A93 Banchory to Aberdeen City Multi-Modal Study - STAG-Based Appraisal

Appendices

Aberdeen City Council

Project number: 60666961

November 2022

Delivering a better world

Appendix A –
Problems, Issues, Constraints and Opportunities Technical Note

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Quality information

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Revision History

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Table of Contents

Figures

Tables

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 A93 corridor from Banchory in Aberdeenshire to South College Street in Aberdeen City.

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 west-east corridor between Corsee Road in Banchory and the Wellington Place/South College Street Junction in Aberdeen City along Station Road, North Deeside Road, Great Western Road, Willowbank Road, Springbank Terrace and Wellington Place. The study corridor is 18 miles (29km) long. The Deeside Way, a long-distance active travel route that runs to the south of the A93 corridor, is also in the vicinity of the study area.

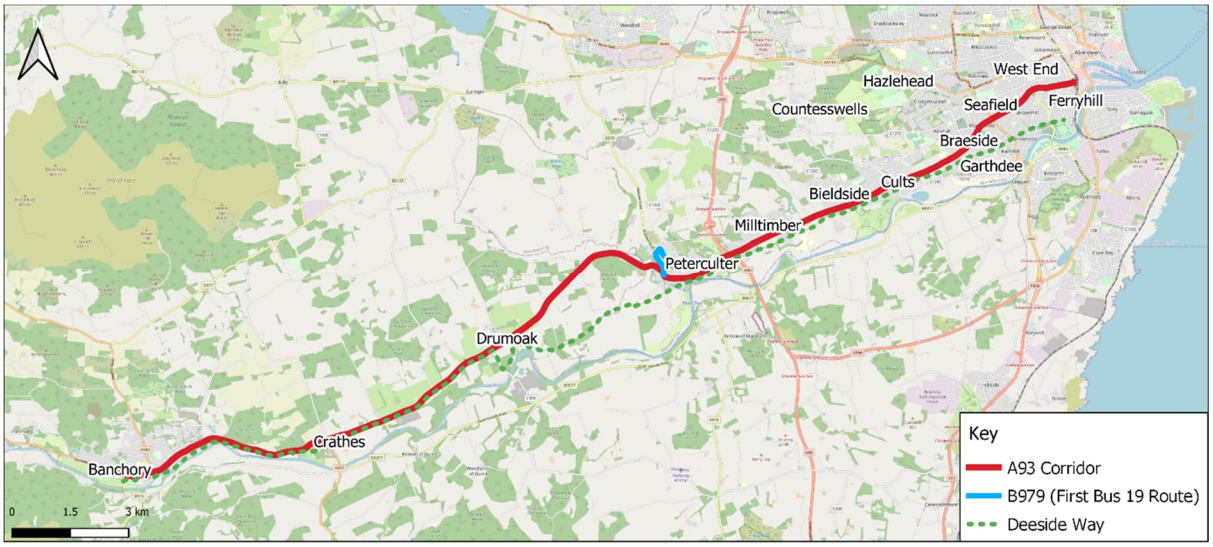


Figure 1.1: Study Area

1.3 Structure of Report

Following this introduction, the remainder of the report is structured as follows:

- **Chapter 2 – Policy Context and Previous Work:** An overview is provided of the background policy context against which this study is being taken forward and provides a summary of previous work undertaken with relevance to the study area.
- **Chapter 3 – Geographic Context:** An overview of the geographic context of the study area.
- **Chapter 4 – Socio-Economic Context:** An overview of the socio-economic context of the study area.
- **Chapter 5 – Baseline Transport Conditions:** A baseline review of transport conditions on the Banchory to Aberdeen City corridor, drawing on the findings of analysis of active travel and traffic count data.
- **Chapter 6 – Planning Context:** A baseline review of development allocations and planning applications on the Banchory to Aberdeen City corridor.
- **Chapter 7 – Environmental Context:** A baseline review of the environmental context of the Banchory to Aberdeen City corridor.
- **Chapter 8 – Stakeholder Consultation:** An overview of the approach to the initial stage of consultation and a summary of the key findings.
- **Chapter 9 – Problems and Opportunities:** Drawing on the findings from the baseline review, detail is provided on the identified problems that should be addressed along the study corridor, with consideration also given to issues, constraints and opportunities in the study area.

- **Chapter 10 – Summary:** A summary of the work that has been completed during the Problems and Opportunities work package.

The following appendices support the report:

- **Appendix A** – Journey Time Analysis;
- **Appendix B** – Road Safety Incident Plans;
- **Appendix C** – Environmental Constraints Mapping;
- **Appendix D** – Study Tour Findings Note; and
- **Appendix E** – Aberdeenshire Councillors Study Tour Findings Note.

2. Policy Context and Previous Work

2.1 Introduction

This chapter presents an overview of the background to this study, including the policy context against which this study is being taken forward and provides a summary of previous work undertaken in the study area, drawing on key outcomes of relevance to the study.

2.2 Policy Context

This section provides an overview of local, regional, and national 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 map[4] 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 in the coming months. 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 tailpipe[7]. In November 2021, the UK Government subsequently announced that all heavy goods vehicles in the UK will be zero-emission by 2040[8].

A wider range of national policy and guidance, covering active travel and bus, provides direction on national aspirations for increasing the mode 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

[1] https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf
[2] https://sp-bpr-en-prod-cdnep.azureedge.net/published/2021/1/12/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

and 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 spilt. The RTS identifies a range of associated polices 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 (2020)**[14] and the **Aberdeen City Proposed Local Development Plan (2020)**[15] identify opportunities for significant development within the study area. Both plans combined have allocated land for approximately 2,000 homes in addition to land allocations for business and retail along the corridor. The **Nestrans Active Travel Action Plan (2014-2035)**[16] identifies the Deeside Corridor: Aberdeen to Banchory and Cairngorms National Park, as one of several strategic active travel corridors in the region.

Recently, there has also been renewed impetus given to the improvement of bus services in the region following the establishment of the **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 Bains 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.

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 Aberdeen Western Peripheral Route (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. 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

[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/AcTrAP_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/2374/2012finallts.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
[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

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 below and includes the eastern extent of the study corridor via Willowbank Road, Springbank Terrace and Wellington Place[27]. An updated **Active Travel Action Plan** for 2021-2026[28] was approved at ACC's City Growth and Resources Committee in February 2021.

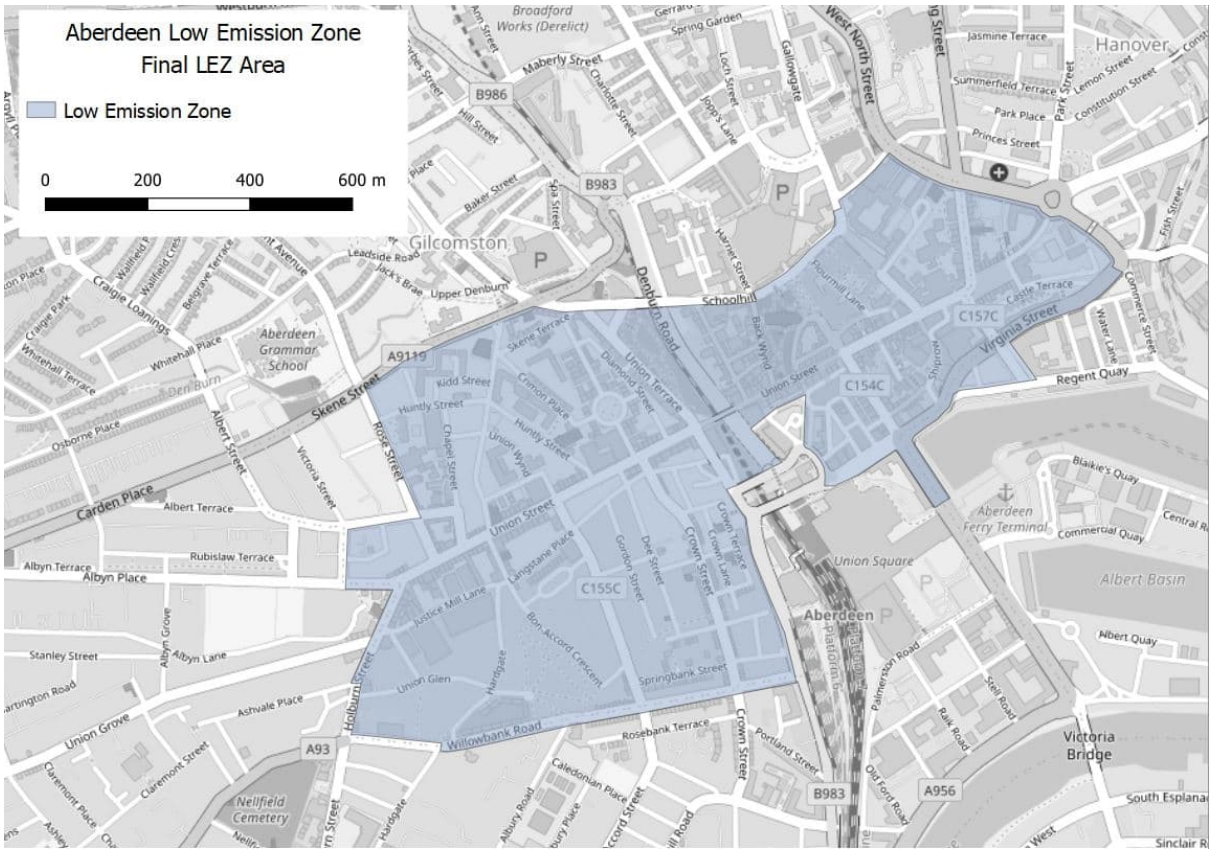


Figure 2.1: Aberdeen's LEZ Area

The policy review presented above and in **Figure 2.2** overleaf enables a number of 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 A93 corridor strongly aligns with the national, regional, and local policy context.

[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/

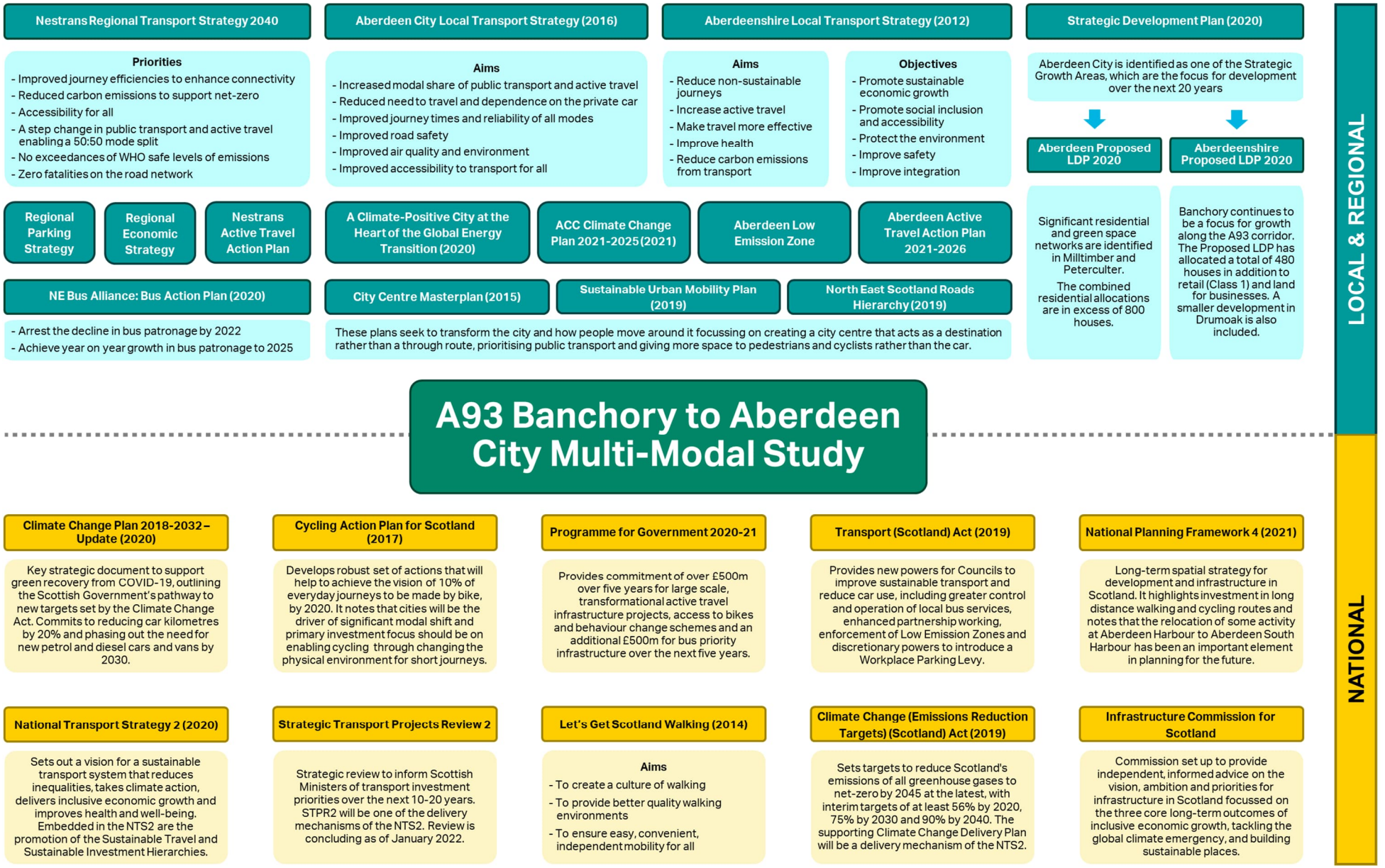


Figure 2.2: Overview of Policy Context

2.3 Previous Studies

A review of previous studies has been undertaken, with the key findings presented below.

Optimising the Benefits of the AWPR (2008)

- Study undertaken prior to the opening of the AWPR that identifies transport initiatives that could be progressed to 'lock in' the benefits provided by the AWPR and create a more sustainable transport network throughout the region.
- The study outlines the potential for provision of an eastbound bus or bus/trial high occupancy vehicle lane extending from Peterculter to Holburn Street, with junction priority at signals. To accommodate a bus priority lane, it is likely that some sections of on-street parking would require removal.
- A cycle route is proposed along the same route as the bus priority lane, which the study notes could make use of the existing small sections of cycle lane and linking to new sections of cycle lane to provide a continuous route along the corridor.
- The study additionally proposes an Urban Streetscape Study for Peterculter.

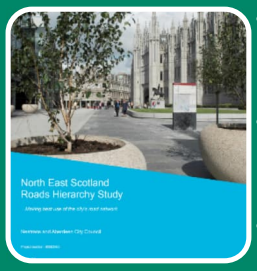
Living Streets Audit of Banchory (2018)

- Undertaken to identify assets and barriers to walking around Banchory and identifying te top priorities for change.
- Barriers to walking include high levels of traffic on the High Street and traffic parking on double yellow lines; parking layout at Burnett Arms where vehicles drive across the footway to access parking spaces; a lack of time for the pedestrian green phase at the junction with Dee Street; crossing Mount Street can be difficult due to a lack of dropped kerbs, poor sight lines and taxis using the junction for u-turns; and many advertising boards along the length of the High Street causing obstructions or trip hazards for the visually impaired.

