This report refers to the acquisition or supply of goods/services where disclosure to the public of the amount to be spent would be likely to give an advantage to a person or organisation seeking to enter a contract with the Council.'
CONFIDENTIAL	No
REPORT TITLE	Condition & Suitability 3 Year Programme
REPORT NUMBER	RES/22/207
DIRECTOR	Steve Whyte
CHIEF OFFICER	Stephen Booth
REPORT AUTHOR	Alastair Reid
TERMS OF REFERENCE	4.1

1. PURPOSE OF REPORT

- 1.1 This report seeks approval of an updated 3-year Condition and Suitability (C&S) Programme.

2. RECOMMENDATION(S)

That the Committee:-

- 2.1 Notes the projects completed or legally committed to date in 2022/23 as shown in Appendix A;
- 2.2 Notes the currently approved projects and approves the amended estimated budgets for each project as shown in Appendix B;
- 2.3 Approves the new Condition & Suitability Programme projects listed in Appendix C for inclusion in the Condition & Suitability Programme and approves the estimated budget for each project and delegates authority to the Chief Officer - Capital, following consultation with the Head of Commercial and Procurement Services, to consider and approve procurement business cases for each of these projects for the purposes of Procurement Regulation 4.1.1.2; and thereafter to procure appropriate works and services, and enter into any contracts necessary for the projects without the need for further approval from any other Committee of the Council;
- 2.4 Approves the removal of the projects listed in Appendix D;

- 2.5 Delegates authority to the Chief Officer - Corporate Landlord, following consultation with the Capital Board and the Convener and Vice-Convener of this Committee, to amend the C&S Programme should priorities change due to unforeseen circumstances during the year, with such changes to be reported retrospectively to the Committee; and
- 2.6 Approves the Outline Business Case for the Tolbooth Improvement Works project shown in Appendix H.

3. CURRENT SITUATION

- 3.1 This report brings together, for Members' approval, the proposed 3-year Condition & Suitability (C&S) Programme (2022/23 – 2024/25) for the condition and suitability works on the Council's General Fund property portfolio. This report seeks approval of the revised 3-year programme.
- 3.2 The total profiled budget allocation for the 3 years is £26.424m. This programme was prepared utilising the detailed property information gathered as part of ongoing workstreams and after discussions with all relevant Chief Officers.

Proposed 3 Year Programme

- 3.3 Projects with a value of £5.281m have already been completed to date or are legally committed in 2022/23. The completed and legally committed are detailed in **Appendix A**.
- 3.4 A further £15.324m is allocated to currently approved projects as shown in **Appendix B**. A confidential version of Appendix B is included within today's confidential reports, which details the approximate cost for each project and the revised budgets where applicable.
- 3.5 As certain projects have progressed through the detailed scoping and feasibility stage, it is evident that an enhanced scope of work is highly desirable or indeed essential. The budgets currently allocated will not cover the enhanced scope of works. As such additional budget allocations are required. This is offset by some project budgets being reduced where budget provision is greater than required. An additional £1.244m needs to be funded as shown in Appendix B.
- 3.6 The above allocations leaves £4.075m available for new projects to allow the continued condition and suitability work to be progressed. The proposed programme is contained in **Appendix C**. A confidential version of Appendix C is included within today's confidential reports section, which details the estimated cost for each project.
- 3.7 £0.5m has been left unallocated. The recommendation is for this to be used as a reserve fund which can address increased budgetary demands for individual projects or be allocated to urgent projects not previously identified. The reserve fund will also be required to address the impact of construction inflation and

building material shortages on projects. Over the last 12 months the reserve fund and underspends were used for the following projects:-

- Kingswood Court – New project to replace boiler.
- Old Dyce Library – Contribution to conversion into a Sports Pavilion.
- Rosemount Learning Centre - Revised budget to accommodate full scope of Changing Place installation.
- Culter Sports Centre - Revised budget to accommodate full scope of roof structure repairs.
- Kincorth an Sheddocksley Sports Centres - Revised budget to accommodate full scope of flooring and lighting replacements.
- Abbotswell Primary School – New project to carry out toilet refurbishments.
- Brimmond Primary School – New project to improve drainage and upgrade of play area surfaces.
- Cemetery walls rebuild budget – New budget to allow essential work to be carried out to priority boundary walls.
- Aberdeen Grammar School - Revised budget to accommodate full scope of kitchen and swimming pool refurbishment.
- Harlaw Academy – New project to replace local exhaust ventilation system.
- Northfield Swimming Pool – New project to replace existing pool hall roof. Not part of capital project scope.
- Maritime Museum - Revised budget to accommodate full scope of lift replacement.
- Spring Garden - Revised budget to accommodate full scope of lift replacement.

3.8 In addition to the in year approval of budgets for the projects listed in 3.7, projects were removed in line with the 2021 Committee approved recommendations. These projects were:-

- Danestone Primary School – Secure door at reception. Work carried out to date provides sufficient security.
- Beach Leisure Centre – Air handling unit replacement (Flume Tower). Work will not proceed whilst Beach Masterplan considerations are ongoing.
- Cults Primary School – Toilet refurbishments. Deferred but now included with Appendix C.
- St Machar Academy - Toilet refurbishments. Deferred but now included with Appendix C.
- Dyce Academy – Electronic locking to all external doors. A review of existing security arrangements has been completed and it has identified that this is not necessary.
- Old Aberdeen House – Window replacements and climate control. Budget reduced.

3.9 The proposed allocation of the £26.424m is shown below:-

Budget Requirement	Allocation
Projects Completed or Legally Committed	£5,281,207

Currently Approved Projects	£15,324,170
Additional Budget for Existing Projects	£1,244,016
New Projects	£4,074,607
Reserve Fund	£500,000
Total	£26,424,000

3.10 In addition to the major works contained in the overall programme, a combined sum of £423k has been identified for minor works. These works are primarily related to Health and Safety, Asbestos removal and Equality Act projects. This list requires to be flexible as works often have to be carried out at short notice to address health and safety issues or to remove asbestos after it has been identified. The proposed allocation of the £422k is:-

	2022/23	2023/2024	2024/25
Asbestos Removal	£60k	£40k	£40k
Completed/programmed:-	<ul style="list-style-type: none"> Broomhill School - Removal of asbestos debris in duct Aberdeen Grammar School - Removal of asbestos in ducts Rosemount Community Centre - Removal of asbestos debris in basement Skene Square School - Removal of asbestos in duct Forehill School – Repair of asbestos containing ceiling coating 	Projected budget allocation. Current programme of works within Harlaw Academy, Westpark School and Sunnybank Primary	Projected budget allocation.
General H&S Works	£49k	£35k	£30k
Completed/programmed:-	<ul style="list-style-type: none"> Airyhall Library - Install traffic calming measures Nellfield Cemetery - To purchase and install shoring props to area of wall showing signs of collapse Bridge of Don Academy - Reline car parking bays and pedestrian walkways 	Projected budget allocation <ul style="list-style-type: none"> Various Buildings – Commence in survey and upgrade for analog to digital transformation for intruder / fire alarm monitoring required by 2025 Ashley Rd School - Reconfiguration of Reception to improve security at front entrance. Improvements to external lighting 	Projected budget allocation <ul style="list-style-type: none"> Various Buildings – Commence in survey and upgrade for analog to digital transformation for intruder / fire alarm monitoring required by 2025 Harlaw Academy - Create sealed vent pipe system with the installation of expansion tanks and a pressurisation unit
Fire Risk Audit works	£60k	£30k	£30k
Completed/programmed:-	<ul style="list-style-type: none"> Minor additions to various fire alarm systems, fire doors and associated building 	Projected budget allocation <ul style="list-style-type: none"> Minor additions to various fire alarm systems, fire doors 	Projected budget allocation

	fabric as individual FRA reports are received <ul style="list-style-type: none"> • Kirhill Primary School – creation of an additional fire escape within games hall area • Various educational Buildings – Upgrade of fire door furniture noted during recent survey inspection 	and associated building fabric as individual FRA reports are received	
Legionella Works	£18k	£15k	£15k
	Completed/programmed:- <ul style="list-style-type: none"> • Improved access to domestic storage water tanks at various assets. 	Projected budget allocation	Projected budget allocation

- 3.11 The projects shown within **Appendix D** are recommended for removal from the programme. The reasons for doing so are also shown in the Appendix. A confidential version of Appendix D is included within today's confidential reports section, which details the estimated cost for each project.
- 3.12 The provisional 3-year programme will allow substitution of projects should it not be possible to implement any of the projects on the primary list, or should a statutory requirement arise. Potential projects for future programmes have been identified and could be brought forward in some instances. These projects are shown in **Appendix E**. It should be noted that Appendix E is not a definitive list of potential condition and suitability projects.
- 3.13 There are a number of approved projects within the programme for both the Beach Leisure Centre and the Beach Ballroom. As the Beach Masterplan progresses and key decisions are made around the assets, these projects will require to be reviewed. Where possible these budgets will be adjusted or removed altogether. It is possible that some of the work would have to proceed if the assets are to continue to operate in the short to medium term.

Procurement Procedures

- 3.14 When inviting tenders or entering into contracts for the C&S Programme Aberdeen City Council Procurement Regulations 4.1.1.1 and 4.1.1.2 will be followed.
- 3.15 4.1.1.1. Contract Value below £50,000 (supplies/services), £250,000 (works) or £4.5m (concessions) Subject to budget approval, the relevant Chief Officer may give authority to conduct any procurement where the estimated Contract Value is below £50,000 (supplies/services) or £250,000 (works), and following consultation with the Convener of the Strategic Commissioning Committee or the Convener of the City Growth and Resources Committee, the Head of Commercial and Procurement may give authority to conduct any procurement where the estimated Contract Value of a Concession Contract is below £4.5m. Such procurements shall be undertaken by a Delegated Procurer in line with Section 4.3 of these Procurement Regulations.

- 3.16 4.1.1.2. Contract Value above £50,000 (supplies/services) £250,000 (works), or £4.5m (concessions) Contracts with an estimated Contract Value of above these thresholds shall be listed on the workplan to be submitted by the relevant Director or Chief Officer in accordance with Procurement Regulation 14.6. Each individual contract will also require a Business Case (conforming to a template approved by the Head of Commercial and Procurement) to be submitted by the relevant Chief Officer to the Strategic Commissioning Committee or the City Growth and Resources Committee as appropriate or where the contract relates to a capital project that is already part of the Capital Programme, to the Director of Resources.
- 3.17 The majority of the projects are below the £250k (works) limit and will be procured under regulation 4.1.1.1. Around 20 projects are estimated to be greater than £250k and require a procurement business case. If recommendation 2.3 is accepted the procurement of those projects will be approved through that route. Should the recommendation not be accepted then they will be procured under regulation 4.1.1.2. Therefore a procurement business case would be submitted for approval as part of an appropriate update of the Resources workplan.

Monitoring and Reporting of Programme

- 3.18 Monitoring of the programme will be carried out in line with the capital monitoring procedures. This includes regular progress reports to the Capital Board chaired by the Chief Officer Capital. In addition, progress will be reported to the Finance & Resources Committee.
- 3.19 An annual report to this Committee will be required to add a further year to the programme and revise any individual budgets if necessary. Changes to the programme will be reported in line with recommendation 2.5.
- 3.20 Monitoring and reporting of the workplan is performed by this Committee. With the annual workplan being updated prior to the commencement of each new financial year, with updates to workplan submitted as required throughout the year.

Property Asset Management Policy and Statutory Performance Indicators

- 3.21 The approved Property Asset Management Framework has the following vision for property assets:-
- “The Council will provide property, working with partners, where appropriate, which supports the Council in the delivery of quality services by being fit for purpose, accessible, efficient, suitable and sustainable.”**
- 3.22 In terms of Condition and Suitability this means that the aim is to have all assets in A or B Condition and A or B Suitability. In addition, publicly accessible buildings are targeted for A or B accessibility. The definitions of the gradings are contained in **Appendix F**.

- 3.23 Targets for improving the percentage of assets in satisfactory condition/suitability and reducing the required maintenance levels are reported through the Statutory Performance Indicators (SPI). This programme along with the rationalisation of our portfolio and property related capital projects will provide the main tools for meeting these targets. **Appendix G** of this report provides the SPI definitions and graphical representation of the trends across 5 years.

Tolbooth Museum

- 3.24 A projected titled 'Major roof and parapet works' with funding of £500k was included in a previous C&S programme update. That was an indicative budget and it has always been known that there was a strong likelihood that would not be sufficient to carry out the work. Since then work has been ongoing to establish a more robust cost estimate that takes into account the full extent of external work. Structural works to an internal arch are also being brought into scope. A revised figure is now available, which has created the requirement to produce an Outline Business Case (OBC) as shown in **Appendix H**. Subject to approval of the OBC, steps will be taken to finalise costs. A Full Business Case will then be completed with a view to taking this to the December meeting of this Committee.

4. FINANCIAL IMPLICATIONS

- 4.1 Expenditure will be in accordance with the Council's approved General Fund Capital budget. The budget identified in years 1-5 in the Capital programme for the Condition & Suitability (C&S) programme is £45,424m. With £26,424 currently allocated to years 1-3.
- 4.2 There are further allocations of £9.5m in 2025/26 and £9.5m in 2026/27. Giving a combined indicative 5-year budget of £45.424m. Projects shown in Appendix E will form the basis for years 2025/26 and 2026/27.
- 4.3 To manage unexpected costs or additional works that may be required a reserve fund budget of £0.5m will not be allocated at this time. This budget will be used to accommodate increased budgetary requirements or urgent projects not previously identified.
- 4.4 There will be flexibility within the 3-year programme for approved projects to move between financial years, however the overall spend will remain within the total budgeted profile.

5. LEGAL IMPLICATIONS

- 5.1 All contracts to be tendered shall be done so in accordance with the ACC Procurement Regulations and the applicable legislation.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 Around half of the proposed C&S programme is made up of projects that will contribute positively to improving the environmental performance and climate resilience of the Council's assets. These are indicated in Appendices B & C. The majority of these projects are window/door replacements, heating replacements, lighting replacements and roof replacements. Projects that have been completed since the last Committee are listed in **Appendix I**, along with the benefits that have been achieved. The measurement of these benefits is a developing area. This will be reviewed and updated on an ongoing basis.
- 6.2 The priority scoring matrix for assessing projects includes scoring of project on Emissions Reduction and Climate Resilience/Adaptation.

7. RISK

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
Strategic Risk	n/a			
Compliance	Many projects are required to make assets safe. If projects are not completed issues could occur.	Appropriate prioritisation of projects. Committee approval to add projects as per recommendation 2.5.	L	Yes
Operational	Assets are required to support service delivery. If projects are not completed the delivery of services could be affected.	Appropriate prioritisation of projects. Committee approval to add projects as per recommendation 2.5.	L	Yes
Financial	Total cost of projects is greater than available budget.	Appropriate budget monitoring. Contingency of £700k made available.	L	Yes

Reputational	The increased budget requirements for projects shown in Appendix B could be perceived negatively by the public and/or press.	The reasons for the budget changes are explained within the appendix.	L	Yes
Environment / Climate	Investment in assets may not positively impact on the environment.	Careful specification of equipment, materials and components.	L	Yes

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN 2022-2023</u>	
	Impact of Report
Aberdeen City Council Policy Statement	The proposals in this report have no impact on the Council Delivery Plan.
<u>Aberdeen City Local Outcome Improvement Plan</u>	
Prosperous Economy Stretch Outcomes	The reopening of the Tolbooth Museum would contribute to Prosperous Economy: increase city centre footfall. A reopened popular visitor venue enhances the heritage portfolio of the city, making the Broad Street end of the city centre a key location for visitor flow establishing a tourism package; advancing post-covid city centre economic recovery and the emerging cruise market offer, as well as increasing city dwell.
Prosperous People Stretch Outcomes	The proposals in this report have no impact on the Prosperous People Stretch Outcomes.
Prosperous Place Stretch Outcomes	The proposals in this report have no impact on the Prosperous People Stretch Outcomes Prosperous Place Stretch Outcomes.
Regional and City Strategies	The proposals within this report supports the draft Council Property and Estates Strategy strategic outcomes in particular 'Assets will be fit for purpose,

	in appropriate condition and with appropriate utilisation' and 'Assets will be environmentally and economically sustainable'.
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9. IMPACT ASSESSMENTS

Assessment	Outcome
Integrated Impact Assessment	Not required
Data Protection Impact Assessment	Not required
Other	None

10. BACKGROUND PAPERS

- 10.1 Condition & Suitability 3-year programme [report](#) to City Growth & Resources Committee 10 November 2021 (item 21).

11. APPENDICES

- 11.1 Appendix A – Complete or Committed Projects
- 11.2 Appendix B – Currently Approved Projects
- 11.3 Appendix C – Proposed New Projects
- 11.4 Appendix D - Projects to be Removed
- 11.4 Appendix E – Future Projects
- 11.5 Appendix F – Property Asset Management Definitions
- 11.6 Appendix G – SPI Tables
- 11.7 Appendix H – Tolbooth Museum Outline Business Case
- 11.8 Appendix I – Emissions Reduction and Climate Resilience Benefits

12. REPORT AUTHOR CONTACT DETAILS

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Appendix A - Complete or Committed

Location	Property Type	Proposed Works	Notes	Cost in 2022/23	Financial Year
Aberdeen Crematorium	Crematorium	Cremator No.2 boiler replacement.	Completed	£ 111,924	2022/23
Aberdeen Grammar School	School - Secondary	Kitchen refurbishment including ventilation and heating improvements.	Committed	£ 1,077,804	2022/23
Aberdeen Grammar School	School - Secondary	Refurbishment of swimming pool changing facilities.	Committed		2022/23
Aberdeen Grammar School	School - Secondary	Local exhaust ventilation replacement.	Committed	£ 16,500	2022/23
Aberdeen Snow Sports Centre	Outdoor Centre	3G pitch replacement. Pitch has reached the end of its economic life.	Committed	£ 200,000	2022/23
Airyhall Library	Library	Window replacements throughout.	Committed	£ 160,643	2022/23
Balnagask House	Home for the Elderly	Swing free door closer	Completed	£ 13,494	2022/23
Brimmond Primary School	School - Primary	Drainage improvements and upgrade of play area surfaces.	Completed	£ 111,550	2022/23
Broomhill Primary School	School - Primary	Improve external/internal door security.	Completed	£ -	2022/23
Byron Square Car Park	Car Park	Resurfacing and relining of car park.	Completed	£ 64,452	2022/23
Cove Library	Library	Issues with curtain walling to be resolved.	Committed	£ 100,553	2022/23
Dyce Academy	School - Secondary	Toilet refurbishment.	Committed	£ 284,413	2022/23
Dyce Library / Pavilion	Sports Pavilion	Contribution to refurbishment project.	Committed	£ 50,000	2022/23
Fergus House	Home for the Elderly	Swing free door closer replacement.	Completed	£ 15,649	2022/23
Ferryhill Primary School	School - Primary	Toilet refurbishment lower ground level.	Committed	£ 162,424	2022/23
Ferryhill Primary School	School - Primary	Single glazing window replacements.	Committed	£ 210,008	2022/23
Forehill School	School - Primary	Window replacement to block 1.	Committed	£ 84,643	2022/23

Appendix A - Complete or Committed

Location	Property Type	Proposed Works	Notes	Cost in 2022/23	Financial Year
Greenbrae Primary School	School - Primary	Chiller installation for cold water supply to ensure appropriate temperature.	Completed	£ -	2022/23
Harlaw Academy	School - Secondary	Local exhaust ventilation replacement.	Committed	£ 32,060	2022/23
Harlaw Academy	School - Secondary	Toilet refurbishments.	Committed	£ 244,168	2022/23
Hazlehead Academy	School - Secondary	Local exhaust ventilation replacement.	Committed	£ 32,690	2022/23
House 145 Gardner Road	Group Home	Window replacements.	Completed	£ 75,393	2022/23
House 145 Gardner Road	Group Home	Kitchen replacement and accessibility improvements.	Completed		2022/23
House 13 Viewfield Avenue	Group Home	Kitchen and bathroom refurbishments.	Committed	£ 91,891	2022/23
House 15 Viewfield Avenue	Group Home	Kitchen and bathroom refurbishments.	Committed		2022/23
Inchgarth Community Centre	Leased Community Centre	Roof replacements. Phase 1.	Committed	£ 54,903	2022/23
Inchgarth Community Centre	Leased Community Centre	Roof replacements. Phase 2.	Committed	£ 90,757	2022/23
Inchgarth Community Centre	Leased Community Centre	Changing Place installation. Part funded from developers obligations.	Completed	£ 9,830	2022/23
Kincorth Sports Centre	Sports Centre	Sports hall floor replacement. Sports hall replacement lighting.	Committed	£ 139,817	2022/23
Kingsford Primary School	School - Primary	Toilet refurbishment.	Committed	£ 200,726	2022/23
Kingswood Court Day Centre	Day Centre - Elderly	Boiler plant replacement.	Completed	£ -	2022/23
Kingswells Care Home	Home for the Elderly	New fire alarm installation.	Completed	£ -	2022/23
Muirfield School	School - Primary	Flat roof replacements to nursery and hall.	Completed	£ 34,131	2022/23
Multi Storey Car Park Chapel Street	Car Park	Structural repairs.		£ 70,000	2022/23
Northfield Academy	School - Secondary	Local exhaust ventilation replacement.	Committed	£ 40,300	2022/23
Northfield Academy	School - Secondary	Gym hall roof replacement.	Roof is in C-Poor condition.	£ 239,892	2022/23

Appendix A - Complete or Committed

Location	Property Type	Proposed Works	Notes	Cost in 2022/23	Financial Year
Northfield Swimming Pool	Swimming Pool	Replacement roof sheeting, membrane and insulation to original building.	Committed	£ 130,000	2022/23
Rosemount Community Centre	Community Learning Centre	Ground floor male toilet refurbishment and the creation of a 'Changing Place'.	Completed	£ 105,004	2022/23
Rosemount Community Centre	Community Learning Centre	Boundary wall structural repairs.	Completed	£ 88,593	2022/23
Rubislaw Playing Fields Pavilion	Sports Pavilion	Replacement boiler plant and pump sets.	Completed	£ -	2022/23
Sheddocksley Sports Centre	Sports Centre	Sports hall floor replacement. Sports hall replacement lighting.	Committed	£ 134,432	2022/23
St Josephs R. C. School	School - Primary	Window replacements.	Committed	£ 138,938	2022/23
Woodside Library	Library	Windows and external doors replacement.	Committed	£ 121,051	2022/23
Projects completed/committed before 2022 committee but have legacy costs	Various		Complete	£ 542,574	
			Total	£ 5,281,207	

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
1 Dominies Road	Group Home	Kitchen and toilet refurbishment.				2023/24	Yes
26A Rowan Road	Group Home	Window replacement.				2023/24	Yes
Abbotswell Primary School	School - Primary	Kitchen refurbishment.				2023/24	
Abbotswell Primary School	School - Primary	Pupil and staff toilet refurbishments.	Toilets are in C:Poor condition.			2022/23	
Abbotswell Primary School	School - Primary	Remaining flat roof replacements.	Roof is in C:Poor condition.			2022/23	Yes
Aberdeen Crematorium	Crematorium	Resurface of West Chapel car park.	Car park is in C:Poor condition.			2023/24	
Aberdeen Grammar School	School - Secondary	Upgrade of fire alarm system.	To address fire risk assessment recommendations.			2023/24	
Aberdeen Grammar School	School - Secondary	Boys toilet refurbishment ground floor.				2023/24	Yes
Aberdeen Grammar School	School - Secondary	Replace metal windows/curtain walling to Hall, Assembly hall, dining room and Art Department.				2024/25	Yes
Ashgrove Nursery Infant School	School - Nursery	Heating replacement.	Heating is in C:Poor condition.			2024/25	Yes
Ashley Road School	School - Primary	Additional security and accessibility				2022/23	
B & W Depot (North) Sillerton Lane	Depot	Refurbish toilets and replace windows in toilets/welfare areas.				2023/24	Yes
Balnagask House	Home for the Elderly	Phase 1 of ensuite and communal toilet refurbishments.				2023/24	Yes
Balnagask House	Home for the Elderly	Phase 2 of ensuite and shared toilet				2023/24	Yes