Cumulative Transport Appraisal (2019)

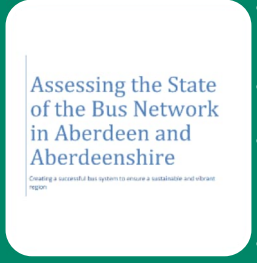
- Undertaken to identify the cumulative impacts and constraints on the transport network resulting from the Strategic Development Plan.
- Considers the impact of different packages of interventions relative to a 'Test Case', which includes development proposals to 2035/37 alongside transport schemes across the region.
- Package 1 includes orbital bus services, bus priority, behaviour initiatives, traffic signals optimisation and Package 3 includes further junction upgrades.
- In terms of time lost due to congestion, Package 1 results in a 10% benefit in the AM and 22% benefit in the PM; Package 3 results in a 15% increase in the AM but a 29% benefit in the PM.

North East of Scotland Roads Hierarchy Study (2019)



- Undertaken to develop options for 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.
- The A93 remains a priority route to its junction with Holburn Street. Priority routes are the main movement corridors linking the AWPR to key destinations and should be considered for the provision of bus lanes and segregated cycle lanes where possible, with bus and cycle priority through junctions.
- Between Holburn Street and South College Street, the corridor is redesignated as a tertiary route. These are local access roads with little strategic function and as such, are unsuitable for large volumes of traffic.

Assessing the State of the Bus Network (2019)



- Undertaken to provide a baseline from which to identify priorities and develop corridor-specific action plans to achieve the objectives of the North East Bus Alliance.
- The report identifies the Great Western Road Junction with Anderson Drive as a priority junction for improvement, noting that traffic light priority is required.
- The report notes that whilst progress has been made towards improvements in infrastructure and vehicle stock, bus journey times continue to increase and bus patronage continues to decrease because bus is not seen as a competitive or attractive alternative to the private car.
- Large bus journey time increases on A93 corridor between 2006 and 2019 - up to 17% from Banchory to Aberdeen and up to 39% from Peterculter to the city centre.

Figure 2.3: Overview of Previous Studies

3. Geographic Context

As set out in **Chapter 1**, the study area encompasses the A93 corridor between Banchory in Aberdeenshire and South College Street in Aberdeen City. An overview of the key settlements located along the corridor are summarised as follows:

- **Banchory** is situated in Aberdeenshire, approximately 18 miles west of the city centre. The population was estimated to be 7,204[29] in 2020. In addition to the A93, other road links include the A980 to Torphins, the B977 and B9125 to Garlogie and the B974 south to Fettercairn. The majority of residential areas and services are located to the north of the A93. There are two primary schools (Banchory Primary and Hill of Banchory Primary) and one secondary school (Banchory Academy) located in the town. Banchory has a busy town centre with shops, restaurants, and hotels. There are a number of off-street car parks within the town centre and on-street parking along the High Street. Local buses serve the community, including regular connections to Aberdeen.
- **Crathes** is situated in Aberdeenshire, approximately 14 miles west of the city centre. It had an estimated population of 1,048 in 2020. In addition to the A93, other road links include the A957 Slug Road to Stonehaven. In recent years, 45 homes have been built in Crathes between the A93 and the River Dee. There is a community desire for the hall in Crathes and associated parking facilities to be conserved for community use and for the establishment of a potential mini-Park and Ride (P&R) site. Crathes Primary School is located 2 miles north of the A93 and is within the catchment area for Banchory Academy.
- **Drumoak** is situated in Aberdeenshire, approximately 11 miles west of the city centre. It had an estimated population of 815 in 2020. Park Bridge, which previously facilitated a link between the A93 and the B9077 across the River Dee at Drumoak, was closed to traffic in early 2019. A community group has since been established campaigning for the reinstatement of the bridge for use by vehicles. Drumoak School is located in the north of the village and is within the catchment area for Banchory Academy.
- **Peterculter** is situated in Aberdeen City, approximately 7 miles west of the city centre. The population was estimated to be 4,763 in 2020. The Deeside Junction to the east of Peterculter provides a strategic linkage to the AWPR, offering connections south to Stonehaven, Perth, and Dundee and to the A90(T) north of Aberdeen. There is one primary school (Culter School) located in the north of the village and Linn Moor Residential School and Campus, which provides specialist education and transitioning care for children and young people living with complex and additional support needs. The village is within the catchment area for Cults Academy. Culter has a busy village centre with shops, pubs, and cafes. There are sections of on-street parking on the A93 throughout the village.
- **Milltimber** is situated in Aberdeen City, approximately 5 miles west of the city centre. It had an estimated population of 3,702 in 2020. The majority of residential areas are located to the north of the A93, as is Milltimber School, the primary school located within the village. The village is within the catchment area for Cults Academy.
- **Bieldside** is situated in Aberdeen City, approximately 4 miles west of the city centre. It had an estimated population of 4,449 in 2020. The majority of residential areas are located to the north of the A93. There is a row of four shops in the village centre, with on-street parking available for approximately 10 cars. There are no public schools in Bieldside, however, Camphill School is located to the south of the A93, which is run by an independent charity supporting children and young people with additional support needs.
- **Cults** is situated in Aberdeen City, approximately 3 miles west of the city centre. The population was estimated to be 3,931 in 2020. There is one primary school (Cults School) and one secondary school (Cults Academy) in Cults, which is the main secondary school for young people living within the sections of the study area within the Aberdeen City boundary. Cults has a busy village centre with shops, cafes, and a hotel/restaurant. There is on-street parking along the south side of the carriageway throughout the village centre.
- **Braeside, Mannofield, Broomhill and Seafield** is a neighbourhood area to the west of the city centre in Aberdeen. The population was estimated to be 13,557 in 2020. The A93 extends through the middle of this neighbourhood area, with Braeside and Seafield located to the north of the A93 and Mannofield and Broomhill located to the south. With the exception of a row of shops on the A93 through Mannofield, this section of the study corridor is largely residential. Schools within this area include Aberdeen International School, Airyhall Primary School, Broomhill Nursery and Primary School, and Ashley Road Primary School. The majority of this

[29] All population figures are based on mid-2020 small area population estimates from National Records of Scotland: 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

area is within the secondary school catchment area for Harlaw Academy; however, pupils may also attend Hazlehead Academy or Aberdeen Grammar School.

- **Garthdee** is situated in Aberdeen, approximately 2 miles south-west of the city centre. It had an estimated population of 5,610 in 2020. Garthdee is connected to the A93 via three separate road links – Anderson Drive (A92) at Great Western Road; Pitfodels Station Road; and Westerton Road to the east of Cults. As part of a planning application to the east of Cults, there are plans to implement a new link road between the A93 and Garthdee. There is one primary school in Garthdee (Kaimhill School), which is within the catchment area for Harlaw Academy. Robert Gordon University Campus is also located within the Garthdee area.

The settlements discussed above are shown in **Figure 3.1** below.

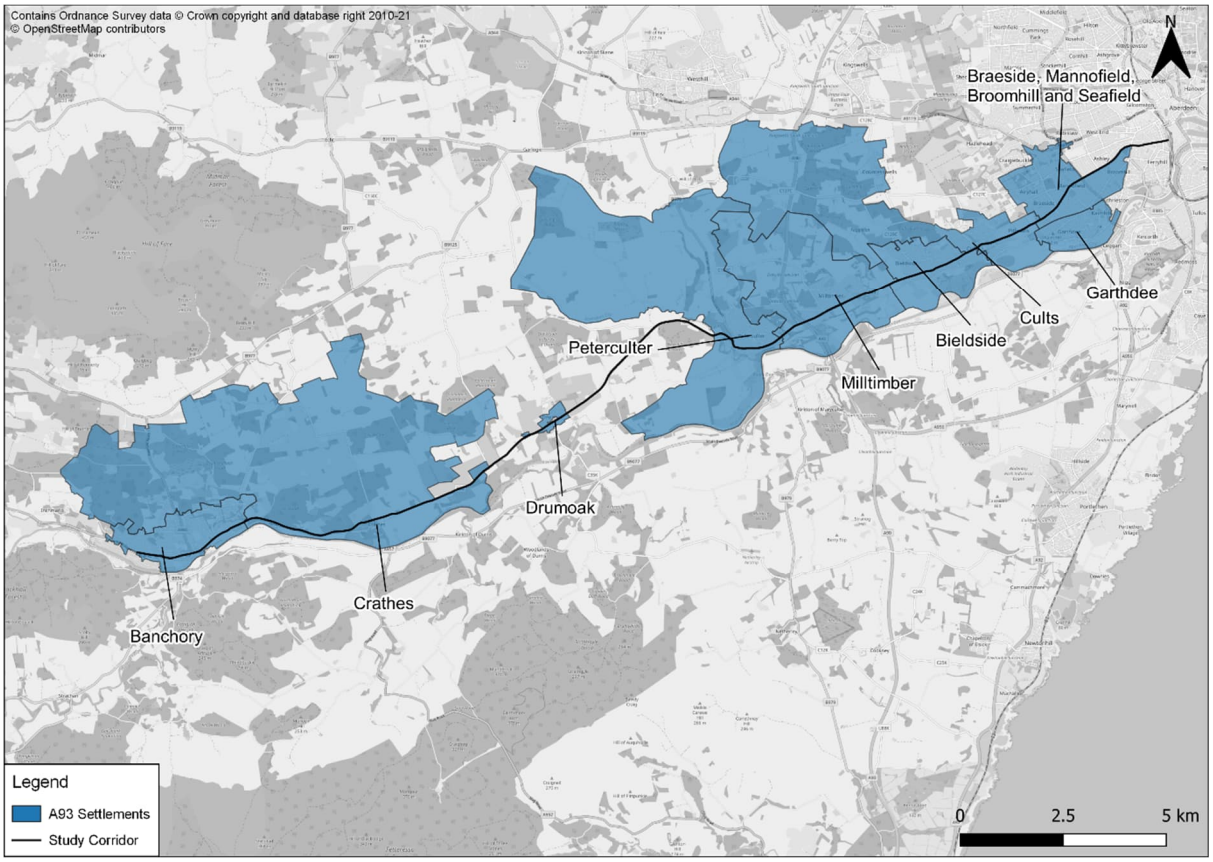


Figure 3.1: A93 Key Settlements

4. Socio-Economic Context

4.1 Introduction

This section outlines the demographic profile of the study area and discusses key indicators including population, employment, car availability, deprivation and health.

4.2 Population

The table below shows the population of the key settlements in the study area between 2001 and 2020.

Table 4.1: Population of Key Settlements (National Records of Scotland Population Estimates)

Settlement	2001	2011	2020	Change (2001-2020)
Banchory	6,117	7,175	7,024	15%
Crathes	593	718	1,048	77%
Drumoak	717	851	815	14%
Peterculter	4,914	4,827	4,763	-3%
Milltimber	2,998	2,987	3,702	24%
Bieldside	4,017	3,960	4,449	11%
Cults	2,932	3,199	3,931	34%
Braeside, Mannofield, Broomhill & Seafield	12,193	12,830	13,557	11%
Garthdee	5,234	5,173	5,610	7%
Aberdeen City	211,910	222,460	229,060	8%
Aberdeenshire	226,940	253,650	260,780	15%
Scotland	5,064,200	5,299,900	5,466,000	8%

- There has been an increase in population for the majority of the key settlements between 2001 and 2020. Population increase was particularly notable in Crathes, where a 77% increase was observed. This is likely due to the housing that has been built in the village in recent years.
- Peterculter was the only settlement along the corridor that saw a population decline between 2001 and 2020 (-3%).
- 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%).

4.3 Age Profile

The population age structure of the principal settlements located along the study corridor is shown below.

Table 4.2: Age Structure of Key Settlements (NRS 2020 Mid-Year Estimates)

Settlement	15 and Under	Working Age	65+
Banchory	19%	58%	23%
Crathes	26%	58%	15%
Drumoak	17%	57%	27%
Peterculter	16%	62%	22%
Milltimber	18%	60%	22%
Bieldside	19%	59%	21%
Cults	21%	61%	18%
Braeside, Mannofield, Broomhill & Seafield	15%	63%	22%
Garthdee	15%	70%	14%
Aberdeen City	16%	68%	16%
Aberdeenshire	19%	61%	20%
Scotland	17%	64%	19%

- There is generally an older population in settlements along the corridor relative to the Aberdeen City and Aberdeenshire averages for those aged 65 and over. This is with the exception of Crathes in Aberdeenshire, where 85% of people are younger than 65, perhaps indicating that the housing built in this location has been occupied by younger people and families. Garthdee in Aberdeen City also has a lower proportion of older people (14% aged 65 and over).

4.4 Employment

4.4.1 Economic Activity

The diagram below shows economic activity in the key settlements in the study area.

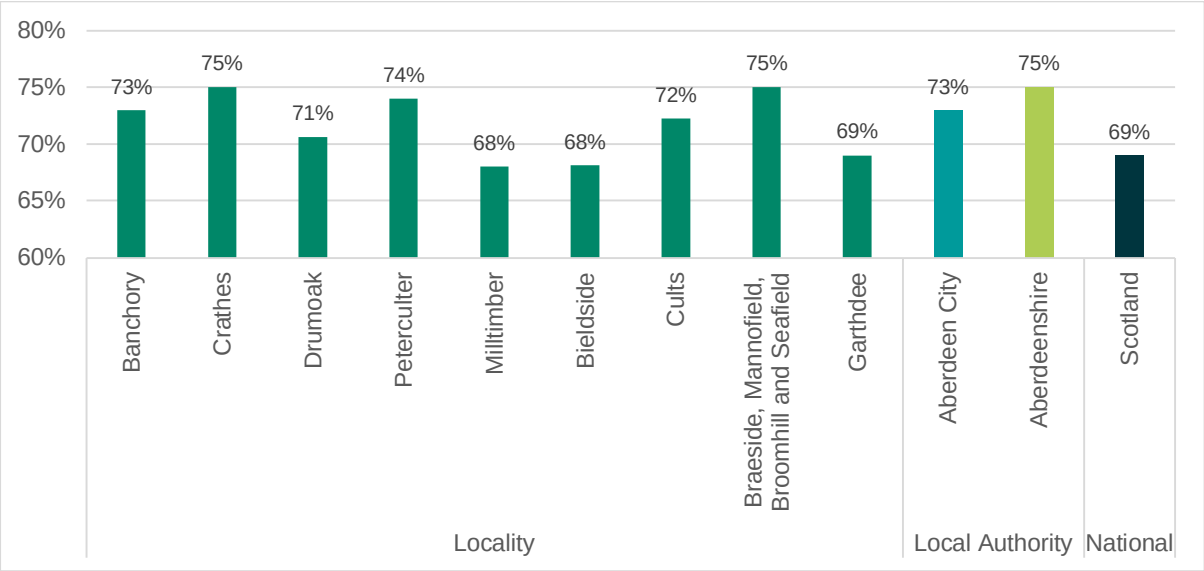


Figure 4.1: Economic Activity (Census 2011)

- Economic activity in settlements along the corridor is generally lower than the Aberdeen City and Aberdeenshire averages, particularly in Milltimber and Bieldside. This may be associated with a higher proportion of retired people based on the age structures discussed above.
- Braeside, Mannofield, Broomhill & Seafield (75%) is the only settlement in Aberdeen to have a higher rate of economic activity than the Aberdeen average (73%), whilst Crathes is the only settlement in Aberdeenshire to equal the Aberdeenshire average for economic activity (75%).

4.4.2 Unemployment

The diagram below shows the unemployment rate in the key settlements in the study area.

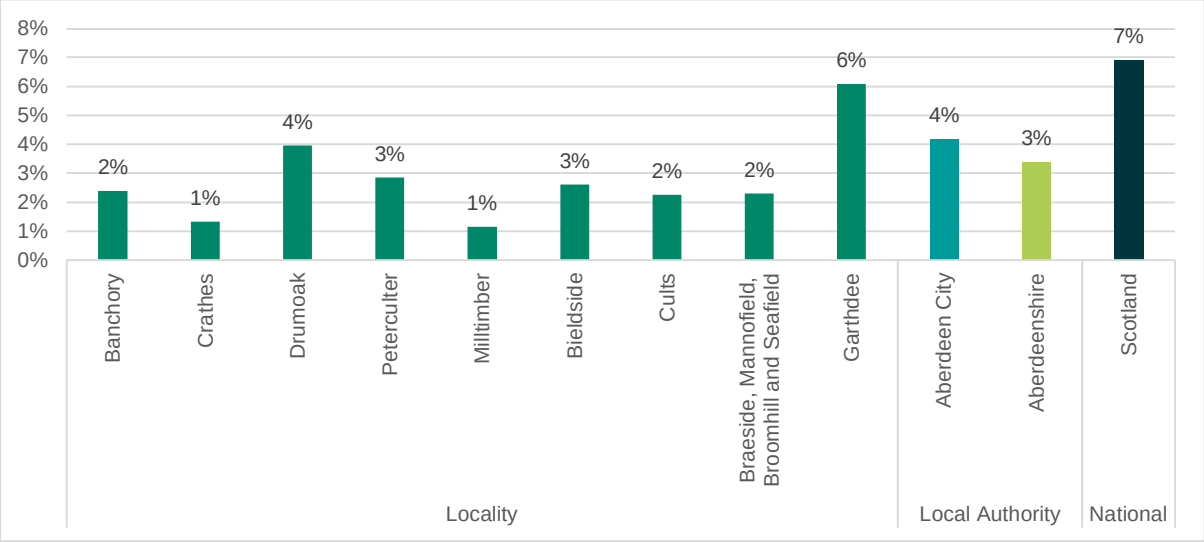


Figure 4.2: Unemployment Rate (Census 2011)

- Unemployment rates are low within the study area, with the majority of settlements equal to or below the respective Aberdeen or Aberdeenshire averages (4% and 3%). Drumoak has a slightly higher unemployment rate (4%) compared to the Aberdeenshire average of 3%.
- The unemployment rate in Garthdee (6%) is above the Aberdeen City average but remains lower than the national average of 7%.

4.4.3 Industry

The diagram below shows employment by industry within the key settlements in the study area.

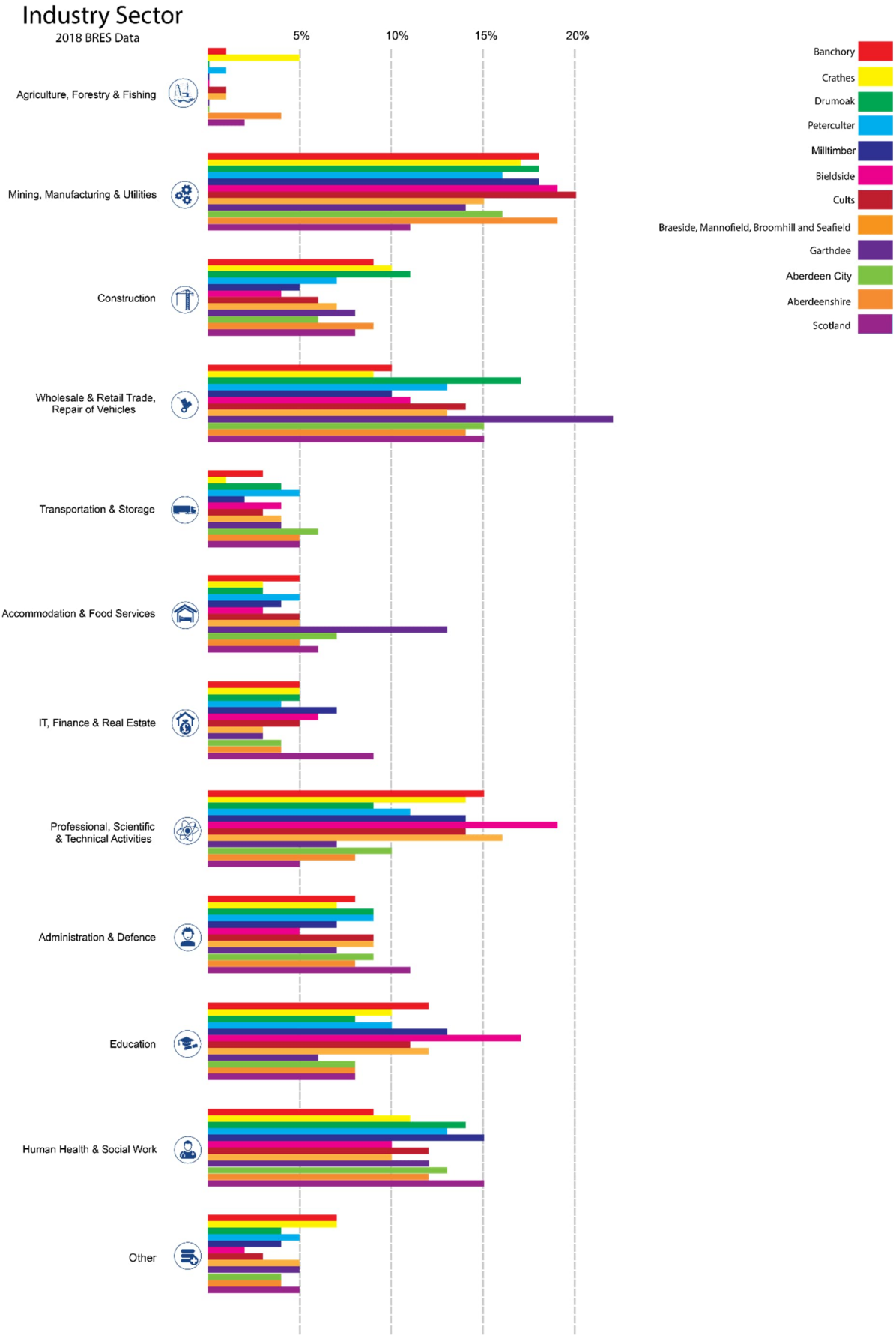


Figure 4.3: Employment by Industry

- Crathes has a higher proportion of those employed in Agriculture, Forestry and Fishing (5%) than the other study area settlements and the average for Aberdeenshire and Scotland.
- There is a higher proportion of those employed in Mining, Manufacturing and Utilities within the study area compared with the average for Scotland. This is particularly notable in Milltimber, Bieldside and Cults.
- There is generally a lower proportion of those employed in Construction within the Aberdeen City settlements in the study area compared to Aberdeenshire settlements and the national average. This is with the exception of Garthdee, which is in line with the national average.
- A high proportion of those employed in Garthdee are employed in the Wholesale and Retail Trade, Repair of Vehicles sector, with approximately 23% employed compared to the national average of 15%.
- There is a lower proportion of those employed in IT, Finance and Real Estate within the study area compared with the national average.
- The study area has a significantly higher proportion of those employed in Professional, Scientific and Technical Activities compared to the national average. For example, Bieldside has approximately 19% employed in this sector compared to a national average of 5%.
- The study area has a lower proportion of people employed in Human Health and Social Work compared to the national average.

4.5 Car/Van Availability

The diagram below illustrates the availability of cars or vans in the key settlements in the study area.

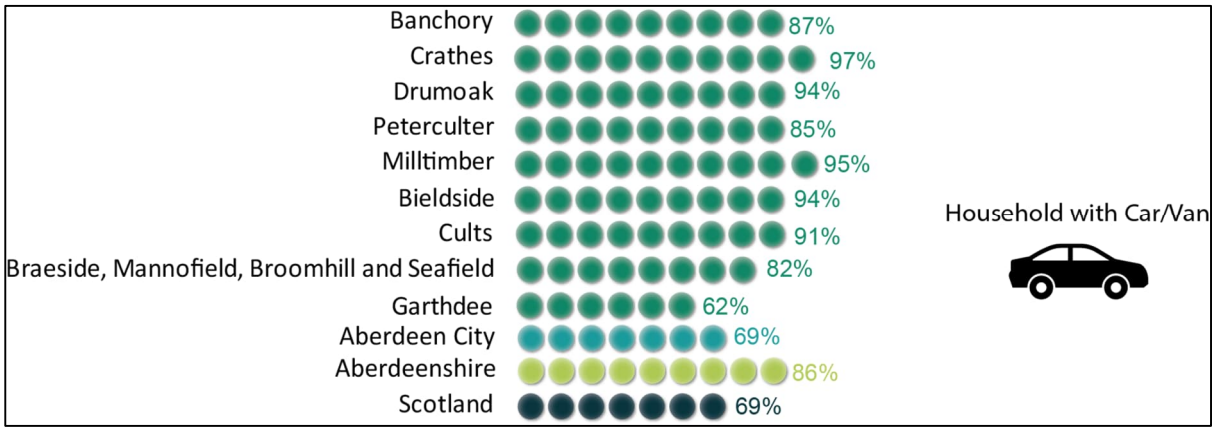


Figure 4.4: Car/Van Availability in the Key Settlements (Census 2011)

- There is very high car/van availability in each of the key settlements within the Aberdeenshire section of the corridor relative to the national average of 69%. It is particularly high in Crathes (97%) and Drumoak (94%); car/van availability in Banchory is 87%, which is slightly higher than the average for Aberdeenshire (86%).
- Car/van availability in Aberdeen City is in line with the national average of 69%. With the exception of Garthdee where 62% of households have access to at least one car/van, car/van availability is very high in the other key settlements along the study corridor within Aberdeen City. Households with access to at least one car/van is especially high in Milltimber (95%), Bieldside (94%) and Cults (91%).

4.6 Scottish Index of Multiple Deprivation

The Scottish Index of Multiple Deprivation (SIMD) identifies small area concentrations of multiple deprivation across all of Scotland in a consistent way. In the diagram below, the most deprived areas within the study area are shown in red and the least deprived areas are shown in blue.

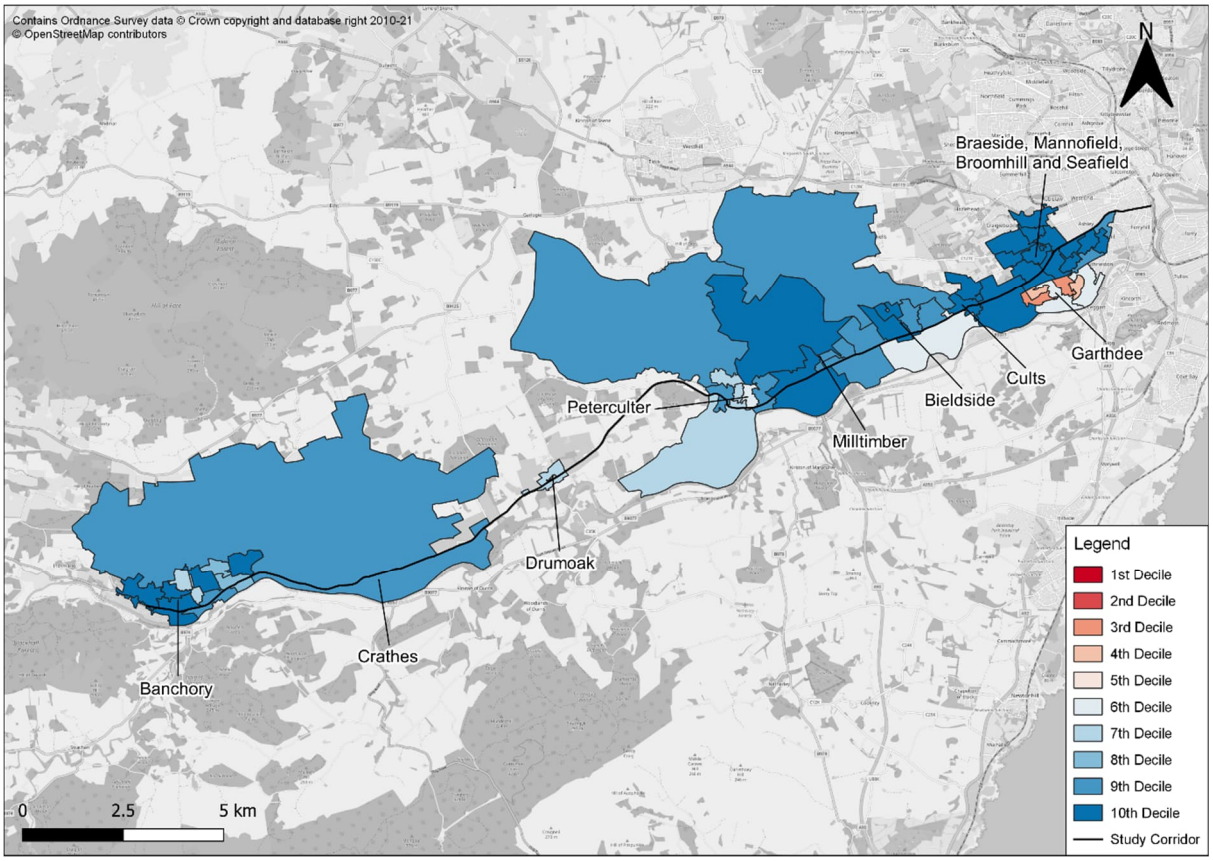


Figure 4.5: Scottish Index of Multiple Deprivation (2020)

- Nearly half of data zones (47%) making up the A93 study area are in the top 10% least deprived in Scotland.
- No data zones in the study area are in the top 20% most deprived in Scotland. There are 4 data zones (8%) in the top 50% most deprived in Scotland. These are concentrated in Garthdee.

4.7 Transport Poverty

Based on the 2016 'Transport Poverty in Scotland' report by Sustrans, data relating to household income and public transport travel time from the SIMD were used in conjunction with car/van availability from the 2011 Census and bus accessibility statistics to allocate a risk score to each data zone in Scotland. The diagram below provides an overview of the methodology[30] applied by Sustrans.