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Balnagask Motte	Historic site	Reinstatement of historic asset.	As per decision of Full Council.			2023/24	
*Beach Ballroom	Leisure Facility	Access issues, ceiling, safety issues, electrics all associated with main ballroom ceiling/roof.				2023/24	
*Beach Ballroom	Leisure Facility	Extended intruder alarm. Improve security to rear of building including improved external doors and external CCTV.				2023/24	
*Beach Ballroom	Leisure Facility	Re-rendering works final phase.				2022/23	
*Beach Leisure Centre	Sports Centre	Repairs to concrete substructure.				2024/25	
*Beach Leisure Centre	Sports Centre	Pool plant improvements.				2024/25	
Budget Change Reason:	Major spend on the building unlikely during ongoing Beach Masterplan considerations. Budget has been reduced on that basis with the remaining budget still being available for any urgent works.						
Bramble Brae Primary School	School - Primary	Refurbishment of toilet blocks. Phase 1.				2023/24	Yes
Bramble Brae Primary School	School - Primary	Refurbishment of two toilet blocks. Phase 2.				2024/25	Yes
Bramble Brae Primary School	School - Primary	Kitchen refurbishment.				2024/25	
Budget Change Reason:	Cost of preferred solution less than anticipated.						
Bridge Of Don Academy	School - Secondary	Window replacements. Phase 2.	Windows are in C:Poor condition.			2023/24	Yes
Bridge Of Don Academy	School - Secondary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2023/24	

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Bridge Of Don Academy	School - Secondary	Kitchen refurbishment.	Part of ongoing programme of replacement.			2023/24	
Bridge Of Don Library	Library	Roof, window and external doors replacements.	Roof is in D:Poor condition and windows/doors are in C:Poor condition.			2023/24	Yes
Broomhill Primary School	School - Primary	Repointing to external walls and lead work to parapets.				2024/25	
Broomhill Primary School	School - Primary	Replacement of atrium roof.				2023/24	
Bucksburn Depot	Depot	Reconfiguration of the office to provide toilet and welfare facilities. Electrical upgrade to be incorporated.	Existing modular toilets in D:Bad condition.			2023/24	
Bucksburn Depot	Depot	Replacement perimeter fencing and entrance gate.	Fencing is in C:Poor condition			2023/24	
Building & Works Depot Northfield	Depot	Window replacements.				2023/24	Yes
Cemetery walls rebuild bu	Cemetery	Rebuilding of cemetery boundary walls.	Nellfield and Allenvale cemeteries are priorities.			2024/25	
Central Library	Library	Staff toilet refurbishment.	Toilets are in C:Poor condition.			2022/23	Yes
Budget Change Reason:	Initial budget was indicative only. Project now fully designed and estimated, which has identified a budget requirement that reflects the scope of work and changes in construction prices.						
Central Library	Library	Renew damaged ceilings and replace associated lighting.				2022/23	Yes

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Central Library	Library	Replacement carpeting of floor coverings at various locations.	Existing floor primarily dates from 1970's refurbishment and has been damaged by water ingress in some areas.			2022/23	
Criminal Justice Office	Office	Lift refurbishment.				2022/23	
Culter Sports Centre	Sports Centre	Roof structure repairs and bay window improvements.				2022/23	Yes
Budget Change Reason:	Initial budget was indicative only. Project now fully designed and estimated, which has identified a budget requirement that reflects the scope of work and changes in construction prices.						
Cults Library	Library	Roof replacement.	Roof is in C:Poor condition.			2023/24	Yes
Budget Change Reason:	Initial budget was indicative only. Project now fully designed and estimated, which has identified a budget requirement that reflects the scope of work and changes in construction prices.						
Deeside Family Centre	Family Centre	Car park and access road resurfacing.	Tarmac is in C:Poor condition.			2024/25	
Denmore Depot	Depot	Refurbishment of external areas and welfare facilities. Rationalise buildings on site.	Asset is C:Poor condition overall.			2024/25	
Depot Bucksburn	Depot	Window replacements.				2024/25	Yes
Depot Cairnwell Drive	Depot	Refurbishment.				2024/25	Yes
Development Budget		Development budget to provide robust estimates prior to projects being added to the programme.				2022/23	
Dyce Academy	School - Secondary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2022/23	

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Dyce Academy	School - Secondary	Replacement of obsolete light fittings.	Replacement tubes hard to obtain and expensive.			2023/24	Yes
Dyce Community Centre	Leased Community Centre	Remaining window replacements to block C.	Windows are in D:Bad condition.			2023/24	Yes
Dyce Primary School	School - Primary	Replace air handling units and carry out associated asbestos works.				2023/24	
Dyce Primary School	School - Primary	Refurbishment of external cladding to gym hall.				2024/25	Yes
Ferryhill Library	Library	Windows and blinds replacement.	Both in D:Bad condition.			2024/25	Yes
Grove Cemetery Depot	Depot	Install permanent toilet facilities.				2022/23	
Hanover Street School	School - Primary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2023/24	
Harlaw Academy	School - Secondary	Window refurbishment and lintel replacements. Phase 1 - Albyn building and Block B.	Windows are in C:Poor condition.			2023/24	Yes
Harlaw Playing Fields Pavilion	Sports Pavilion	Refurbishment and access improvements (DDA). Project remains included on a provisional basis.	Asset is C:Poor condition overall.			2024/25	
Hazlehead Academy	School - Secondary	Reconfigure main entrance and reception to improve building security.				2023/24	
House 233 Birkhall Parade	Group Home	Window replacement.				2022/23	Yes

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
House 233 Birkhall Parade	Group Home	Replacement kitchen.	Kitchen is in C:Poor condition.			2022/23	
Kincorth Community Centre	Community Learning Centre	Toilet refurbishments.				2022/23	Yes
Budget Change Reason:	Initial budget was indicative only. Project now fully designed and estimated, which has identified a budget requirement that reflects the scope of work and changes in construction prices.						
Kincorth Library And Customer Access Point	Library	Window replacement.				2024/25	Yes
Kincorth Sports Centre	Sports Centre	Replacement of the boilers and Domestic Hot Water Services and essential system improvements.				2023/24	Yes
Kingswells Care Home	Home for the Elderly	Swing free door installation.				2022/23	Yes
Kingswells Primary School	School - Primary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2022/23	
Kirkhill Primary School	School - Primary	External door replacement.	Doors are in C:Poor condition.			2024/25	Yes
Kittybrewster School	School - Primary	Windows in dining hall.	Windows are in C:Poor condition.			2024/25	Yes
Maritime Museum	Museum	Passenger lift replacement.				2022/23	
Maritime Museum	Museum	CCTV upgrade including external lighting improvements.				2023/24	
Maritime Museum	Museum	Replacement tannoy system.				2023/24	
Multi Storey Car Park West North Street	Multi Storey Car Park	Structural repairs including works to parapets.				2022/23	

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Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Nellfield Cemetery Depot	Depot	New welfare modular unit. Demolish existing buildings.				2022/23	Yes
New Town House Extension	Office	Replacement back up generator.	Generator has reached the end of its economic life.			2022/23	
New Town House Extension	Office	Flat roof replacement.	Roof is in C:Poor condition.			2022/23	Yes
Budget Change Reason:	Initial budget was indicative only. Project now fully designed and estimated, which has identified a budget requirement that reflects the scope of work and changes in construction prices.						
Newhills Churchyard Cemetery Depot	Depot	New welfare modular unit. Demolish existing buildings.	Poor quality structures with significant issues. Not worth investing in so replacement preferred.			2022/23	Yes
Northfield Academy	School - Secondary	Repairs to external walls - C&D blocks.				2024/25	
Northfield Academy	School - Secondary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2022/23	
Northfield Community Centre	Leased Community Centre	Pitched roof replacement.				2022/23	Yes
Budget Change Reason:	Refurbishment of roof was considered originally. However, replacement is a more appropriate option. Budget costs for replacement are higher. Windows included in initial scope but will now be carried out at a later date.						
Northfield Library	Library	Pitched roof replacement.				2024/25	Yes
Budget Change Reason:	Refurbishment of roof was considered originally. However, replacement is a more appropriate option. Budget costs for replacement are higher. Windows included in initial scope but will now be carried out at a later date.						
Old Aberdeen House	Office	Further repointing.				2024/25	
Old Aberdeen House	Office	Replacement of single glazed windows and new climate control.				2024/25	Yes

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Oldmachar Academy	School - Secondary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2022/23	
Powis Community Centre	Leased Community Centre	Window replacements.	Windows are in C:Poor condition.			2022/23	Yes
Replacement of obsolete school lighting.	School - Primary	Replacement of obsolete light fittings in identified Primary School. Initial phase to design/cost requirements and then carry out work in a priority school.	Priority schools are Cornhill Primary, Culter School, Dyce Primary and Holy Family.			2023/24	Yes
Rosemount Community C	Community Learning Centre	Various External works.				2023/24	
Rosemount Community Centre	Community Learning Centre	Fire escape improvements at ground floor gym.				2023/24	
Rosemount Community Centre	Community Learning Centre	Window replacements - Phase 2.	Windows are in D:Bad condition.			2023/24	Yes
Rosemount Community Centre	Community Learning Centre	Damp proofing to gym and gym store.	To address ongoing water penetration issues.			2023/24	
Scotstown School	School - Primary	External door replacement.	Doors are in C:Poor condition.			2023/24	Yes
Sheddocksley Community Centre	Leased Community Centre	Replacement windows and entrance doors. Accessibility improvements. Repointing of external walls.	Windows and external doors are in C:Poor condition.			2023/24	Yes

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Sheddocksley Sports Centre	Sports Centre	Replacement of the boiler and essential improvements to the heating system.	Scope to consider pavilion heating system as well.			2024/25	Yes
Springbank Cemetery Depot	Depot	New welfare modular unit. Demolish existing buildings.	Poor quality structures with significant issues. Not worth investing in so replacement preferred.			2022/23	Yes
St Josephs R. C. School	School - Primary	Tanking of basement to reduce flooding risk.				2023/24	
St Josephs R. C. School	School - Primary	Final phase of toilet refurbishments.				2023/24	Yes
St Machar Academy	School - Secondary	Toilet refurbishments phase 1.				2023/24	Yes
St Machar Academy	School - Secondary	Upgrade the kitchen gas supply and ventilation system due to breach in regulations.				2023/24	
The Bush Depot	Depot	Roof replacement to store/workshop building.	Roof is in D:Bad condition.			2023/24	
Tolbooth Museum	Museum	Major roof and parapet works.	To include structural repairs to arch.			2023/24	
Budget Change Reason:	As per Outline Business Case.						
Torry Community Centre	Leased Community Centre	Windows replacement, re-render walls and replace downpipes/gutters.				2023/24	Yes
Trinity Cemetery Depot	Depot	Refurbishment.				2024/25	
Tullos Depot	Depot	Windows and flat roof replacement.				2024/25	Yes
Tullos Depot	Depot	Salt store replacement. Development budget.	Existing building is in D:Bad condition.			2023/24	

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Tullos Depot	Depot	Replacement automatic gate.	Security issue due to poor reliability.			2023/24	
Tullos Primary and Community Centre	School - Primary	Window replacements - phase 1	Windows are in C:Poor condition.			2024/25	Yes
Westburn House	Surplus asset	Structural survey & structural Stability/H & S works.				2024/25	
Westburn Lounge And Outdoor Sports Centre	Outdoor Sports Centre	Replacement of the boilers and Domestic Hot Water Services and essential system improvements.				2023/24	Yes
Westburn Tennis Centre	Sports Centre	Replacement of the boilers and essential improvements to the heating system.				2024/25	Yes
Westburn Tennis Centre	Sports Centre	Roof structure recladding and Improvements.				2024/25	
Westpark School	School - Primary	Toilet refurbishment phase 1.				2024/25	Yes
Health & Safety Budget	Various	Rolling programme	2 year budget allocation.	£ 397,867		2023/24	
Memorials in City Centre	Memorials	Rolling programme of stabilisation and H&S works to memorials.	2 year budget allocation.	£ 210,984	£ 120,000	2023/24	
Budget Change Reason:	Following discussions with Operations & Protective Services it was established that £120k would be sufficient budget						
Play Ground Equipment (Various)	Various	Rolling programme of play ground equipment renewal.	2 year budget allocation.	£ 226,185		2023/24	
School fixed equipment and fixtures/fittings replacement - Rolling programme	Schools	Rolling programme of school fixed equipment and fixtures/fittings replacement.	2 year budget allocation.	£ 130,000		2023/24	

Appendix B - Currently Approved

Asset	Property Type	Proposed Works	Notes	Budget Cost	Revised Budget	Financial Year	Energy & Climate
Relay and renew path network - Rolling programme	Open space	Rolling programme of replacement/upgrade of open space path network.	2 year budget allocation.	£ 54,134		2023/24	

*These projects will be reviewed in line with decisions made regarding the Beach Masterplan.