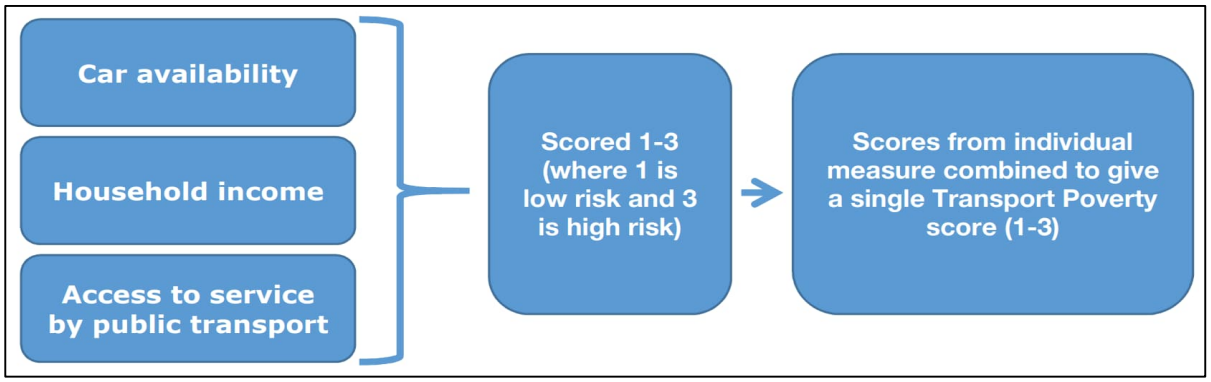


Figure 4.6: Transport Poverty Methodology[31]

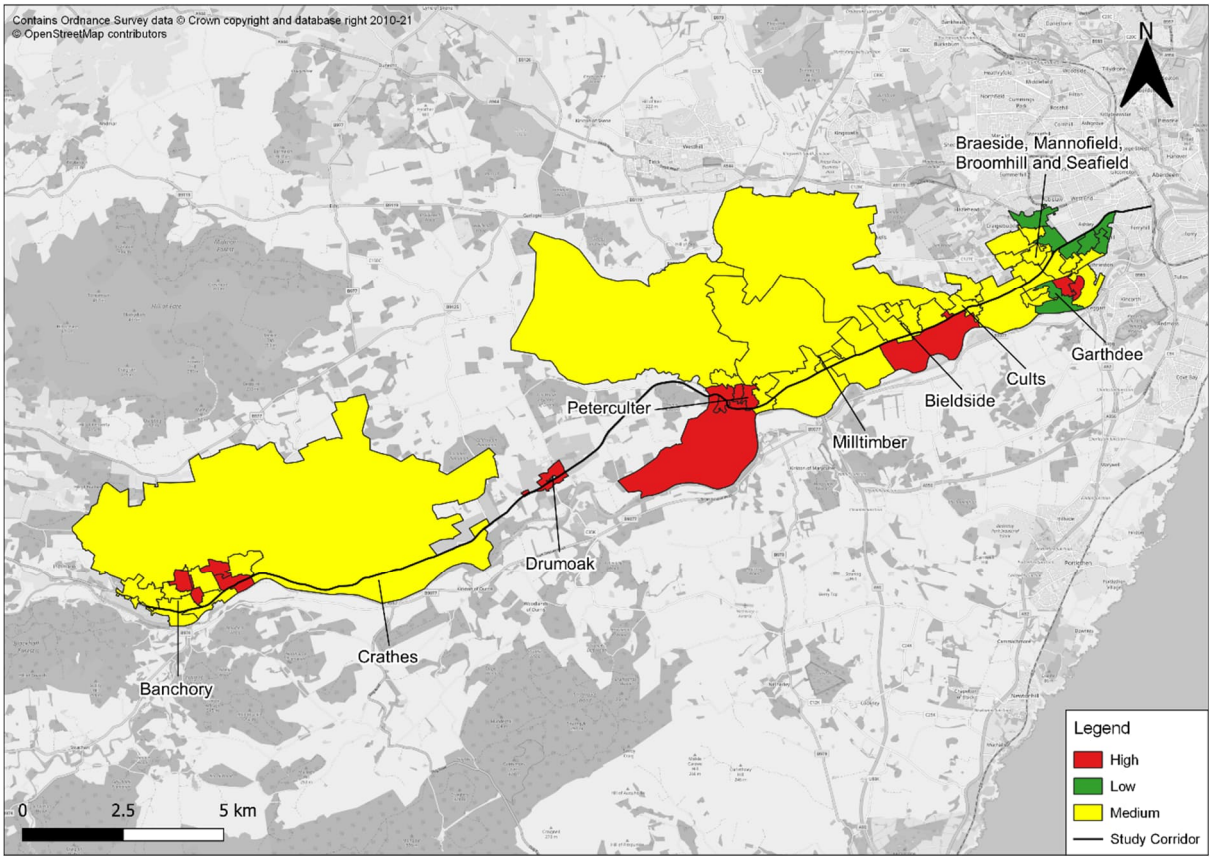


Figure 4.7: Risk of Transport Poverty along Study Corridor

- Within Aberdeenshire, communities are generally identified to be at a medium risk of transport poverty. This is with the exception of some small sections within Banchory and Drumoak, which are identified to be at a high risk of transport poverty.
- The majority of communities within Aberdeen City are identified to be at medium risk of transport poverty, though southern sections of Peterculter and Cults are identified to be at high risk of transport poverty. Garthdee has a varied risk of transport poverty. There is low risk of transport poverty in the eastern section of the corridor.

[30] It should be noted that while the original work undertaken by Sustrans was based on SIMD 2012, SIMD 2020 has been used for the purposes of this study. Similarly, the original Sustrans approach used the frequency of public transport services to assess the access to services by public transport. This study has used the Scottish Government's Scottish Access to Bus Indicator (SABI) dataset, which provides a score for the accessibility of bus services in each data zone and provides an objective measure of accessibility to public transport by bus in Scotland. The latest SABI dataset (2019) has been used for the purposes of this study.

[31] https://www.sustrans.org.uk/media/2880/transport_poverty_in_scotland_2016.pdf

4.8 Healthy and Physical Activity

The diagram below shows the quality of general health of the population in each of the key settlements.

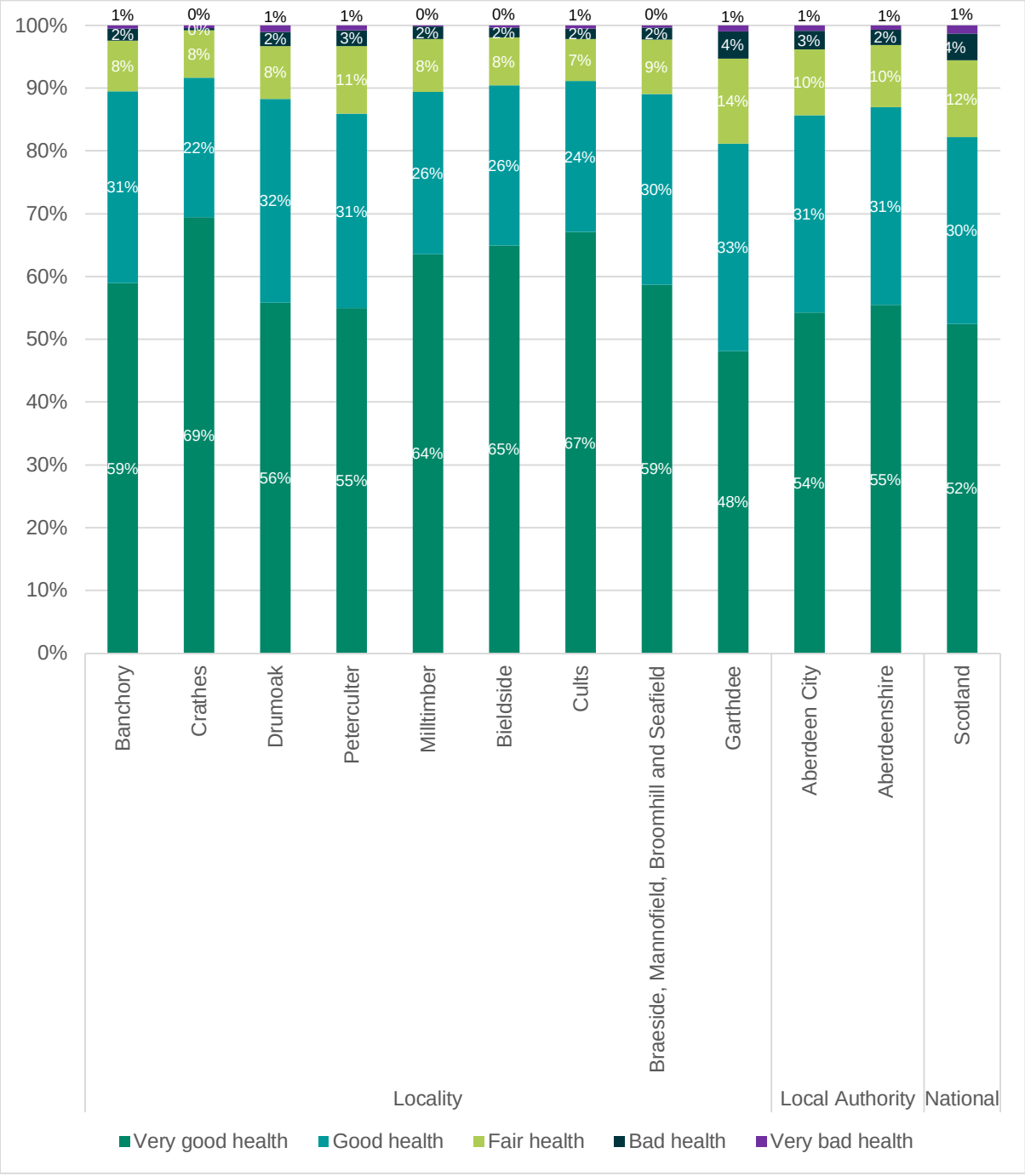


Figure 4.8: General Health (Census 2011)

- General health is shown to be good in the study area, with between 86% and 91% reporting very good or good health across the majority of settlements along the study corridor. This is higher than the average for Aberdeen City (85%), equal with the average for Aberdeenshire (86%) and higher than the average for Scotland (82%).
- This is with the exception of Garthdee, where 81% reported very good or good health. This is slightly lower than the average for Scotland (82%).

The diagram below shows the level of limitation experienced due to a long-term health problem or disability in each of the key settlements.

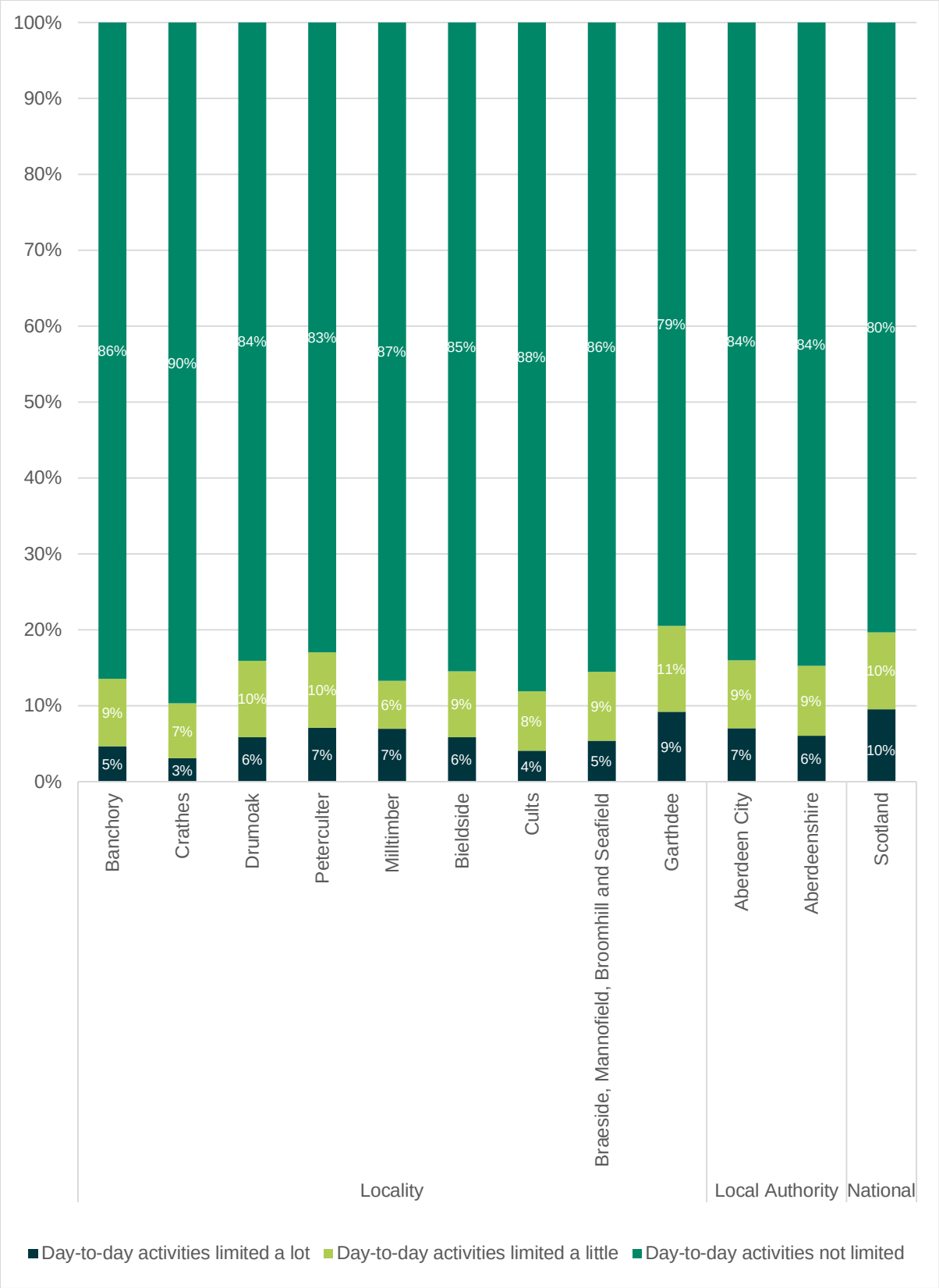


Figure 4.9: Long-Term Health Problem or Disability (Census 2011)

- The proportion of those limited (to some extent) by a long-term health problem or disability is relatively low in the study area, with between 10% and 17% reporting some level of limitation across the Aberdeenshire and the majority of Aberdeen City settlements. Garthdee is slightly higher, with 20% reporting some level of limitation, which is in line with the average for Scotland.

5. Baseline Transport Conditions

5.1 Origin Destination Analysis

This section outlines travel to work destination information for the key settlements along the corridor based on information from the 2011 census. It should be noted that travel patterns are likely to have changed since the data was collected, particularly since the onset of the COVID-19 pandemic in March 2020. Nevertheless, the information provided in the following sections facilitates understanding of typical movements along the A93 corridor.

5.1.1 Banchory

The travel to work destinations of those with an origin of Banchory are shown below.

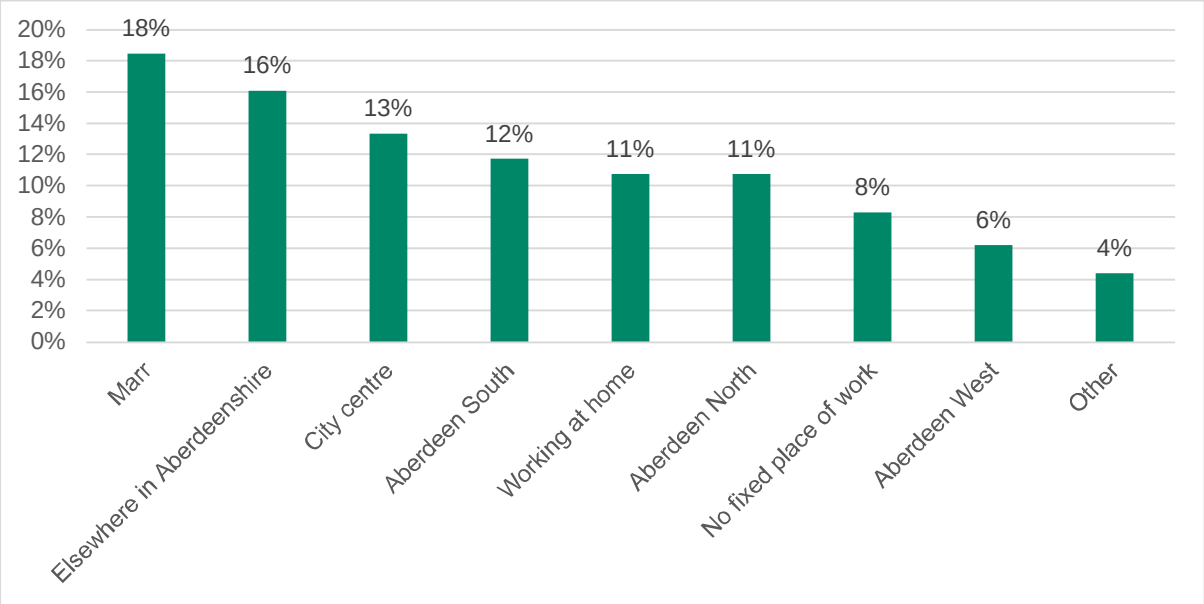


Figure 5.1: Banchory Travel to Work Destinations (Census 2011)

- Marr is the most common destination for work for people in Banchory, the majority of which is people travelling to work within Banchory itself (13%).
- The next most common destinations are other areas of Aberdeenshire – Kincardine and Mearns (11%), Garioch (4%) and Formartine (1%), with the other areas being the destination for less than 1% of people.
- Areas of Aberdeen are other common destinations, particularly the city centre (13%), Aberdeen South (12%) and Aberdeen North (11%).
- In 2011, 11% of people indicated that they worked from home.

5.1.2 Crathes and Torphins

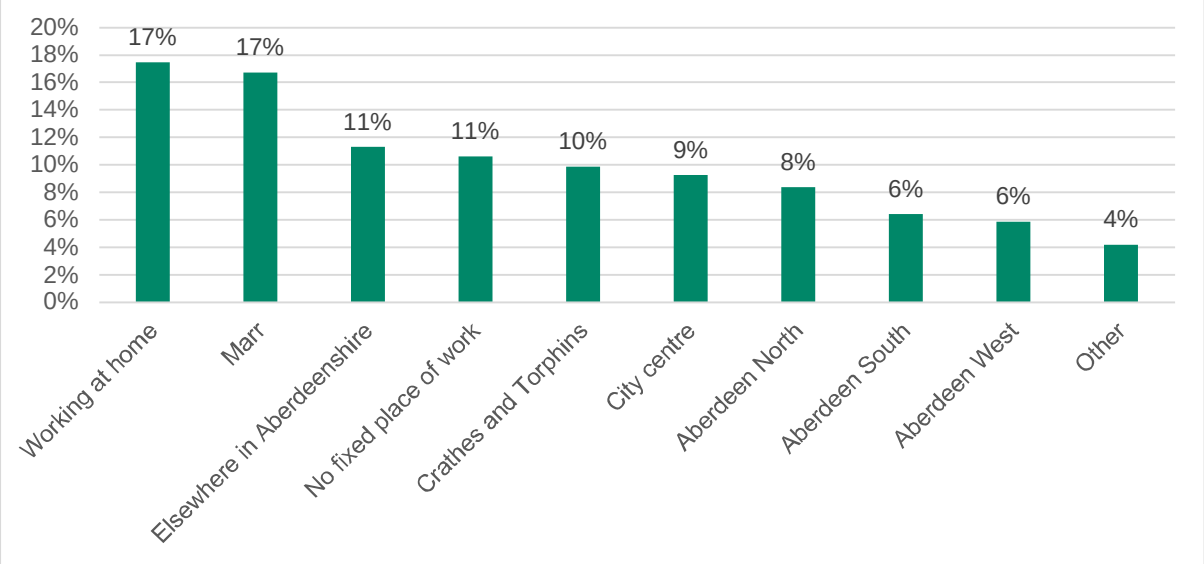


Figure 5.2: Crathes and Torphins Travel to Work Destinations (Census 2011)

- Working at home was the highest response category for those in Crathes and Torphins (17%).
- Marr is the most common destination for work for people in Crathes and Torphins (17%), including 10% travelling to work in Banchory.
- The next most common destinations are other areas of Aberdeenshire – Garioch (6%), Kincardine and Mearns (4%) and Buchan; Formartine; and Banff and Buchan (1%).
- 10% of people travelling to work from Crathes and Torphins remain within the area.
- 29% of people travel to work somewhere in Aberdeen, including 9% to the city centre, 8% to Aberdeen North and 6% to Aberdeen South and Aberdeen West.

5.1.3 Dunecht, Durris and Drumoak

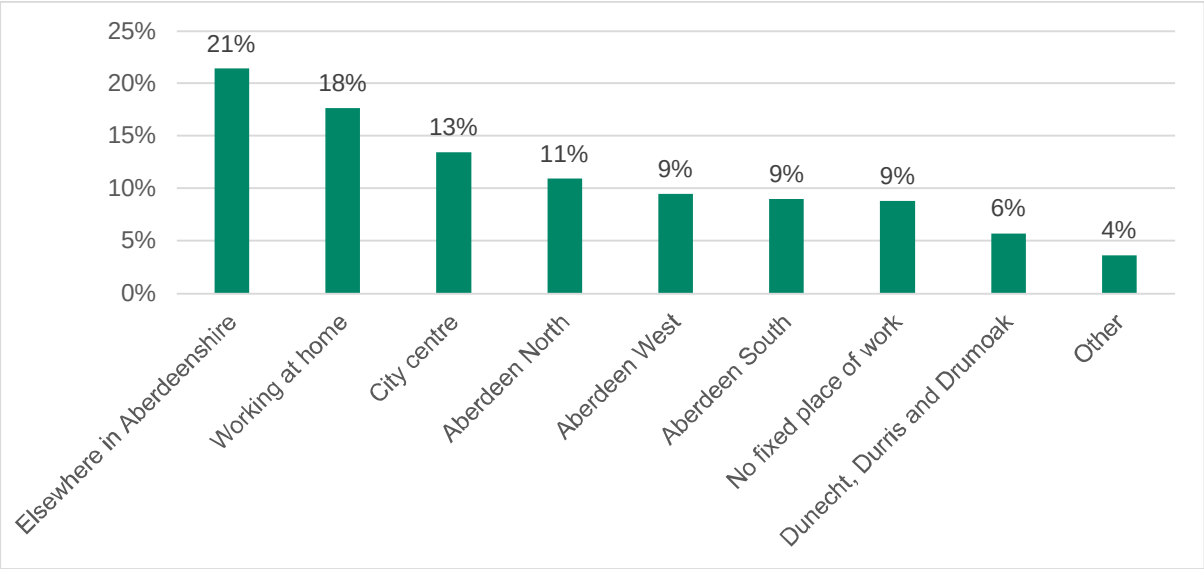


Figure 5.3: Dunecht, Durris and Drumoak Travel to Work Destinations (Census 2011)

- The most common travel to work destinations for those in Dunecht, Durris and Drumoak are areas of Aberdeenshire – Garioch (9%), Marr (7%), Kincardine and Mearns (3%) and Banff and Buchan; Formartine; and Buchan (1%).
- In 2011, 18% of people indicated that they worked from home.
- 42% of people travel to work somewhere in Aberdeen, including 13% to the city centre, 11% to Aberdeen North and 9% to Aberdeen South and West.

5.1.4 Peterculter

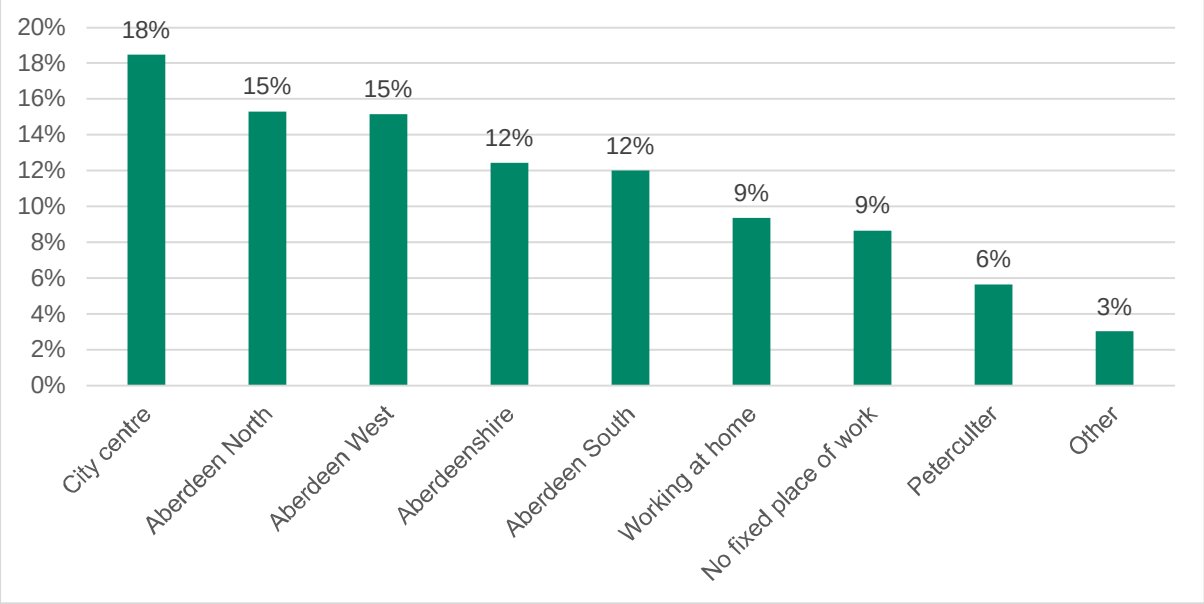


Figure 5.4: Peterculter Travel to Work Destinations (Census 2011)

- The majority of those travelling to work from Peterculter travel to somewhere within Aberdeen City – 18% to the city centre, 15% to Aberdeen North and Aberdeen West, 12% to Aberdeen South and 6% within Peterculter itself.
- 12% of people travelling to work from Peterculter travel to somewhere in Aberdeenshire – Garioch (5%), Kincardine and Mearns (4%), Marr (2%) and Formartine (1%).
- In 2011, 9% of people indicated that they worked from home.

5.1.5 Cults, Bieldside and Milltimber

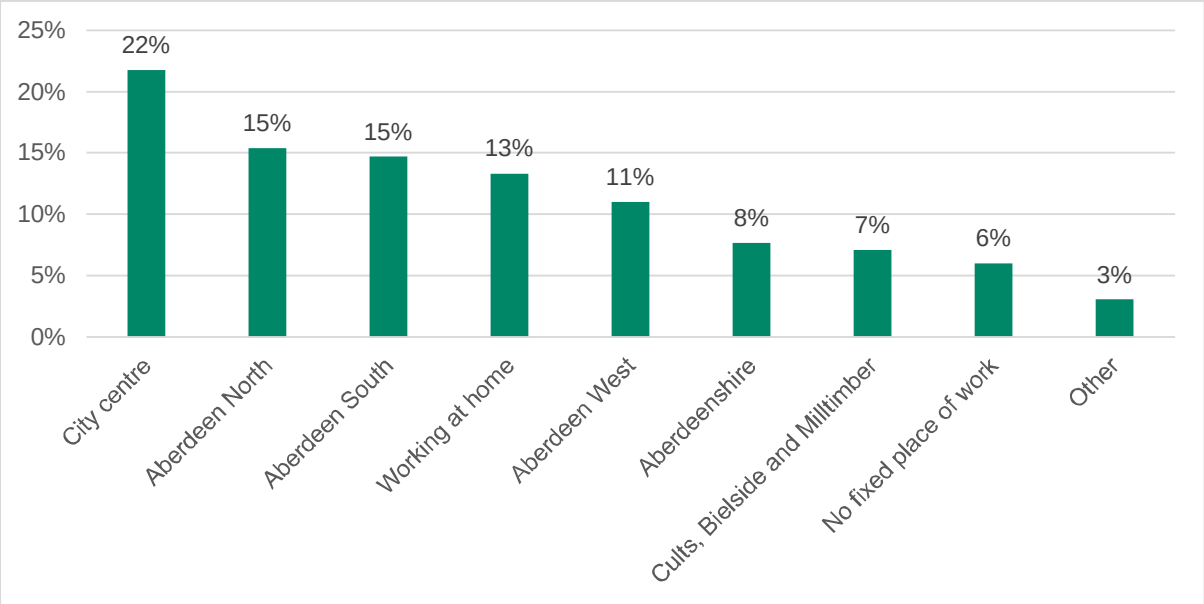


Figure 5.5: Cults, Bieldside and Milltimber Travel to Work Destinations (Census 2011)

- The majority of those travelling to work from Cults, Bieldside and Milltimber travel to somewhere within Aberdeen City – 22% to the city centre, 15% to Aberdeen North and Aberdeen South, 11% to Aberdeen West and 7% within Cults, Bieldside and Milltimber itself.
- 8% of people travelling to work from Cults, Bieldside and Milltimber travel to somewhere in Aberdeenshire – Garioch (4%), Kincardine and Mearns (2%), Marr (1%) and less than 1% for the other Aberdeenshire areas.
- In 2011, 13% of people indicated that they worked from home.

5.1.6 Braeside, Mannofield, Broomhill and Seafield

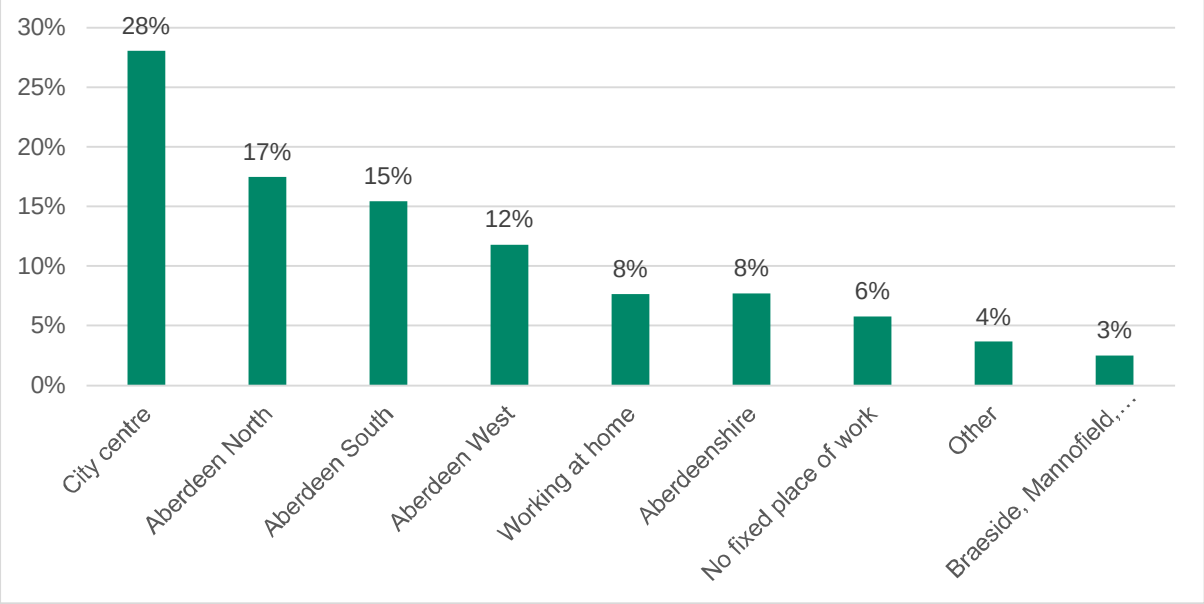


Figure 5.6: Braeside, Mannofield, Broomhill and Seafield Travel to Work Destinations (Census 2011)

- The majority of those travelling to work from Braeside, Mannofield, Broomhill and Seafield travel to somewhere within Aberdeen City – 28% to the city centre, 17% to Aberdeen North, 15% to Aberdeen South, 12% to Aberdeen West and 3% within Braeside, Mannofield, Broomhill and Seafield itself.
- 8% of people travelling to work from Braeside, Mannofield, Broomhill and Seafield travel to somewhere in Aberdeenshire – Garioch (4%), Kincardine and Mearns (2%), Marr (1%) and less than 1% for the other Aberdeenshire areas.
- In 2011, 8% of people indicated that they worked from home.