Existing Total	£ 15,324,170
Additional Total	£ 1,244,016

Appendix C - New Projects

Asset	Property Type	Proposed Works	Notes	Budget Cost	Financial Year	Energy & Climate
116 Westburn Road	Family Centre	Replacement of obsolete boilers.			2024/24	Yes
Abbotswell Primary School	School-Primary	Window replacement phase 2.	Windows are in C:Poor condition.		2024/25	Yes
Abbotswell Primary School	School-Primary	Emergency lighting replacement.			2024/25	
Aberdeen Snow Sports Centre	Outdoor Sports Facility	Replacement of the lighting columns and luminaires.			2024/25	Yes
Altens Community Centre	Community Centre (Leased)	Boiler replacement and new gas line.			2024/25	Yes
Bridge Of Don Academy	School-Secondary	Replacement boilers and pressurisation system.			2024/25	Yes
Broomhill Primary School	School-Primary	Phase 2. Roof refurbishment, repointing, leadwork and rainwater goods replacement.			2024/25	
Bucksburn Swimming Pool	Swimming Pool	Full replacement of the existing ventilation plant and the automatic controls that feed the pool hall/changing rooms together with all the associated control panels.			2024/25	Yes
Central Library	Library	Replace rolling shelving units. Sections closed off and very dated.			2024/25	
Central Library	Library	Childrens lift replacement.			2024/25	
Cults Primary School	School - Primary	Toilet refurbishments.			2024/25	Yes
Cummings Park Learning Centre	Community Learning Centre	Replacement of obsolete boilers.			2024/25	Yes
Fergus House	Home For the Elderly	Replacement boundary fence.			2024/25	
Ferryhill Primary School	School-Primary	Window replacements phase 2. Single glazed windows.	Windows are in C:Poor condition.		2024/25	Yes

Appendix C - New Projects

Asset	Property Type	Proposed Works	Notes	Budget Cost	Financial Year	Energy & Climate
Hanover Street School	School-Primary	Replacement flooring and treads to stairwells.	Health and safety issue.		2023/24	
Harlaw Academy	School-Secondary	Install gas testing system in all relevant classrooms.			2024/25	
Inchgarth Community Centre	Community Centre (Leased)	Final phase of roof replacements.	Roofs are in C:Poor condition.		2024/25	Yes
Kittybrewster School	School-Primary	Burner replacement to boilers.			2024/25	
Len Ironside Centre	Day Centre-Disabled	Alterations to mechanical and electrical controls.			2024/25	
Loirston Primary School	School-Primary	Replacement of electrical Main Switchboard Panel.			2022/23	
Newhills Churchyard Cemetery Depot	Depot	Complete new roof to granite store. Part of listed structures.	Roof is in D:Bad condition.		2023/24	
St Josephs R. C. School	School-Primary	Window replacement phase 2.	Windows are in C:Poor condition.		2024/25	Yes
St Machar Academy	School - Secondary	Toilet refurbishment phase 2.			2023/24	Yes
The Jesmond Centre	Sports Centre	Installation of bird proof netting to roof structure.			2023/24	
Westburn Tennis Centre	Indoor Sports Facility	Replacement of indoor tennis courts lighting.			2024/25	Yes
Woodside School	School-Primary	To replace the playing field fencing with new black weld mesh fencing and replacement gates.	Fencing and gates are in D:Bad condition.		2023/24	
Development Budget		Development budget to provide robust estimates prior to projects being added to the programme.		£ 35,000	2024/25	
Memorials in City Centre - Rolling programme	Memorials	Rolling programme of stabilisation and H&S works to memorials.		£ 60,000	2024/25	

Appendix C - New Projects

Asset	Property Type	Proposed Works	Notes	Budget Cost	Financial Year	Energy & Climate
School fixed equipment and fixtures/fittings replacement - Rolling programme	Schools	Rolling programme of school fixed equipment and fixtures/fittings replacement.		£ 50,000	2024/25	
Relay and renew path network - Rolling programme	Open space	Rolling programme of replacement/upgrade of open space path network.		£ 70,000	2024/25	
Health & Safety - Rolling programme	Various	Rolling programme of H&S works.		£ 24,607	2024/25	
Play Ground Equipment - Rolling programme	Play areas	Rolling programme of play ground equipment renewal.		£ 175,000	2024/25	

Total	£ 4,074,607	4074607
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Appendix D - Projects Removed

Location	Proposed Works	Notes	Budget Cost
Bridge of Don Community Centre	Community Learning Centre	Some work has been carried out to the servery since the project was approved. In addition the servery is not currently used. On that basis project is not to proceed.	
Building & Works Depot Hilton	Window replacements.	Building no longer required for service delivery.	
Marchburn Childrens Home	Convert storeroom into a bedroom to provide additional capacity.	Review of service need identified this is not currently required.	

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
1 Dominies Road	Group Home	Provide staff welfare facilities by converting the garage.
116 Westburn Road	Family Centre	Reconfiguration of space to support additional teams.
116 Westburn Road	Family Centre	Replacement of obsolete boilers.
26A Rowan Road	Group Home	Kitchen refurbishment.
Abbotswell Primary School	School-Primary	Toilet refurbishment, phase 2.
Aberdeen Art Gallery	Museum	Security improvements - additional sensors for alarm system.
Aberdeen Grammar School	School-Secondary	Lighting upgrade to classrooms.
Aberdeen Music School Hall Of Residence	Hostel	Install boiler & provide domestic hot water cylinder.
Aberdeen Treasure Hub	Depot	Security improvement through installation of hard wired key box.
Alex Collie Sports Centre	Sports Centre	Replacement of the ventilation, DHWS, BMS controls and improvement of the
Alex Collie Sports Centre	Sports Centre	Renovation and refurbishment of the roof and glazing.
Alex Collie Sports Centre	Sports Centre	Re-tarmacking of the main car parking area and access road.
Allenvale Cemetery	Depot	Refurbishment and rationalisation of space.
Ashgrove Nursery Infant School	School-Nursery	Electrical improvements.
Ashley Road School	School-Primary	Suitability improvements. Rated as C:Poor.
Aulton Pavilion	Sports Pavilion	Replacement of building management system & controls.
Balgownie Community Centre	Community Centre (Leased)	Replacement roof. Structural improvements may be required to accommodate enhanced roof specification.
Balnagask House	Home For the Elderly	Catering kitchen replacement.
Bramble Brae Primary School	School-Primary	Fire alarm system upgrade.
Bridge Of Don Academy	School-Secondary	Toilet refurbishment Phase 2.
Bridge Of Don Library	Library	Refurbishment internally including electrical improvements and desk reconfiguration.
Broomhill Primary School	School-Primary	Catering kitchen replacement (servery).
Broomhill Primary School	School-Primary	Phase 3. Roof refurbishment, repointing, leadwork and rainwater goods replacement.
Broomhill Primary School	School-Primary	Phase 4. Roof refurbishment, repointing, leadwork and rainwater goods replacement.
Central Library	Library	Replacement floors to allow flooring coverings to be replaced.
Central Library	Library	Refurbishment of main basement & basement mezzanine storage.

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
Central Library	Library	Internal refurbishment of Children's Library.
Charleston Primary School	School-Primary	Suitability improvements. Rated as C:Poor.
Childrens Home 2 Gilbert Road	Childrens Home	Kitchen refurbishment. Replace existing kitchen and utility room including Cooker and hood, flooring and lighting.
Cornhill Learning Centre	Community Learning Centre	Window replacements. Windows are in C:Poor condition.
Cornhill Primary School	School-Primary	Toilet refurbishments.
Cornhill Primary School	School-Primary	Flat roof replacement to middle school. B:Satisfactory condition.
Craigton Road Day Care Centre	Day Centre- Elderly	kitchen refurb to bring up to modern standards.
Cromdale Outdoor Centre	Outdoor Centre	Replacement of the wall mounted boiler and enhancement of the heating system to incorporate a dedicated primary heating loop to feed the DHW cylinder heating coils to improve energy efficiency.
Culter Library	Library	Refurbishment of staff areas.
Culter School	School-Primary	Suitability improvements. Rated as C:Poor.
Culter School	School-Primary	Window replacements. Windows are in C:Poor condition.
Culter School	School-Primary	Gym hall flat roof replacement.
Culter School	School-Primary	Catering kitchen replacement.
Culter Sports Centre	Sports Centre	Full replacement of the sports hall and studio lighting, replacing the existing fluorescent lamps with LED lighting.
Culter Sports Centre	Sports Centre	Re-tarmacking of the main car parking areas the associated roadways adopted as part of the property.
Cults Library	Library	Refurbishment of the interior, re-site desk and refurbish staff area.
Cults Primary School	School-Primary	Full kitchen refurbishment and dining area.
Cults Primary School	School-Primary	Replacement suspended ceilings to teaching block. Ceilings are in C:Poor condition.
Danestone Primary School	School-Primary	Toilet refurbishments. Toilets are in C:Poor condition.
Duthie Park Workshops	Depot	Toilet and changing refurbishment - Sanitary is C:Poor condition.
Dyce Academy	School-Secondary	Sports hall flooring replacement. Flooring is in C:Poor condition.
Dyce Academy	School-Secondary	Improvements to Front Entrance (accessibility works).
Dyce Academy	School-Secondary	Catering kitchen replacement.
Dyce Primary School	School-Primary	Toilet refurbishment phase 2 - Green Unit.
Dyce Primary School	School-Primary	Catering kitchen replacement.
Dyce Primary School	School-Primary	Swimming pool plant replacement and repairs to undercroft.

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
Fernielea Primary School	School-Primary	Catering kitchen replacement.
Ferryhill Library	Library	Replacement gutters/downpipes to improve rainwater run off capacity.
Ferryhill Library	Library	Redecorate/repair interior walls. Replace interior door.
Ferryhill Primary School	School-Primary	Window replacements phase 3. Single glazed windows. Windows are in C:Poor condition.
Ferryhill Primary School	School-Primary	Catering kitchen replacement.
Ferryhill Primary School	School-Primary	Structural repairs to East Elevation walls.
Ferryhill Primary School	School-Primary	Improvements required to dining facilities.
Forehill School	School-Primary	Toilet refurbishments.
Froghall Learning Centre	Community Learning Centre	Replacement of lower flat roof. Roof is in C:Poor condition.
Gilcomstoun School	School-Primary	Kitchen refurbishment.
Glashieburn School	School-Primary	Toilet refurbishments.
Hanover Community Centre	Community Centre (Leased)	Replacement flooring in main and side halls. Flooring C:Poor condition.
Harlaw Academy	School-Secondary	Suitability improvements. Rated as C:Poor.
Harlaw Academy	School-Secondary	Relocation of catering kitchen and dining facilities, and associated works
Harlaw Academy	School-Secondary	Catering kitchen replacement.
Harlaw Academy	School-Secondary	Toilet refurbishment phase 2.
Hazlehead Academy	School-Secondary	Catering kitchen replacement.
Hazlehead Golf Course	Golf Course	Improvements to the drainage on the Mackenzie Championship Course.
Hazlehead Park		Refurbishment of play area.
Holy Family R.C. Primary School	School-Primary	Toilet refurbishment.
Holy Family R.C. Primary School	School-Primary	Replacement of obsolete light fittings.
Holy Family R.C. Primary School	School-Primary	Catering kitchen replacement (servery).
Inchgarth Community Centre	Community Centre (Leased)	Car park resurfacing and access road reconfiguration.
Jack Wood Pavilion	Sports Pavilion	Changing/toilet refurbishment. In C:Poor condition.
Jack Wood Pavilion	Sports Pavilion	Windows and external door replacement. Are rated C:Poor.
Kincorth Library And Customer Access Point	Library	Replacement of single glazed upper curtain wall. Glazing is in C:Poor condition.
Kings Links	Golf Course	Full replacement of the irrigation system at Kings Links Golf Course.
Kingsford Primary School	School-Primary	Suitability improvements. Rated as C:Poor.
Kingswells Care Home	Home For the Elderly	Replacement nurse call system.
Kingswells Care Home	Home For the Elderly	New lift installation to increase capacity.
Kingswells Care Home	Home For the Elderly	Car park resurfacing. Car park is in C:Poor condition.
Kingswells Primary School	School-Primary	Suitability improvements. Rated as C:Poor.
Kingswells Primary School	School-Primary	Boys toilet refurbishment.