5.1.7 Garthdee

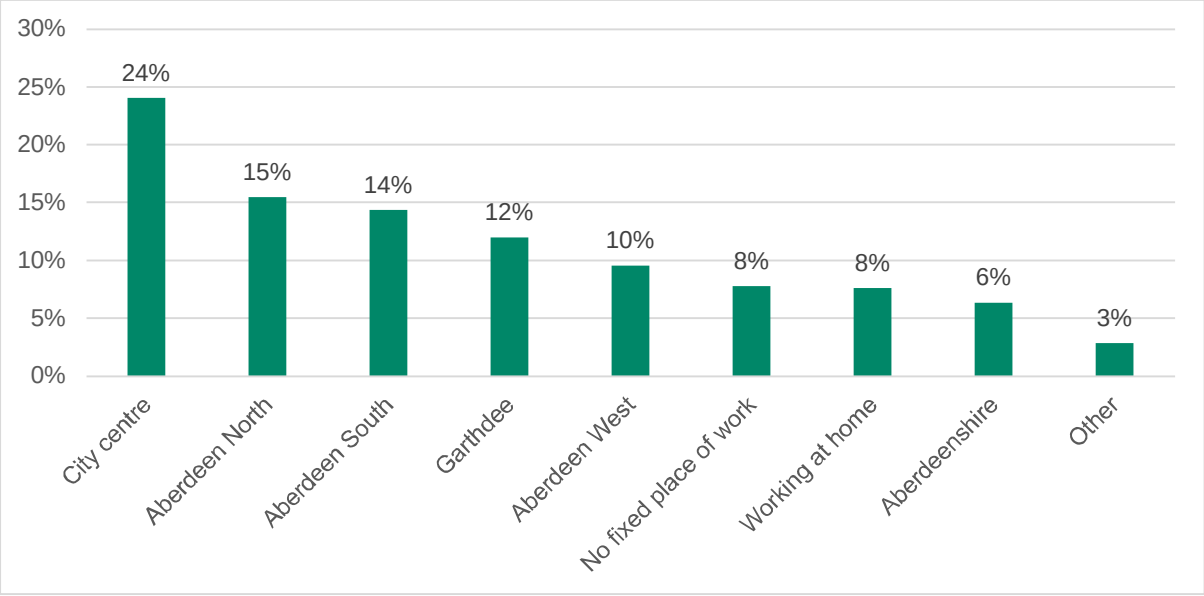


Figure 5.7: Garthdee Travel to Work Destinations (Census 2011)

- The majority of those travelling to work from Garthdee travel to somewhere within Aberdeen City – 24% to the city centre, 15% to Aberdeen North, 14% to Aberdeen South, 10% to Aberdeen West and 12% within Garthdee itself.
- 6% of people travelling to work from Garthdee travel to somewhere in Aberdeenshire – Kincardine and Mearns (3%), Garioch (2%), Formartine (1%) and less than 1% for the other Aberdeenshire areas.
- In 2011, 8% of people indicated that they worked from home.

5.2 Distance Travelled to Work

The diagram below highlights the distance travelled to work for people in the key settlements. It should be noted that those responding 'Other'[32] have been omitted from the analysis and therefore percentages do not total 100%.

Figure 5.8: Distance Travelled to Work in the Key Settlements

- The Aberdeenshire settlements are generally in line with the Aberdeenshire average (43%) in terms of those travelling less than 10km for work (Banchory 39% and Crathes 42%). However, those in Drumoak travel further than average (only 27% travelling less than 10km for work), which reflects locations within Aberdeen City and other parts of Aberdeenshire being the most common destinations for those in Drumoak.
- The vast majority of those living east of Milltimber – Bieldside (82%); Cults (82%); Braeside, Mannofield, Broomhill and Seafield (84%) and Garthdee (81%) – travel less than 10km for work, significantly above the national average of 62% and in line with the average for Aberdeen City (82%). Peterculter (35%) and Milltimber (66%) have significantly smaller proportions of those travelling less than 10km for work, reflecting their location further west on the corridor.

[32] People in the 'other' distance travelled category include people with no fixed place of work or study, people who work on an offshore installation and people who work or study outside the UK.

5.3 Mode Share

The diagram below outlines the travel to work modal share for the key settlements along the study corridor. It should be noted that results are taken from the 2011 Census and it is expected that trends shown may have changed, particularly since the beginning of the COVID-19 pandemic in early 2020.

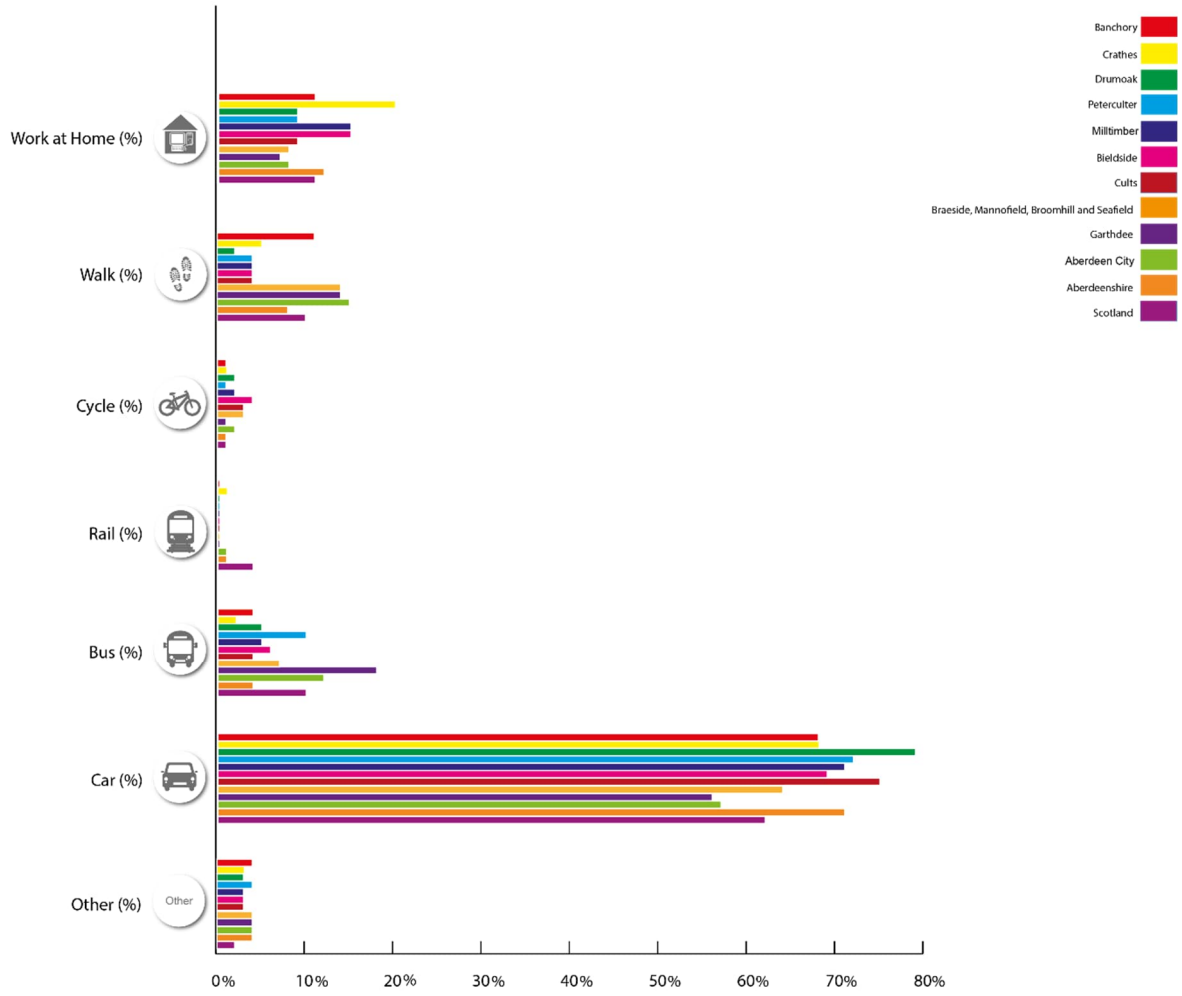


Figure 5.9: Travel to Work/Study Mode Share for Key Settlements

- Crathes recorded a high proportion of working from home (20%) relative to the other settlements, the average for Aberdeenshire (12%) and the average for Scotland (12%). Milltimber (15%) and Bieldside (15%) also recorded relatively high proportions of working from home.
- Walking to work in Aberdeen City (15%) is higher than the national average of 10%. This is not reflected in the majority of study area settlements within Aberdeen City, with only 4% walking to work from Peterculter, Milltimber, Bieldside and Cults. There are higher rates of walking to work in Braeside, Mannofield, Broomhill and Seafield and in Garthdee (14%), likely due to the closer proximity to the city centre. Banchory has high rates of walking to work (11%) relative to the Aberdeenshire average (8%).
- Cycling proportions are low throughout the study area, although some of the settlements have higher rates than the national average (1%) and the average for Aberdeen City (2%) including Bieldside (4%), Cults (3%) and Braeside, Mannofield, Broomhill and Seafield (3%).
- Very few people in the study area travel to work by rail, which is as expected due to the absence of rail services on this corridor.
- Travel to work and study by bus for the majority of Aberdeen City settlements along the corridor is lower than the Aberdeen City average (12%) and national average for Scotland (10%). This is with the exception of Garthdee, which has an 18% mode share for bus.
- Car is the most used mode of transport for travel to work. With the exception of Garthdee, all settlements along the corridor have a higher rate of travel to work and study by car than the national average for Scotland (62%). In Aberdeenshire, Drumoak has the highest car usage (79%) which is considerably higher than the Aberdeenshire average (70%).

5.4 Active Travel

5.4.1 National Cycle Network

As shown in **Figure 5.10**, the National Cycle Network (NCN) runs on or parallel with the study corridor via the Deeside Way (NCN Route 195). The Deeside Way follows traffic-free paths and some short quiet-road sections along the former Deeside Railway line between Duthie Park in Aberdeen and Ballater in the west of Aberdeenshire.

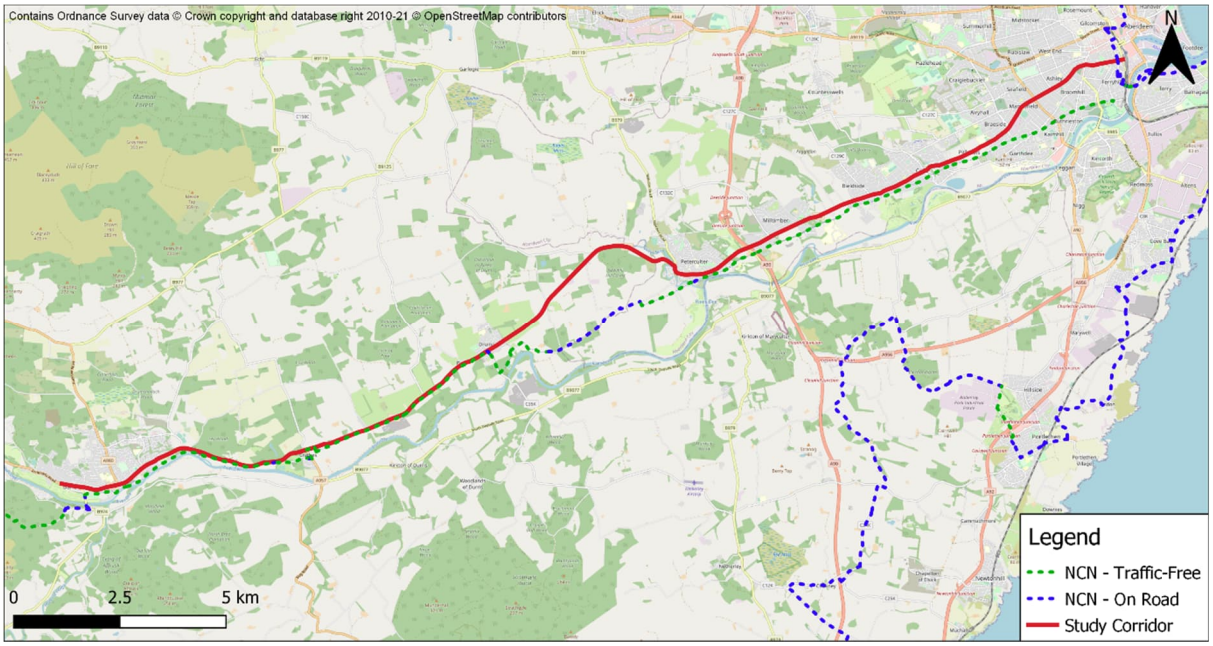


Figure 5.10: National Cycle Network

The Deeside Way can be used by pedestrians and cyclists, with many sections also suitable for equestrian users. The quality of the surface of the Deeside Way is variable along its length. Between Duthie Park and Peterculter, the Deeside Way is surfaced with tarmac, as shown in **Figure 5.11**. To the west of this point, the surface is variable and there are some sections that can become very muddy, as shown in **Figure 5.12**.

Figure 5.11: Deeside Way – Aberdeen City near Garthdee

Figure 5.12: Deeside Way – Aberdeenshire near Banchory

5.4.2 Core Paths

Figure 5.13 outlines the location of core paths in Aberdeen City and Aberdeenshire and of aspirational core paths within the Aberdeen City boundary.

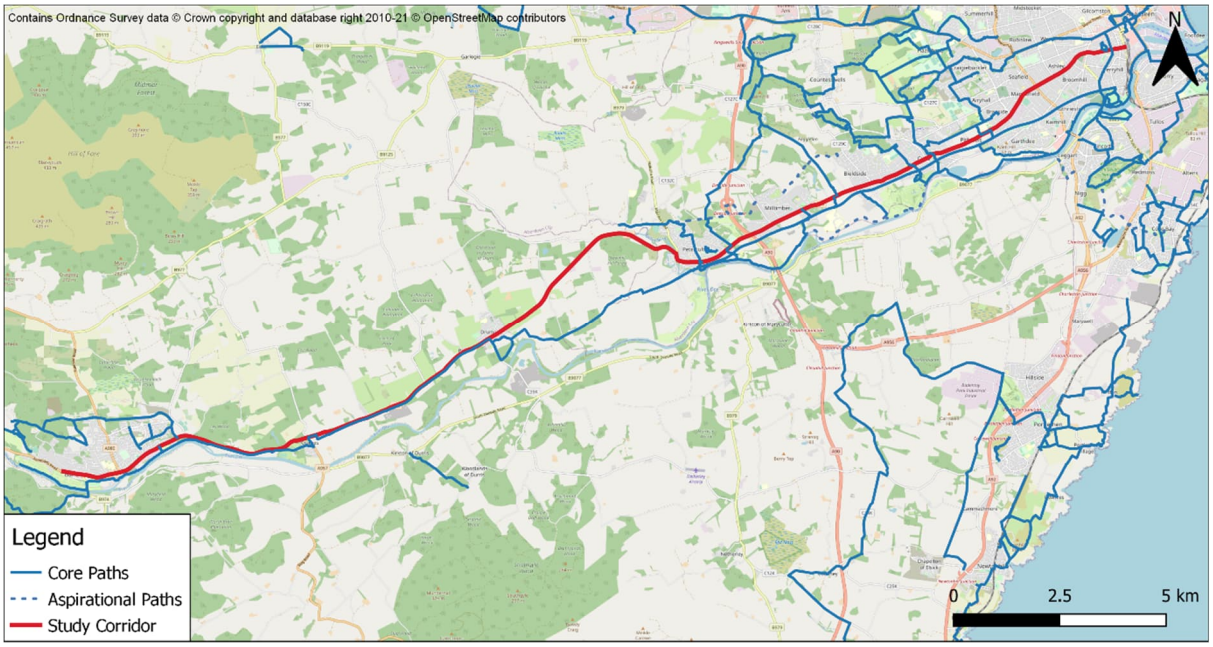


Figure 5.13: Core Paths in Aberdeen and Aberdeenshire

- While there are core paths located in proximity to the study corridor, the only core path on the study corridor itself is between Drumoak and Crathes (where the Deeside Way routes alongside the A93).
- There are a number of core paths which cross over the A93 corridor, particularly within the city boundary between Peterculter and Braeside. There is also a network of core paths in the north of Banchory.
- Further aspirational paths can be found within the Aberdeen City boundary, including one across the AWPR.