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
Kingswells Primary School	School-Primary	Replacement of 2 boilers.
Kirkhill Primary School	School-Primary	Suitability improvements. Rated as C:Poor.
Kirkhill Primary School	School-Primary	Catering kitchen replacement (servery).
Kittybrewster School	School-Primary	Suitability improvements. Rated as C:Poor.
Loirston Annexe Community Centre	Community Centre (Leased)	Final phase of roof replacements and refurbishment. Roofs are in C:Poor condition.
Loirston Primary School	School-Primary	Toilet refurbishment.
Maritime Museum	Museum	Replacement building management system.
Maritime Museum	Museum	Improved intruder alarm. Update from Redcare to new duel comm system.
Maritime Museum	Museum	Replacement of built-in glass display cases.
Mastrick Community Centre	Community Centre (Leased)	Toilet refurbishment.
Mastrick Library	Library	Flat roof replacement. Roof is in C:Poor condition.
Middlefield Community Project	Community Centre (Leased)	Flat roof replacement to original building. Roof is in C:Poor condition.
Middleton Park Primary School	School-Primary	Toilet refurbishments.
Middleton Park Primary School	School-Primary	Window replacements. Windows are in C:Poor condition.
Muirfield School	School-Primary	Playground resurfacing.
Muirfield School	School-Primary	Catering kitchen replacement (servery).
Muirfield School	School-Primary	Gym hall toilet and changing refurbishments.
New Town House Extension	Office	Works to external decorative tiles.
Northfield Academy	School-Secondary	Kitchen refurbishment.
Northfield Academy	School-Secondary	Domestic hot water boiler replacement.
Northfield Academy	School-Secondary	Electrical improvements. Phase 1.
Northfield Academy	School-Secondary	Electrical improvements. Phase 1.
Northfield Academy	School-Secondary	Resurfacing of section of car park and relining. Including creation of safe pedestrian routes. Car park is C:Poor for condition.
Northfield Academy	School-Secondary	Install gas testing system in all relevant classrooms.
Northfield Academy	School-Secondary	Replacement windows to gym hall. Assessed as C:Poor for condition.
Northfield Community Centre	Community Centre (Leased)	Toilet refurbishment and installation of showers (beside gymnasium). Sanitary is in C:Poor condition.
Northfield Community Centre	Community Centre (Leased)	Complete rewire & upgrade of emergency lighting.
Northfield Community Centre	Community Centre (Leased)	Window replacements.Windows are in C:Poor.
Northfield Library	Library	Windows replacements.Windows are in C:Poor.
Old Aberdeen House	Office	Retro-fit environmental control, fire and security improvements.

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
Oldmachar Academy	School-Secondary	Suitability improvements. Rated as C:Poor.
Oldmachar Academy	School-Secondary	Catering kitchen replacement.
Oldmachar Academy	School-Secondary	Upgrade fire alarm system.
Oldmachar Academy	School-Secondary	Install gas testing system in all relevant classrooms.
Quarryhill Primary School	School-Primary	Catering kitchen replacement.
Quarryhill Primary School	School-Primary	Replacement of obsolete boilers.
Ruthrieston Community Centre	Community Centre (Leased)	Male and female toilet refurb (C:Poor grade).
Scotstown School	School-Primary	Kitchen refurbishment.
Seaton Park		Water infrastructure improvements.
Sheddocksley Sports Centre	Sports Centre	Replacement of the heating and hot water system that supplies the pavilion.
Sheddocksley Sports Centre	Open Space	Drainage improvements to tree belt adjacent to Sheddocksley Drive.
Skene Square Primary School	School-Primary	Flat roof replacements. Roofs are in B-condition.
Skene Square Primary School	School-Primary	Toilets refurbishment in annexe.
Skene Square Primary School	School-Primary	Classrooms in poor state of decoration, repainting of walls and replacement of some fixtures and fittings required.
Skene Square Primary School	School-Primary	Catering kitchen replacement (servery).
Skene Square Primary School	School-Primary	Upgrade fire alarm system.
St Josephs R. C. School	School-Primary	Refurbishment of green houses. Listed building.
St Josephs R. C. School	School-Primary	Catering kitchen replacement.
St Josephs R. C. School	School-Primary	Window replacement phase 3. Windows are in C:Poor condition.
St Josephs R. C. School	School-Primary	Window replacement phase 4. Windows are in C:Poor condition.
St Machar Academy	School-Secondary	Toilet refurbishment phase 3 (of 5).
St Machar Academy	School-Secondary	Toilet refurbishment phase 4 (of 5).
St Machar Academy	School-Secondary	Toilet refurbishment phase 5 (of 5).
St Machar Academy	School-Secondary	Home Economics classrooms to be refurbished.
St Machar Academy	School-Secondary	Reinstate rendering.
Sunnybank School	School-Primary	Suitability improvements. Rated as C:Poor.
Sunnybank School	School-Primary	Senior boys toilet refurb.
Sunnybank School	School-Primary	Catering kitchen replacement.
The Quarry Centre	Family Centre	Replacement of fascias and rainwater goods. Canopy refurbishment. Elements are in C:Poor condition.
Tolbooth Museum	Museum	Internal improvements to staff facilities and alarm systems.
Town House	Office	Repairs to Bon Accord room ceiling.
Trinity Cemetery	Depot	Refurbishment of external fabric. Roof and windows are C:Poor condition.
Tullos Depot	Depot	Toilet and changing area refurbishment.
Tullos Depot	Depot	Roller shutter door replacements. Eight in total.
Tullos Depot	Depot	Fire alarm system upgrade.

Appendix E - Future Projects

Property Address	Property Type	Proposed Work
Tullos Learning Centre	Community Learning Centre	Suitability improvements. Rated as C:Poor.
Tullos Primary School	School-Primary	Suitability improvements. Rated as C:Poor.
Walker Road School	School-Primary	Toilet refurbishment.
Walker Road School	School-Primary	Catering kitchen replacement (servery).
Walker Road School	School-Primary	Suitability improvements. Rated as C:Poor.
Westpark School	School-Primary	Toilet refurbishment phase 2.
Woodside School	School-Primary	Catering kitchen replacement (servery).

Condition

- A: Good - performing well and operating efficiently
- B: Satisfactory - performing adequately but showing minor deterioration
- C: Poor - showing major problems and/or not operating adequately
- D: Bad - life expired and/or serious risk of imminent failure

Suitability

A: Good - performing well and operating efficiently. The buildings support the delivery of the service and are considered suitable for use now and in the future.

B: Satisfactory - performing well but with minor issues. The buildings generally support the delivery of services and would be considered suitable. There is room for improvement in certain areas but the property is fundamentally okay.

C: Poor - showing major problems and/or not operating optimally. The buildings impede the delivery of services and would not be considered suitable.

D: Bad - does not support the delivery of services at all. The buildings seriously impede the delivery of services and would definitely not be considered suitable.

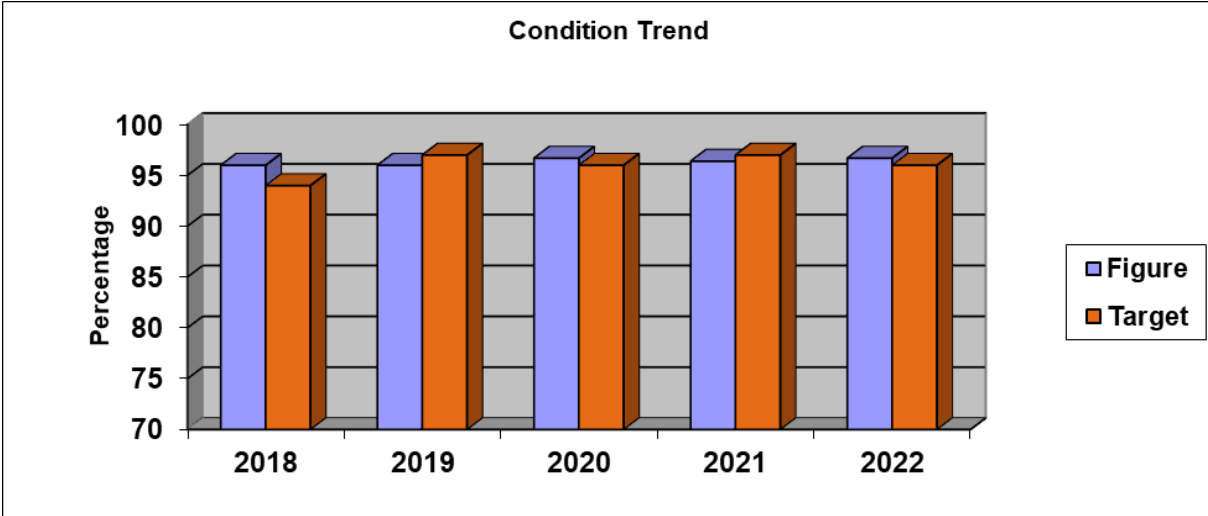
Accessibility

- A: Good - Accessible with little or no works required.
- B: Satisfactory - Accessible with only minor works required.
- C: Poor - Significant investment required to make accessible.

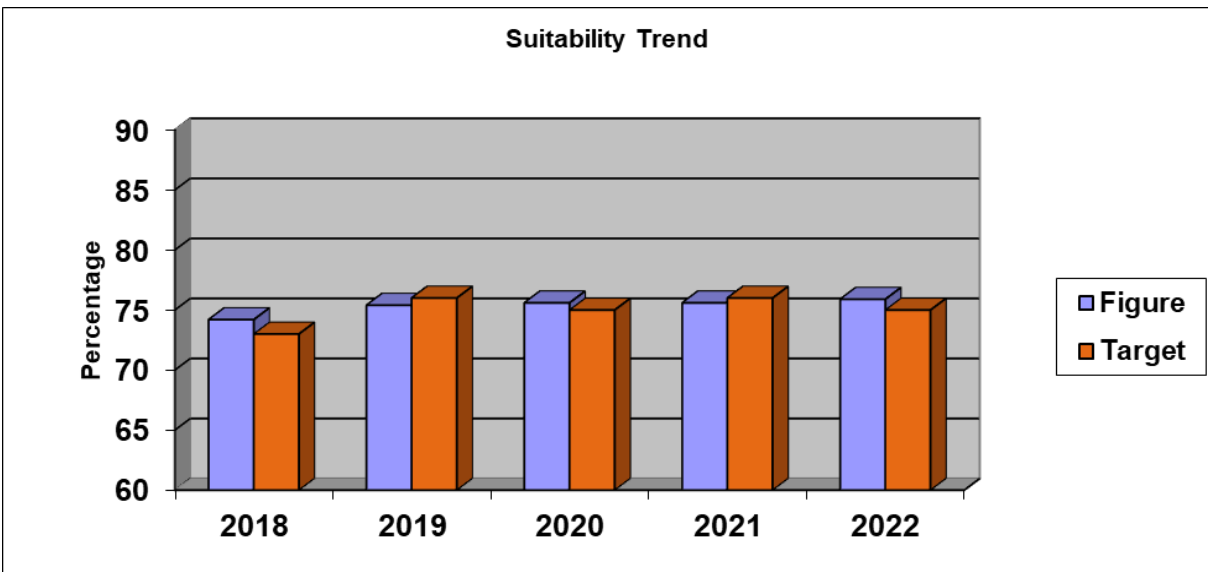
D: Bad - Major Investment required or cannot be made accessible.

SPI Definition – Condition & Suitability

The SPI shows the overall position of operational buildings in terms of if they are both suitable and in satisfactory condition. As the SPI has been in use for several years it is possible to see long term trends. The SPI figure shows if the investment being made is leading to improvements in condition and suitability grades. Improving figures would suggest investment levels are sufficient while declining figures would suggest that the investment is not sufficient.



This year's figure of 96.7% is a small improvement on last year's figure and exceeds last years target of 96%. All the assets which were removed this year were B or A rated for condition. Removing no C or D rated assets did not improve the overall figure, however the increase in overall gross internal floor area of 2,973m2 improves the overall percentage. Taking all of this into account a target for next year of 97% has been set for condition.

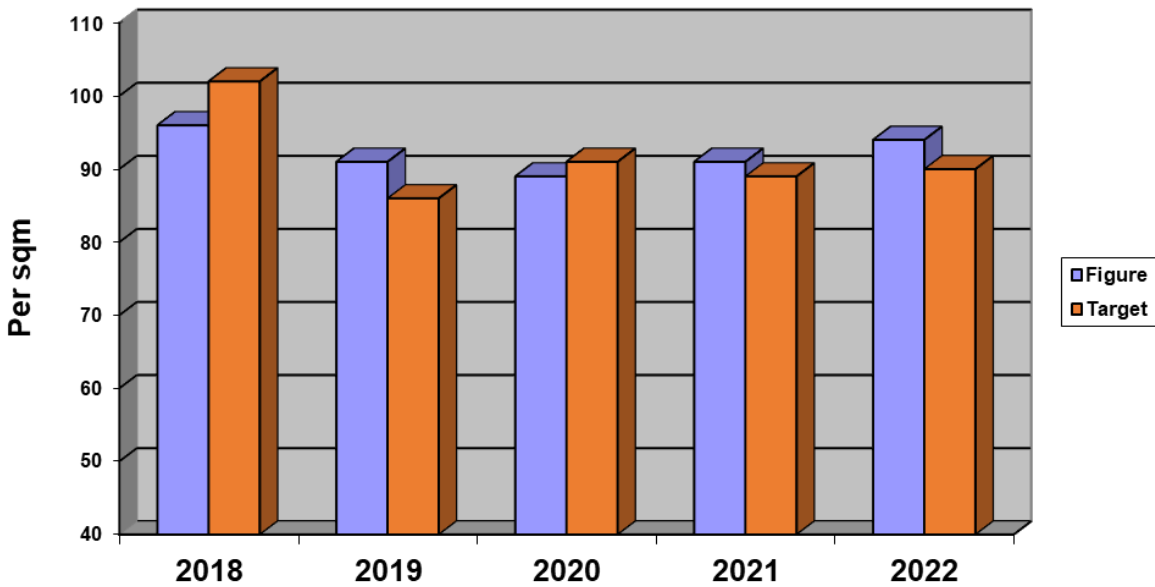


This year's figure of 75.9% is a small improvement on last year's figure, exceeding the target set last year of 75%. Two of the assets which were removed were C rated, which improved the overall figure slightly. The suitability survey programme has only recently recommenced following delays due to staff deployment and the Services occupying the assets. The survey programme restarting may see some assets being downgraded, which would have a negative impact on next years figure. It is not presently possible to predict this impact. Taking all of this into account a target for next year of 76% has been set for suitability.

SPI Definition – Required Maintenance

The required maintenance cost of operational assets per square metre is an assessment of the cost to bring the property from its present state up to the state reasonably required by the authority to deliver the service or to meet statutory or contract obligations and maintain it at that standard. Betterment should be specifically excluded from the calculations of cost.

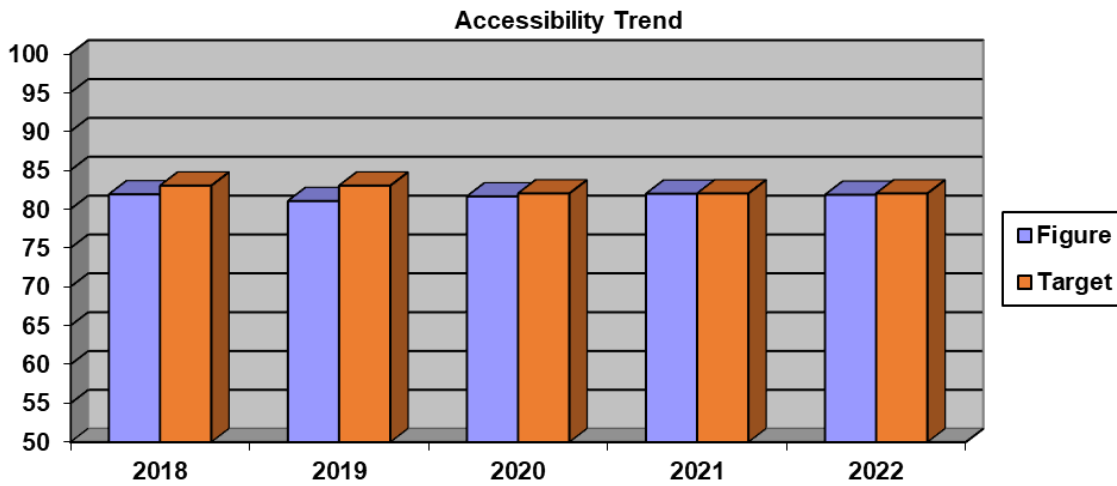
Required Maintenance Trend



The figure has increased with last year's figure of £91 per sqm rising to £94 per sqm, against a target of £90 per sqm. The overall cost has increased by £2.2m with £49.6m becoming £51.8m. The overall floor area has increased slightly due to additional operational space coming into use such as Provost Skene's House. The C&S Programme will continue to allow for targeted priority capital spend. This will result in improvements to specific buildings but buildings not included in the programme will decline. Planned works within the capital programme over the next 12 months on various assets include the reopening of Northfield Swimming Pool and the Dyce Changing Pavilion. Both of which will positively affect the figures. Taking this into account a target of £93 sqm has been set for next year, which should be achievable through the above investment.

SPI Definition - Accessibility

The number of council buildings from which the council delivers services to the public and percentage of these in which all public areas are suitable for and accessible to disabled people.



This figure has decreased slightly this year from 81.96% in 2021 to 81.82% this year. This is in line with the target of 82%. The figure has been consistent over the past 5 years. The remaining buildings that are not accessible are generally inherently difficult to improve so unless they are replaced/closed then they will continue to negatively affect the figure. Looking ahead across the next 12 months a target of 82% has been set, which is essentially a standstill position.

Appendix I - Emissions Reduction and Climate Resilience Benefits

Location	Property Type	Project	Emissions Reduction	Climate Resilience
Aberdeen Grammar School	School - Secondary	Refurbishment of swimming pool changing facilities.		Water saving measures reduces demand on water supplies.
Airyhall Library	Library	Window replacements throughout.	Thermal fabric improved by replacing 19 old single / double glazed windows.	Reduced risk of water penetration during weather events.
Brimmond Primary School	School - Primary	Drainage improvements and upgrade of play area surfaces.		Reduced risk of flooding in playground during weather events.
Cove Library	Library	Issues with curtain walling to be resolved.	Thermal fabric improved by replacing 61 sqm of original wall/glazing. U-Value* significantly improved from 2.8 (approx) to 1.0 (average).	
Dyce Academy	School - Secondary	Toilet refurbishment.		Water saving measures reduces demand on water supplies.
Ferryhill Primary School	School - Primary	Single glazing window replacements.	Thermal fabric improved by replacing 65 single glazed windows.	Reduced risk of water penetration during weather events.
Ferryhill Primary School	School - Primary	Toilet refurbishment lower ground level.		Water saving measures reduces demand on water supplies.
Forehill School	School - Primary	Window replacement to block 1.	Thermal fabric improved by replacing 35 poor condition double glazed units. U-Value* significantly improved from 2.8 to 1.1.	Reduced risk of water penetration during weather events.
Harlaw Academy	School - Secondary	Toilet refurbishments.		Water saving measures reduces demand on water supplies.
House 145 Gardner Road	Group Home	Window replacements.	Thermal fabric improved by replacing 15 old double glazed	Reduced risk of water penetration during weather events.
House 13 Viewfield Avenue	Group Home	Kitchen and bathroom refurbishments.		Water saving measures reduces demand on water supplies.
House 15 Viewfield Avenue	Group Home	Kitchen and bathroom refurbishments.		Water saving measures reduces demand on water supplies.

Appendix I - Emissions Reduction and Climate Resilience Benefits

Location	Property Type	Project	Emissions Reduction	Climate Resilience
Inchgarth Community Centre	Leased Community Centre	Roof replacements. Phase 1.	Thermal fabric improved by replacing 420 sqm of poor condition and poorly insulated roofs. U-Value* significantly improved from 2.3 (approx) to 0.15.	Reduced risk of water penetration during weather events.
Inchgarth Community Centre	Leased Community Centre	Roof replacements. Phase 2.	Thermal fabric improved by replacing 180 sqm of poor condition	Reduced risk of water penetration during weather events.
Kincorth Sports Centre	Sports Centre	Sports hall replacement lighting.	Estimated reduction in consumption of 8,000kwh per annum.	
Kingsford Primary School	School - Primary	Toilet refurbishment.		Water saving measures reduces demand on water supplies.
Kingswood Court Day Centre	Day Centre - Elderly	Boiler plant replacement.	A more efficient boiler will result in reduced gas consumption.	
Muirfield School	School - Primary	Flat roof replacements to nursery and hall.	Thermal fabric improved by replacing 200sqm of poor condition and poorly insulated roofs. U-	Reduced risk of water penetration during weather events.
Northfield Academy	School - Secondary	Gym hall roof replacement.	Thermal fabric improved by replacing 414 sqm of poor condition and poorly insulated roofs. U-Value* significantly improved from 2.0 (approx) to 0.15.	Reduced risk of water penetration during weather events.
Northfield Swimming Pool	Swimming Pool	Replacement roof sheeting, membrane and insulation to original building.	Thermal fabric improved by replacing 1164 sqm of poor condition and poorly insulated roofs. U-Value* significantly improved from 0.5 to 0.26.	Reduced risk of water penetration during weather events.
Rubislaw Playing Fields Pavilion	Sports Pavilion	Replacement boiler plant and pump sets.	A more efficient boiler will result in reduced gas consumption.	
Sheddocksley Sports Centre	Sports Centre	Sports hall replacement lighting.	Estimated reduction in consumption of 8,000kwh per annum.	
St Josephs R. C. School	School - Primary	Window refurbished and secondary glazing added.	Thermal fabric improved through work to 28 windows. U-Value* significantly improved from 4.7 (approx.) to 1.8.	Reduced risk of water penetration during weather events.

Appendix I - Emissions Reduction and Climate Resilience Benefits

Location	Property Type	Project	Emissions Reduction	Climate Resilience
Woodside Library	Library	Windows and external doors replacement.	Thermal fabric improved by replacing 28 old single / double glazed windows and 2 doors.	Reduced risk of water penetration during weather events.

*U-Value - A measure of the heat transmission through a building part (such as a wall or window) or a given thickness of a material (such as insulation) with lower numbers indicating better insulating properties.

Outline Business Case

Project Name	Tolbooth Museum External Improvements and Structural Repairs		
Author	Alastair Reid	Date	2 Sep 2022
Sponsoring Cluster	Corporate Landlord	Version	2

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Introduction and Project Overview

Briefly describe the basic project concept. Describe the current business situation as it relates to the problem or opportunity that gave rise to the idea, including any other drivers such as regulatory or legal compliance requirements

If taking no action may have a negative effect on the organisation, then also describe what will happen if the project is **not** undertaken.

The Tolbooth Museum has been closed since the start of the pandemic. Unlike other cultural venues it has not been reopened. The primary reason for this is there is a large crack to an internal archway on the ground floor, considered a potential risk to health and safety.

Furthermore, there are extensive repairs required to external areas. Including the roofs, stonework, parapets and pointing. These requirements have now been initially assessed and a scope of work has been established. Tolbooth is a grade A listed building and located in a very prominent location. The Council has a duty to maintain Listed Buildings in its ownership. Failure to maintain the exterior would create a risk of falling masonry, slates and leadwork. The work will protect an historically important asset and allow it to be brought back into use.