5.4.3 Pedestrian Infrastructure

The existing pedestrian infrastructure within the Aberdeenshire section of the corridor is shown below.

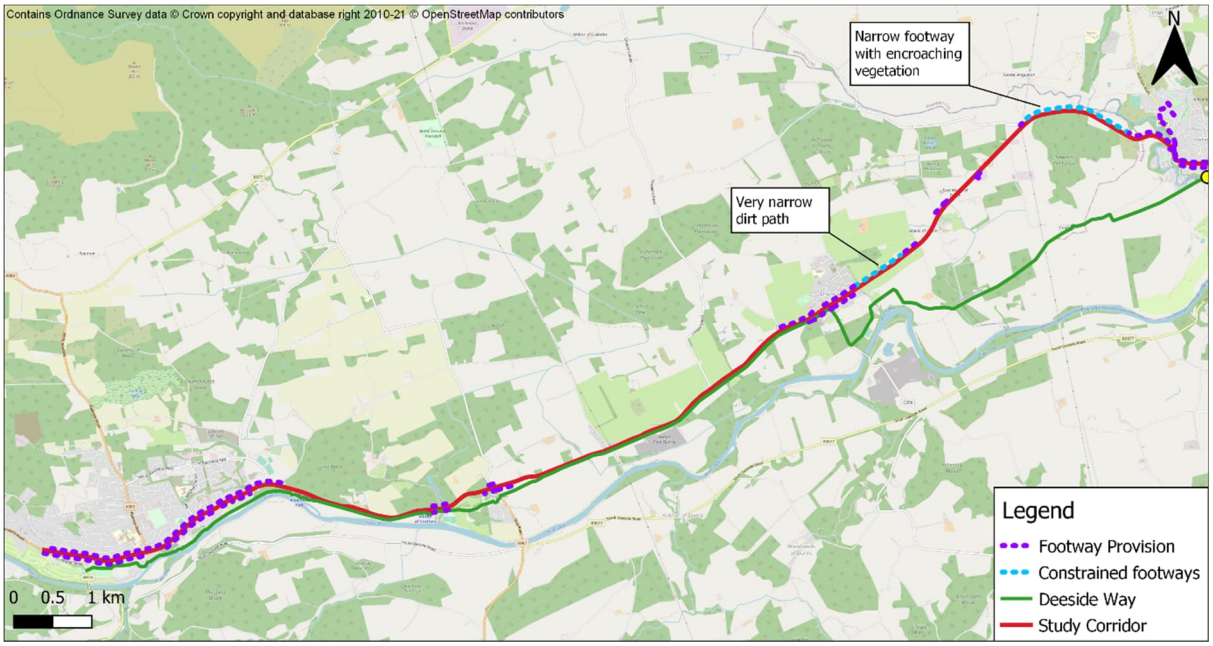


Figure 5.14: Pedestrian Infrastructure in Aberdeenshire

- Footways have not been provided along extensive sections of the corridor within Aberdeenshire, particularly in rural areas outwith the key settlements.

The existing pedestrian infrastructure within the Aberdeen City section of the study corridor is shown below.

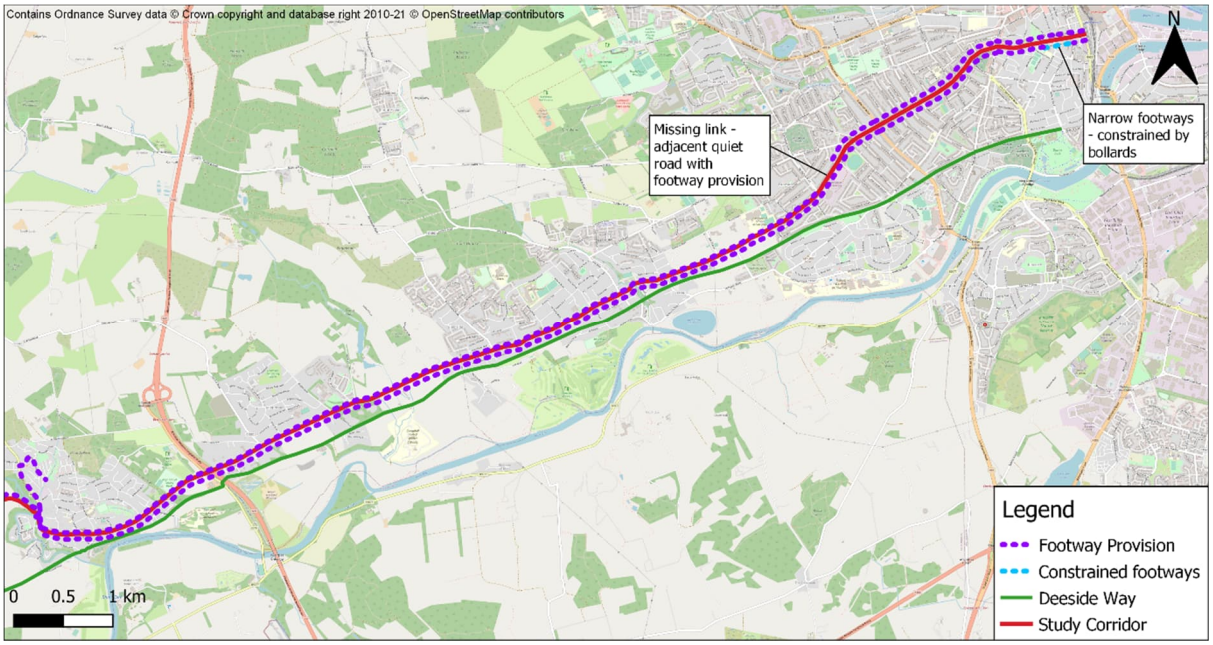


Figure 5.15: Pedestrian Infrastructure in Aberdeen City

- There is good footway provision along the Aberdeen City section of the corridor. Whilst there is a missing link on the north side between Springfield Road and Gordon Terrace; St John's Terrace, directly adjacent to the A93, has footway provision.

5.4.4 Cycling Infrastructure

The existing cycling infrastructure within the Aberdeen City section of the corridor is shown below.

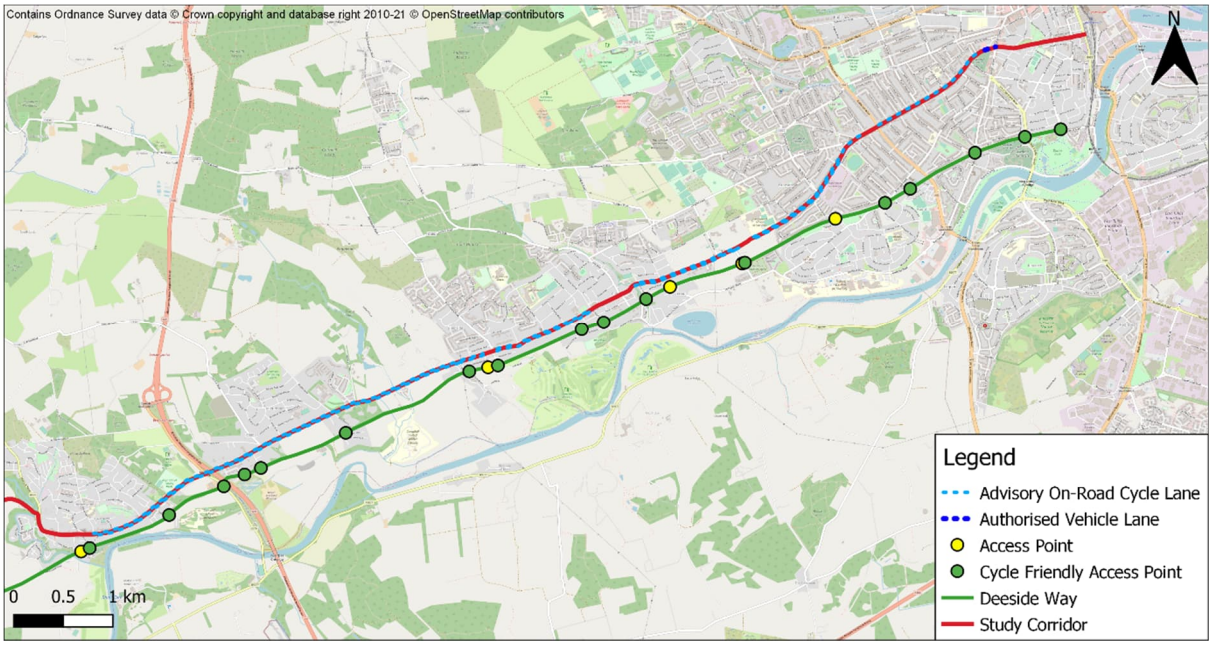


Figure 5.16: Existing Cycling Infrastructure

- There are sections of advisory on-road cycle lanes on either side of the corridor from Peterculter to Holburn Street. The advisory lanes are generally not continuous through junctions and require cyclists to navigate the poorest quality section of the road surface with drains and gullies.
- The Deeside Way offers an off-road alternative for cyclists to the south of the A93. As shown, cycle friendly access points are frequently located along the route.
- To the west of Peterculter, the surface of the Deeside Way is generally not conducive to travelling via road bike. There is no dedicated cycling infrastructure on the A93 in the Aberdeenshire section of the corridor.

Figure 5.17: Advisory Cycle Lane in Cults

Figure 5.18: Deeside Way Access at Westerton Road

5.4.5 Active Travel Counts

There are three active travel counters located on or in close proximity of the study corridor as shown in **Figure 5.19** – one is located in Aberdeenshire and a further two in Aberdeen City. All counters are located on the Deeside Way.

Analysis of the active travel counters has been undertaken, with key results presented in this section. Due to issues with the count technology throughout a number of the years under review, average daily pedestrian and cycle counts have been used for the analysis.

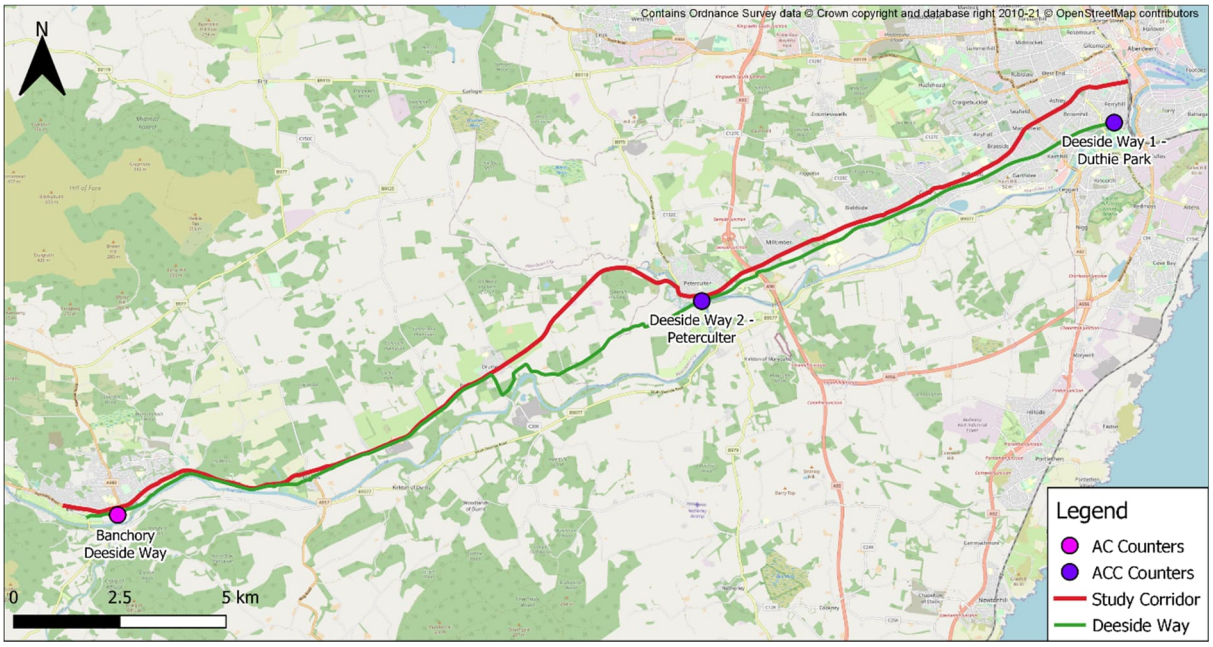


Figure 5.19: Active Travel Counters

Table 5.1: Average Daily Pedestrian Counts (2017-2021)

Site	Average Daily Pedestrian Count				
	2017	2018	2019	2020	2021
Deeside Way – Duthie Park	543	391	537	723	786
Deeside Way – Peterculter	161	43	94	226	133
Deeside Way – Banchory	n/a	135	116	219	276
Overall average	**352**	**190**	**249**	**389**	**398**

- Across all sites, there was a notable increase in average daily pedestrian counts in 2020 relative to the previous years, reflecting the effects of the COVID-19 pandemic and the increase in demand for travel by active modes during this time. The results suggests that this demand has persisted (and increased) throughout 2021 at the Duthie Park site and at Banchory.
- The lower average daily pedestrian counts in 2018 at the Duthie Park site can be partially attributed to issues with the count technology between January and August meaning that counts were only recorded during the later months of the year when numbers are likely to be lower than summer months.

Table 5.2: Average Daily Cycle Counts (2017-2021)

Site	Average Daily Cycle Count				
	2017	2018	2019	2020	2021
Deeside Way – Duthie Park	326	231	275	341	245
Deeside Way – Peterculter	90	94	92	171	114
Deeside Way – Banchory	n/a	14	36	57	59
Overall average	**208**	**113**	**134**	**190**	**139**

- As outlined above, there was a notable increase in average daily cycle counts across all sites in 2020, reflecting the effects of the COVID-19 pandemic. However, unlike the pattern shown for pedestrians, the site at Banchory is the only location where the demand for cycling appears to have persisted to the same extent during 2021.

5.5 Public Transport

5.5.1 Bus Operators

There are two operators in the study area running commercial services – First Bus and Stagecoach. Aberdeen City has two main operators, with First Bus, who are based in Aberdeen, operating the majority of routes. Stagecoach operates in both Aberdeen City and Aberdeenshire, operating a number of inter-urban services and local services in Aberdeenshire.

5.5.2 Park and Ride

There are no existing Park and Ride (P&R) facilities within the study area. Aberdeenshire Council is currently working towards developing a mini transport hub at Crathes and it is outlined within Aberdeenshire's Local Development Plan (LDP) that an area should be reserved for a P&R facility within an allocation in the east of Banchory.