Funding is currently allocated in the Condition & Suitability Programme for a project described as 'Major roof and parapet works'. As per the name, that has been focussed on external areas. It is proposed to expand the scope of works to include the repairs to the archway and all essential external works. This will require an adjustment to the budget.

Executive Summary

Provide a clear, concise summary of the key features of the business case, briefly describing what the project will deliver, any key decisions associated with it, the expected costs and the funding position (showing any budgets already identified/ expected and the ask of Capital). Include an outline of the benefits, and any dis-benefits, what risks and assumptions are associated with the project, and summarise planned or agreed dates and time constraints. Indicate who is the project sponsor and how the project will be owned and governed and what form the project board will take.

The proposed works to be completed are as follows:-

- Structural repairs to archway.
- Loose surfaces to stonework to be brushed down.
- Removal of rusting embedded metal in stonework.
- Removal of previous mortar repairs and replace with lime based mix.
- Repointing.
- Lead covered spire to be stripped and new sheeting installed.
- Repair or replacement of flat roof.
- Renewal of timber louvre infills.
- Refurbishment of clockfaces.

This work will require an extensive scaffolding system to be put in place for a number of months to allow the work to be carried out. This adds significant costs to the project.

Initial costs estimate for the work are £[REDACTED]. That figure will be updated in the Full Business Case. There are still some unknowns about the extent of works required. As such it is expected that this figure will change. Officers have factored in a large contingency, which will help mitigate any cost increase. It is proposed that the full project amount is funded from the Condition & Suitability Programme.

Works could potentially start in Spring 2023 and take around 8 months to complete. A high level initial programme is detailed in section 12.2.

The key benefits of the project would be the protection of a Grade A listed building and the reopening of the museum. The scaffolding will appear unsightly and there will be minor disruption to the access through the adjacent lane. The scaffolding will also encroach on to the pavement.

As the total spend would be significant it would be good practice to follow the business case process to justify this large capital spend. It should be noted that other building investment internally would be hugely beneficial to service delivery and the visitor experience. The significant investment this project requires would likely create opportunities for external funding for further internal works or to offset some of the external works. External funding will be considered as part of the full business case.

The Project Sponsor would be the Chief Officer Corporate Landlord with Chief Officer City Growth having shared responsibility for looking at external funding. The Capital Board will have an overview of the project.

Strategic Fit

This section will consider how the project fits with the list of projects identified in the Local Outcome Improvement Plan). Firstly, state if the project is identified within the LOIP. If it is not, how does it work with the Council's strategic objectives such as:

- Prosperous Economy
- Prosperous People (Children & Young People)
- Prosperous People (Adults)
- Prosperous Place

This project is not directly identified within the LOIP. The reopening of the museum would contribute to Prosperous Economy: increase city centre footfall.

A reopened popular visitor venue enhances the heritage portfolio of the city, making the Broad Street end of the city centre a key location for visitor flow (adding to Provost Skene's House, Marischal College, Maritime Museum, Peacock's Close, Mercat Cross, and connecting through to St Nicholas Kirk and the Art Gallery) establishing a tourism package; advancing post-covid city centre economic recovery and the emerging cruise market offer, as well as increasing city dwell.

Business Aims, Needs & Constraints

Provide an overview of the sponsoring organisation and explain how the project supports the existing policies and strategies, and how it will assist in achieving the business goals, aims and business plans of the organisation. Include any relevant information about the current business situation, such as the organisational structures, business model, buildings, processes, teams and technology currently in place.

Corporate Landlord – The service has overall responsibility for the Council’s assets including property assets. It will support other services in reviewing assets used for service delivery and provide strategic direction. It is also leads on investment decisions related to operational assets.

Describe the purpose of the project, why it is needed, establishing a compelling case for change based on business needs, e.g. demand for services, deficiencies in existing provision etc. Where are we now and where do we need to get to.

The Tolbooth has now been shut for a number of years and will not reopen whilst there are any concerns regarding the structural stability of the internal arch. The museum remains part of the City’s cultural offering and regular enquiries from the public are received regarding its reopening.

The building has an overall condition grade of B:Satisfactory, when assessed in 2018. However, the roof and associated drainage were assessed as C:Poor at that time. There has almost certainly been further deterioration since then and the roof may well now be considered to be D:Bad. That would push the overall condition of the building into C:Poor. The internal condition of the building is also being affected by the water penetration. Lack of action would see further deterioration of internal finishes.

Parts of the Tolbooth date back to 1615 and is one of the oldest buildings in Aberdeen. It forms part of Category A listing for the Town House. The Statement of Special Interest reads “Aberdeen Town House, including municipal offices, court house, Tolbooth and city chambers, is a significant example of civic architecture and is of outstanding importance because of its fine and influential Scots baronial design with exceptional interior scheme, conceived by the highly respected architects Peddie and Kinnear. The imposing scale of the building with its landmark tower and its striking grey and white 1975 extension, dominates the east end of Union Street in Aberdeen city centre. It incorporates an early 17th century Tolbooth, one of the oldest buildings in Aberdeen and its integration with the newer Municipal buildings provides a connection between the old burgh of Aberdeen and the new-found confidence and wealth of the 19th and 20th centuries. It is the embodiment of civic affairs in Aberdeen”.

The completion of extensive work to the exterior fabric and internal arch will contribute significantly to protecting a Grade A listed building. Furthermore it creates the opportunity to reopen the museum to staff and visitors. The level of capital investment required to complete the structural repairs offers the opportunity to identify external funding to match, contribute to or enhance the required investment.

Identify any constraints, e.g. timing issues, legal requirements, professional standards, planning constraints. What assumptions have been made, and any linkages and interdependencies with other programmes and projects should be explained, especially where the proposed project is intended to contribute to shared outcomes across multiple Clusters.

Listed building consent will be required. Officers with Capital have extensive experience of working with Historic Environment Scotland with regards to work on historic assets.

There is a need to start the work as soon as possible. However, that has to be balanced against the practicalities of carrying out work during the winter months. Carrying out work across the December/January break is also best avoided as no work would be carried out during that period. As such works on site could only commence in early 2023.

If external funding were to be identified, the timescales for repair would be adjusted to take in account the enhanced scope of work.

State what impact the project will have on business as usual, e.g. temporarily reduce capacity or divert resources.

As the Museum is already closed there would be no additional impact on the delivery of that service. The Capital Team do have multiple projects to progress but is recognised that this would be a priority. So resources would be available to deliver the project.

Objectives

List the project's objectives. Make these tangible and clear as they will influence which option is recommended and will be used to monitor project progress and success.

External Areas assessed as A-Good for condition

Grade A Listed Building Protected

Museum reopened

Scope

What will the project produce? What are its outputs?

Consider what business services, processes, people and environments will be delivered, affected or changed by the project.

Also define the work the project will carry out to make the transition from the project to 'business as usual' – the handover period.

State the project success criteria.

The project will produce a structurally sound building that is in good condition externally. That work would provide long term protection for the building. On completion of the work the museum could be reopened following museum operations being re-established.

A successful project would see the external areas assessed as A condition, the arch being made structurally sound, the removal of unsympathetic historic repairs and an improvement in the overall visual appearance. Ultimately this would facilitate the reopening of the museum.

Out of Scope

List any notable exclusions, those areas that may be viewed as associated with the project or the affected business area, but which are excluded from the scope of the project.

Internal improvements would not be covered by the budget currently requested. As noted it is proposed to consider external funding opportunities, which could bring those works back into scope.

Options Appraisal

Option 1 – Do Minimum

Description	Patch repair where possible and remove any dangerous elements.
Expected Costs	<u>Capital</u> Construction works - £0 Corporate fees - £0 Additional construction works – £0 External funding – £0 <u>Revenue</u> Ongoing repairs – Unknown. Anticipate increased frequency.
Expected Benefits	None
Risks Specific to this Option	Deterioration in building condition and risk of falling debris. Increased costs if full scope of work eventually carried out.
Advantages & Disadvantages	<u>Advantages</u> No significant capital outlay. <u>Disadvantages</u> Project objectives not met.
Viability	Viable in the short term.
Other Points	None

Option 2 – Carry Out Full Scope of Works

Description	Carry out full scope of works and explore funding opportunities. Reopen museum.
Expected Costs	<u>Capital</u> Construction works - £■■■■ Corporate fees - £■■■■ Additional construction works – Unknown External funding - Unknown <u>Revenue</u> Ongoing repairs – Anticipate significantly reduced frequency.

Expected Benefits	Archway made structurally sound. Grade A Listed Building protected. Unsuitable historic repairs removed.
Risks Specific to this Option	Cost increases. Mitigation – Have sufficient contingency. Complete full suite of surveys.
Advantages & Disadvantages	<u>Advantages</u> Project objectives met. <u>Disadvantages</u> Significant capital costs. Some local disruption to path network.
Viability	Viable subject to funding being made available.
Other Points	None

Option 3 – Carry Out Full Scope of Works	
Description	Carry out full scope of works and explore funding opportunities. Mothball museum.
Expected Costs	<u>Capital</u> Construction works - £■■■■ Corporate fees - £■■■■ Additional construction works – £0 External funding - £0 <u>Revenue</u> Ongoing repairs – Anticipate significantly reduced frequency.
Expected Benefits	Archway made structurally sound. Grade A Listed Building protected. Unsuitable historic repairs removed.
Risks Specific to this Option	Cost increases. Mitigation – Have sufficient contingency. Complete full suite of surveys.
Advantages & Disadvantages	<u>Advantages</u> Some project objectives met. <u>Disadvantages</u> Objective to reopen museum not met. Significant capital costs. Some local disruption to path network. No opportunity to consider additional funding.
Viability	Viable subject to funding being made available.
Other Points	None

Scoring of Options Against Objectives

Use the table below to score options against the objectives in order to create a shortlist of options to be considered.

Objectives	Options Scoring Against Objectives							
	1	2	3					
External Areas assessed as A-Good for condition	0	3	3					
Grade A Listed Building Protected	0	3	3					
Museum reopened	0	3	0					
Total	0	9	6					
(use F9 function key on each total to add the numbers in the column <highlight 0 in Total column before pressing to update>)								
Ranking	3	1	2					

Scoring

Fully Delivers = 3

Mostly Delivers = 2

Delivers to a Limited Extent = 1

Does not Deliver = 0

Will have a negative impact on objective = -1

Recommendation

Using evidence based on the options appraisal and the objectives scoring, clearly articulate the recommended option, showing the best fit against the project's stated objectives, and balancing cost, benefits and risk. Note, if an option fails to deliver any essential objective then it must be discounted as unsuitable. The recommendation should not be made on objectives scoring alone but the table can be used to eliminate those options that score poorly as a first stage, with the second stage being a more detailed analysis of the remaining options. Bear in mind:

- Investment Appraisal
- Assumptions
- Constraints
- Dependencies

The do minimum option is only viable in the short term. That will almost certainly lead to significant building deterioration if that was to become a long-term option. Creating the potential for falling debris and a subsequent health & safety risk to pedestrians. Furthermore, the Council would be failing in its duty to look after a listed building. If in the future the work was eventually to be completed it would cost more due to further deterioration and construction inflation. The scoring reflects that this option is not one that is recommended.

Option 3 is viable and achieves some of the key objectives. However, unless there is a change to service delivery the museum needs to reopen. As such that option can also be discounted

The only viable option is to carry out the work, which will achieve the desired project objectives. Although the cost is significant there is funding available through the Condition & Suitability Programme. Carrying out the work now would be less costly than deferring until some unknown timeline.

Benefits

In the tables below, identify the key benefits the project will deliver.

All benefits need to be measurable, realistic and have a baseline or comparable starting point. These benefits will be monitored during and after the project close to gauge project success and value for money. If a benefit is more subjective, then that should be supported by, for example, staff or customer surveys taken **before and after** the project.

Give an idea of the total financial benefits, if these exist.

List any dis-benefits where appropriate, e.g. the loss of a disposal receipt where it is proposed to utilise a surplus building instead of selling it.

Customer Benefits						
Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Museum reopened	Archway made structurally sound	Structural Engineer	Archway not considered sound	Museum Open	Autumn 2023	Once
	Works completed	Contract Administrator	Work not started	Museum Open	Autumn 2023	Once
	Reopening launch	Media release	Closed	Museum Open	2024	Once
Grade A Listed Building Protected	External Areas assessed as A-Good for condition	Condition Survey	Roof and drainage C:poor	Roof and drainage A:Good	Autumn 2023	Once
	Unsuitable historic repairs removed	Specialist survey	Historic repairs in place	Historic repairs replaced	Autumn 2023	Once

Staff Benefits						
Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
n/a						

Resources Benefits (Financial)

Benefit	Measures	Source	Capital or Revenue?	Baseline (£'000)	Saving (£'000)	Expected Date	Measure Frequency
Reduced ongoing maintenance	Budget spend	Confirm System	Revenue	tbc	tbc	Autumn 2024	Once – After 12 months

Costs

Use the tables below to provide cost information. Costs must include capital investment and where relevant any ongoing revenue costs incurred by the project or as a result of the project.

The source/basis of any estimates should be clearly identified.

Refer to the Government Green Book and the Supplementary Guidance on Optimism Bias for information on determining costs. Outline any assumptions in estimating costs in Section 17, **and** confirm in the Checklist that you have followed this guidance.

[Green Book Supplementary Guidance Optimism Bias](#)

[The Green Book 2022 \(HM Treasury Guidance\)](#)

To improve the design development process for capital projects there is a need to consider full life cycle costs, including maintenance. Therefore, costs should be considered at least over a 5-year period. It is an estimate of the resources and capabilities (people, physical resources, and funding) needed to deliver the project and sustain the benefits. The estimates need to cover both the direct project costs and the ongoing (business as usual) costs for the lifetime over which the benefits are to be considered.

Include information on where the budget will come from.

Full costs breakdown to be included.

Any impact on business as usual or service delivery.

Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Staffing Resources											
n/a											
Land Acquisitions											
n/a											
New Vehicles, Plant or Equipment											
n/a											
Construction Costs											
Construction work	■	■									■
Professional fees	■	■									■
Capital Receipts and Grants											
None – To be reviewed											
Sub-Total	■	■									■

Project Revenue Expenditure & Income											
(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Staffing Resources											
n/a											
Non-Staffing Resources											
n/a											
Revenue Receipts and Grants											
n/a											
Sub-Total											

Post- Project Capital Expenditure & Income											
(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Staffing Resources											
n/a											
Land Acquisitions											
n/a											
New Vehicles, Plant or Equipment											
n/a											
Construction Costs											
n/a											
Capital Receipts and Grants											
n/a											
Sub-Total											

Post- Project Revenue Expenditure & Income											
(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Staffing Resources											
n/a											
Non-Staffing Resources											
n/a											
Revenue Receipts and Grants											
n/a											
Sub-Total											

Key Risks	
Description	Mitigation
Fully explain any significant risks to the project that you are aware of, especially those which could affect the decision on whether and in what form the project goes ahead. Append your full Risk Log if available.	Details of any mitigating action already taken or suggested.
Cost increases	Complete full range of surveys. Include appropriate contingency.
Construction risks to vehicles and pedestrians	Contractor to provide full details of work practices. Checked by Council Officers.

Procurement Approach
If this project will involve the procurement of products or services, describe the approach that will be taken based upon the recommended option. The Design Teams must conduct a check on the Health & Safety track record on tender documentation and submission prior to award and confirm this has been done.
Building Service's are likely to be the lead contractor for the work and discussions are ongoing. Having recently completed works at Provost Skene's House they have direct experience of working on high profile listed buildings.

Time
Time Constraints & Aspirations
Detail any planned or agreed dates, any time constraints on the project or the affected business areas and any other known timescales.
There are no specific timescales but given the issues with the external fabric it would be a case of starting as soon as possible.

Key Milestones	
Description	Target Date
Outline Business Case Approval – City Growth & Resources	September 2022
Statutory consent approvals	October 2022
Full Costed Plan Submitted and Checked	October 2022
Full Business Case Approval – Capital Board	November 2022

Full Business Case Approval – Finance & Resources	December 2022
Contract acceptance and mobilisation	January 2023
Start on site	Spring 2023
Construction Completion	Autumn 2023
Museum reopening	2024

Governance		
Include any plans around the ownership and governance of the project and identify the people in the key project roles in the table below.		
Role	Name	Service
Project Sponsor	Chief Officer Corporate Landlord	Resources – Corporate Landlord
Project Manager	TBC	
Contract Administrator	Architect – Design Team	Resources - Capital
Contract Manager	TBC	Operations & Protective Services – Building Services

Resources			
List the staff resources and expertise required to implement the project. Ensure support services are included, such as Project Management, Legal, Procurement and Communications.			
Task	Responsible Service/Team	Start Date	End Date
Project management	Corporate Landlord	In progress	Autumn 2023
Contract administration	Capital	In progress	Autumn 2023
Cost plan	Building Services	In progress	October 2022
Construction	Building Services	Spring 2023	Autumn 2023
Re-establish museum operations	Gallery & Museums	Autumn 2023	tbc

Environmental Management

Fully explain any impacts the project will have on the environment (this could include, eg, carbon dioxide emissions, waste, water, natural environment, air quality and adaptation). Include both positive and negative effects and how these will be managed. Include details on how this has been assessed, giving an idea of the cost implication if this exists.

Positive

Existing materials and components will be retained as far as possible. With those no longer useable being recycled or responsibly disposed of. Consideration will be given to improving the thermal performance of components. That will be limited by the listed status of the building.

Negative

The construction and refurbishment works will impact in terms of transportation, material creation and waste. This will be considered in the Buildings Checklist and would need to be looked at as part of the contract.

	Yes	No
Is a Buildings Checklist being completed for this project?	<input type="checkbox"/>	<input type="checkbox"/>
If No, what is the reason for this?		
In progress.		

Preserving Our Heritage

Describe fully any impacts the project will have on the heritage of the city or more widely in the region or nationally. This could include but is not exclusive to the following examples:

- Specific historical items of interest;
- Features of significant local or regional importance/interest;
- Granite elements of existing structures.

Include both positive and negative effects and how these will be managed.

Include details on how this has been assessed, giving an idea of the cost implication if this exists.

As an A listed building in a highly visible location this project would contribute significantly to the preserving the City's heritage. This investment would be a long term solution and is anticipated that no major investment to the external areas would be required for decades.

Stakeholders

List the key interested individuals, teams, groups or parties that may be affected by the project or have an interest in it, including those external to the organisation. Show what their interest would be and their level of responsibility. Also note any plans for how they will be engaged including the use of any existing communication channels, forums or mechanisms already in place.

In the event the Business Case projects a total capital expenditure of more than £10 Million, stakeholders should include “ACC Bond Investors” who may require to be communicated with through the London Stock Exchange.

City Growth
Corporate Landlord
Strategic Place Planning
Elected Members
General public
Museum visitors
Historic Environment Scotland
Local heritage societies

Assumptions

Document the high-level assumptions that have been made during the development of the Business Case and any other unanswered questions that may be significant. Refer to the Supplementary Guidance on Optimism Bias and detail the assumptions you have made in constructing the costs and business case.

[Green Book Supplementary Guidance Optimism Bias](#)

The full scope of the work required is a key gap in the information. That will be determined over the coming months and covered within the full business case.

It is assumed that Building Services have capacity to deliver the contract.

Statutory consents will be required. These can take time to be obtained but there is nothing to suggest these would be refused.

Dependencies

Document any projects, initiatives, policies, key decisions or other activities outside the control of the project that need to be considered or which may present a risk to the project's success, or on which this project depends.

The project does not rely on any other projects to be progressed/completed. It will require availability of Building Services and any sub-contractors they appoint.

Constraints

Document any known pressures, limits or restrictions associated with the project.

The demand on the Condition & Suitability Programme outstrips the available budget. Therefore once a budget is finalised a Full Business Case will be required and it will be important that the spending envelope is not broken.

ICT Hardware, Software or Network infrastructure

List any new ICT systems or changes likely as a result of the project. If there are no ICT changes, then record as 'none'.

Description of change to Hardware, Software or Network Infrastructure	Approval Required?	Date Approval Received
n/a		

Change Controls Issued by the Project

Date	Change Ref ID	Approval Route	Change Description
n/a			

Support Services Consulted

The minimum **consultation period for Outline/Full Business Cases is 10 working days** unless the Programme Board Chair agrees there are exceptional circumstances that require a shorter turnaround time.

Note:

It is mandatory for Capital projects to consult with the full list below.

If any services are not consulted, this should be indicated in the Comments section, along with the reason why. All comments received should also be noted, or reasons given for discounting them.

It is a legal requirement for the Council to carry out an [Equality and Human Rights Impact Assessment \(EHRIA\)](#) to evaluate the impact our decisions have on our customers.

Note: There is a copy and paste version of the consultation list below which you can use for circulating your Business Case – [Support Services Consulted Circulation List](#)

Service	Consultee	Comments	Date
Resources	Chief Officer, Finance jbelford@aberdeencity.gov.uk		
Resources	Chief Officer, Corporate Landlord stbooth@aberdeencity.gov.uk	Supportive of recommended option.	08/09/2022
Governance	Chief Officer, Governance frbell@aberdeencity.gov.uk		
Place	Chief Officer, Strategic Place Planning DDunne@aberdeencity.gov.uk		
Place	Chief Officer, City Growth rsweetnam@aberdeencity.gov.uk		
Operations	Chief Officer, Operations and Protective Services mareilly@aberdeencity.gov.uk		
Operations (Facilities)	Andy Campbell, Facilities Manager AnCampbell@aberdeencity.gov.uk	Support recommended option.	02/08/2022
PMO	PMO Programme Manager RMacTaggart@aberdeencity.gov.uk	Comments and amendments entered using track changes. Support recommended option.	2/8/2022
Finance	Scott Paterson, Finance Partner spaterson@aberdeencity.gov.uk		
Asset Management	Alastair Reid, Team Manager alareid@aberdeencity.gov.uk	n/a – Business case author	
Legal (Property/ Planning & Environment)	Ross Campbell/Alan Thomson roscampbell@aberdeencity.gov.uk alathomson@aberdeencity.gov.uk	No comment	
Legal (Commercial & Procurement)	Michele Pittendreigh, Team Leader MPittendreigh@aberdeencity.gov.uk		
Procurement	Boguslawka Symonowicz BSymonowicz@aberdeencity.gov.uk		
ICT – Digital & Technology	Steve Robertson, Digital & Transformation Manager sterobertson@aberdeencity.gov.uk	Not consulted.	
Design – Public Buildings	Neil Esslemont, Team Leader nesslemont@aberdeencity.gov.uk		
Grounds Maintenance	Steven Shaw, Environmental Manager stevens@aberdeencity.gov.uk	Not consulted.	
Communications	TBC		
HR	Lindsay MacInnes, People & OD Manager lmacinnnes@aberdeencity.gov.uk		
Transportation Strategy and Programmes	Joanna Murray, Team Leader joannamurray@aberdeencity.gov.uk	Not consulted.	
Place – TSAP	Nicola Laird, Senior Project Officer NLaird@aberdeencity.gov.uk		
Roads Management	Stuart Allan, Team Leader Technical StuAllan@aberdeencity.gov.uk		

Service	Consultee	Comments	Date
	Vycki Ritson, Team Leader Engineering wrightson@aberdeencity.gov.uk		
Roads Projects	Alan McKay, Team Leader AlanMcKay@aberdeencity.gov.uk	Not consulted.	
Emergency Planning Officer	Fiona Mann FioMann@aberdeencity.gov.uk	Not consulted.	

You can attach a link to your document to the list above but will need to attach a **copy of your document** to the consultees below as the link function doesn't work for generic addresses:

Service	Consultee	Comments	Date
Estates	Property Estates Manager Estates@aberdeencity.gov.uk	Not consulted.	
Environmental Policy	EPConsultations@aberdeencity.gov.uk		
Equalities	Baldeep McGarry/ Faiza Nacef equality_and_diversity@aberdeencity.gov.uk		
Planning	Local Development Plan Team LDP@aberdeencity.gov.uk Development Management PI@aberdeencity.gov.uk	LDP – No comments	15/08/2022

Document Revision History

Version	Reason	By	Date
1	Consultation	A.Reid	29 July 2022
2	Update following consultation	A.Reid	2 Sep 2022
3			

Decision by Capital Board

Decision by Capital Board	Date
Approved	7 Sep 2022

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