Aberdeenshire Council is currently working on adapting the design of the hub at Crathes to align with the 'Mobility Hub' concept[33]. Facilities could include electric vehicle charging infrastructure, electric bike and low emission vehicle car share schemes, and upgrade to bus shelters, including low-powered Real Time Passenger Information (RTPI) displays. Following completion of land conveyancing, this project will progress to the final design stage.

The site at Banchory will be a combination of a P&R and Mobility Hub. It is understood that the site would include car parking; high specification eco-friendly bus shelters with low/renewable energy-powered RTPI displays; electric vehicle charging infrastructure; eBike and eCargo bike share schemes with charging points; cycle lockers; low emission vehicle car share schemes; and parcel lockers (e.g. for Amazon deliveries). Furthermore, consideration is being given to use of renewable energy sources to power the lighting to the site using a vertical axis wind turbine. It should be noted that delivery of this concept will be subject to the level of funding available.

5.5.3 Bus Priority Infrastructure

There is no bus priority infrastructure on the A93 corridor, with the exception of a short section of authorised vehicle lane for approximately 60m on approach to Holburn Street on Great Western Road. The authorised vehicle lane can be used by buses, cyclists and taxis and is in operation 07:30-09:30 and 16:00-18:00 from Monday to Saturday.

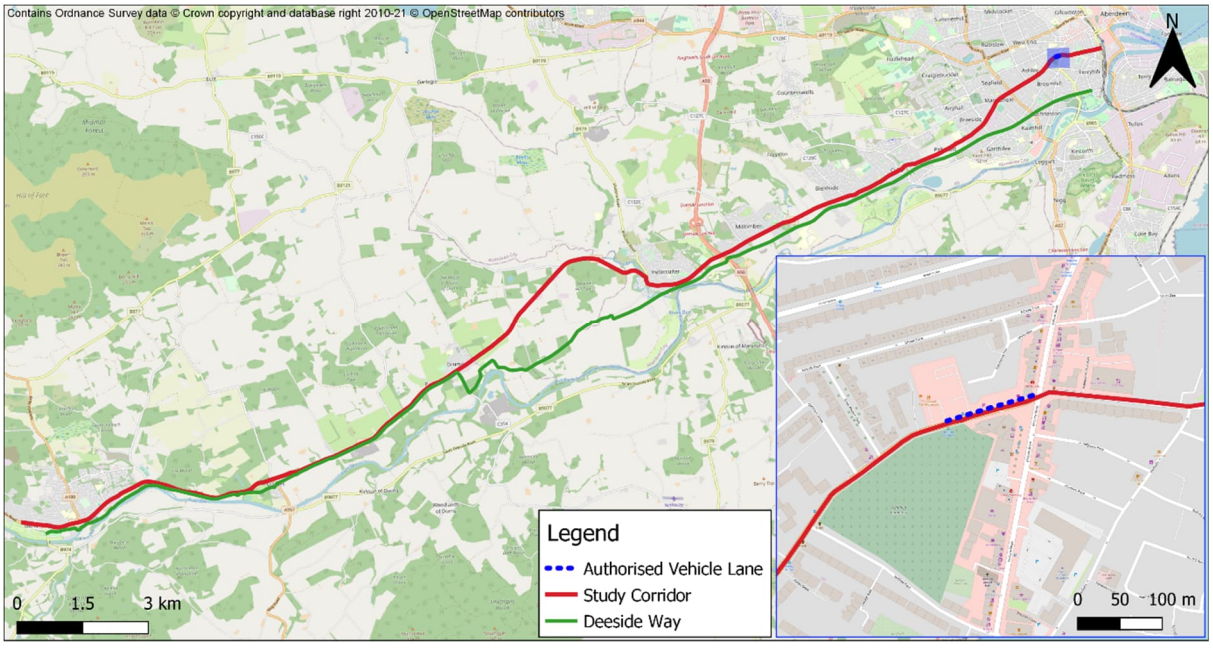


Figure 5.20: Existing Bus Priority

[33] https://como.org.uk/shared-mobility/mobility-hubs/what/

5.5.4 Local Bus Services

Within Aberdeen City, bus services cover the major routes into and around the city, as well as the main suburbs. Historically, services entering Aberdeen have been hub and spoke, with services focussed on accessing the city centre and requiring connections to other key destinations, such as Aberdeen Royal Infirmary (ARI). While several connections have been introduced in recent times to link key destinations without the need for interchange in the city centre, direct connections and interchange opportunities outwith the city centre could be improved. There is additionally limited 'cross-country' service provision in Aberdeenshire.

In Aberdeenshire, many services are either wholly or partially supported by the local authority. With budget revisions leading to reductions in supported service provision, a review of the Aberdeenshire Council supported bus network has recently been undertaken.

The only First Bus service operating along the study corridor is the Service 19, which provides a connection between Peterculter and Tillydrone via North Deeside Road, Great Western Road, Holburn Street, Union Street, Broad Street, George Street, Bedford Road and Tillydrone Avenue. A route map is shown in **Figure 5.21**.

It should be noted that the routeing of this service has been affected by the closure of Union Street to vehicles (between Union Terrace and Market Street) during the Spaces for People interventions associated with the COVID-19 pandemic. As a result, services are diverting via Bridge Street, Guild Street and Market Street. At a meeting of ACC's City Growth and Resources Committee on 12th November 2021, it was agreed that this section of Union Street will become permanently pedestrianised, except for cyclists and time-limited servicing[34].

Figure 5.21: First Bus Service 19 Route Map (Source: First Bus Aberdeen)

[34] https://committees.aberdeencity.gov.uk/ieListDocuments.aspx?CId=618&MId=8139

The principal Stagecoach service operating along the study corridor is the Service 201, which provides a connection between Braemar, Ballater, Banchory and Aberdeen City. A Banchory Town Service (Service 205) also operates along some sections of the A93 within Banchory. A route map of the Stagecoach services through Banchory is shown in **Figure 5.22**. Outwith Banchory, the 201 service operates directly along the A93 corridor.

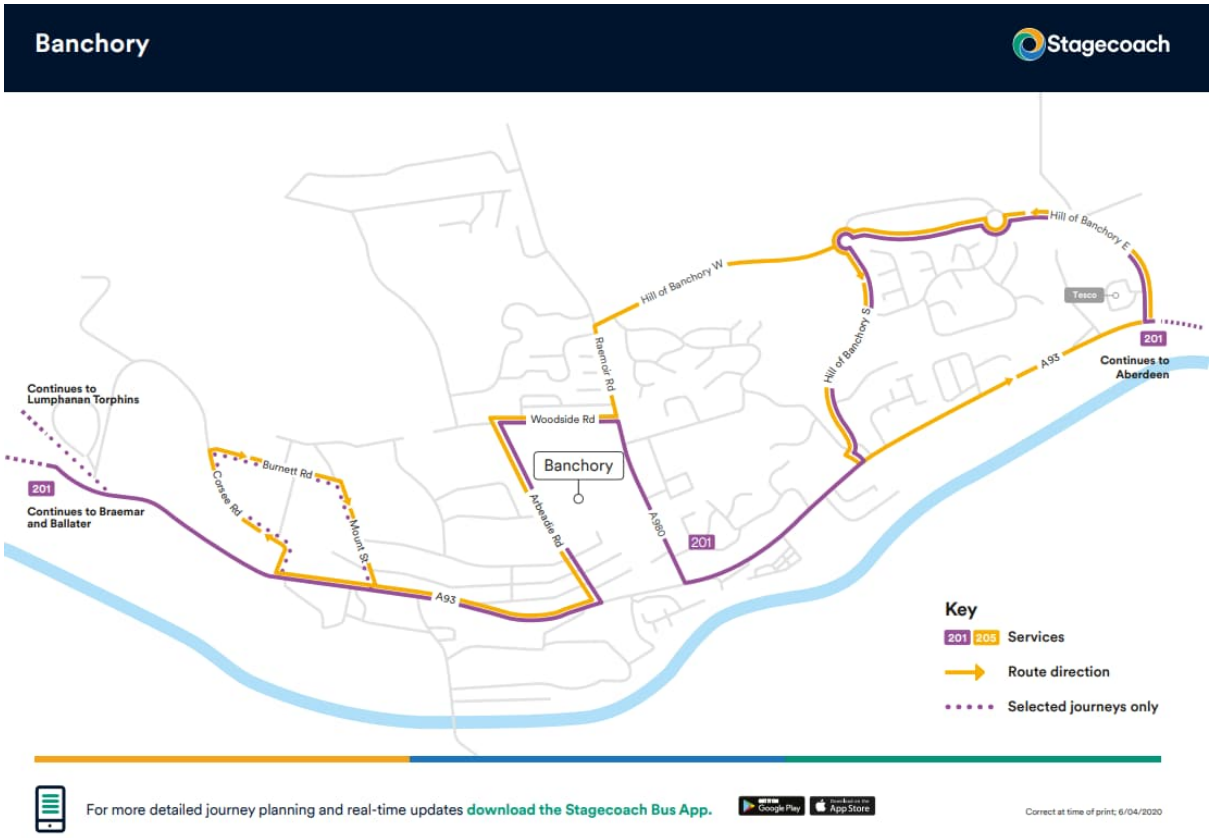


Figure 5.22: Stagecoach Services through Banchory (Source: Stagecoach)

Table 5.3 outlines the frequency of the services operating along the study corridor. The numbers presented for the First Bus service are based on the number of buses at Peterculter Terminus and the numbers presented for the Stagecoach service are based on the number of buses at Banchory High Street.

Table 5.3: Frequency of Local Services

Route	Description	Number of Buses (Monday to Friday)		
		Morning Peak (0500-1000)	Inter-Peak (1000-1600)	Evening Peak (1600-1900)
First Bus				
Route 19	Peterculter – Aberdeen – Tillydrone	16 eastbound 13 westbound	24 eastbound 24 westbound	11 eastbound 12 westbound
Stagecoach				
Route 201	Braemar – Ballater – Banchory – Aberdeen	10 eastbound 8 westbound	12 eastbound 13 westbound	4 eastbound 3 westbound

- The First Bus 19 service generally operates on a 15-minute frequency between 07:00 and 19:30 during the week and a half hourly service thereafter until 23:30. The Saturday service operates on a similar frequency, although there are 20 minutes between services until 09:30 in the morning.
- The First Bus 19 service operates on a half hourly frequency on a Sunday between 08:20 and 22:30.
- The Stagecoach Bus 201 service generally operates on a half hourly frequency between 06:30 and 17:00 during the week. Thereafter, service frequencies range from 30 minutes to 1.5 hours until 23:00. The Saturday service operates on a similar frequency.
- The Stagecoach Bus 201 service operates on an hourly frequency on a Sunday between 08:00 and 23:00.

Table 5.4: Number of Services Operating via Settlements[35]

Route	Number of Buses (Monday to Friday)			
	Morning Peak (0500-1000)	Inter-Peak (1000-1600)	Evening Peak (1600-1900)	Total
Braemar	3 eastbound 2 westbound	3 eastbound 2 westbound	2 eastbound 3 westbound	8 eastbound 7 westbound
Ballater	4 eastbound 3 westbound	7 eastbound 6 westbound	2 eastbound 4 westbound	13 eastbound 12 westbound
Aboyne	5 eastbound 2 westbound	6 eastbound 8 westbound	3 eastbound 3 westbound	14 eastbound 12 westbound
Lumphanan	2 eastbound 0 westbound	0 eastbound 2 westbound	0 eastbound 1 westbound	2 eastbound 3 westbound
Torphins	2 eastbound 0 westbound	0 eastbound 1 westbound	1 eastbound 2 westbound	3 eastbound 3 westbound
Cults	24 eastbound 22 westbound	36 eastbound 38 westbound	16 eastbound 17 westbound	76 eastbound 77 westbound

- The provision of bus services to some of the settlements west of Banchory on the A93 corridor is very limited, particularly Lumphanan (5 in total) and Torphins (6 in total).
- Settlements within Aberdeen City are served by very regular bus services as they benefit from access to both the 19 and 201 service. This is with the exception of Garthdee, which is served by regular First 1 and 2 services. The north-western section of Peterculter (Malcolm Road and Johnston Gardens) is only served by the First 19 service.

5.5.5 Bus Fares

The bus fares for local Stagecoach services are summarised in the table below. Fares are based on the cheapest standard adult return ticket option available for each journey.

Table 5.5: Stagecoach Bus Fares

	Banchory	Peterculter	Cults	City centre
Banchory		£7.00	£7.00	£7.00
Peterculter	£7.00		£4.00	£4.00
Cults	£7.00	£4.00		£4.00
City Centre	£7.00	£4.00	£4.00	

- For journeys between Banchory and Aberdeen, a weekly ticket costs £25 and a monthly ticket costs £90.
- For journeys from west of Banchory to Aberdeen, a weekly ticket costs £30 and a monthly ticket costs £100.

The bus fares for First Bus services are summarised in the table below, again focussed on the cheapest standard adult ticket option available. First Bus additionally has 'Tap & Cap' in place, which uses contactless payments to cap passengers' travel charges to ensure that customers never pay more than the price of a day ticket in a single day or a weekly ticket in a week.

Table 5.6: First Bus Fares

	Online/App	On Bus
Single (based on a journey from Peterculter to the city centre)	-	£2.70
FirstDay	£4.20	£4.40
FirstWeek	£16.99	£18.00
FirstMonth	£64.99	-
FirstAnnual	£699.00	-

[35] Based on weekday services during term times arriving/departing each settlement as of January 2022.

5.5.6 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. The North East Bus Alliance's 'Assessing the State of the Bus Network in Aberdeen and Aberdeenshire' report[36] notes that there has been a considerable drop in bus patronage in the region in recent years; in the order of 11% between 2015/16 and 2017/18, as illustrated in **Table 5.7**.

Table 5.7: North East Bus Patronage 2015/16-2017/18

	Total Patronage	Number of Concessionary Passengers	Proportion of Concessionary Passengers
2015/16	29.9 million	10.4 million	35%
2016/17	28.6 million	10.5 million	37%
2017/18	26.5 million	10.2 million	38%
% change from 2015/16	-11.2%	-3%	+3%

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 A93 corridor.

The First Bus data represents Ticketer boarding data for the Service 19 along the following boarding stages: Johnston Gardens; Gordon Arms; Station Road East; Coronation Road; Kippie Lodge; Contlaw Road; Tornadee; Dalmunzie Road; Bieldside Inn; West Cults Station Road; Kirk Brae; Wellwood; Pitfodels; Springfield Road; Mannofield Church; Burns Road; Holburn Road; and Holburn Junction. The Stagecoach data includes passengers boarding within the study area for services 201 and 202 (until operation of the latter was changed in April 2020, with some services merging with the 201).

Given commercial sensitivities, numbers have been presented as an index. FY2019/20 has been taken as the base year, as shown in **Table 5.8**.

Table 5.8: Index of Year Patronage on A93 Corridor (19/20-20/21)

Financial Year	Index of Year Patronage on A93 Corridor	
	First Bus	Stagecoach
2019/20 (Base Year)	100	100
2020/21	28.4	25.9
2021/22	63.3	65.3

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.

[36] https://www.nestrans.org.uk/wp-content/uploads/2019/06/5aapp-State-of-the-Network-Report_Final.pdf

The figure below provides an overview of bus patronage on the First 19 Service in the study area, indexed against March 2019, highlighting the impact of the COVID-19 pandemic.

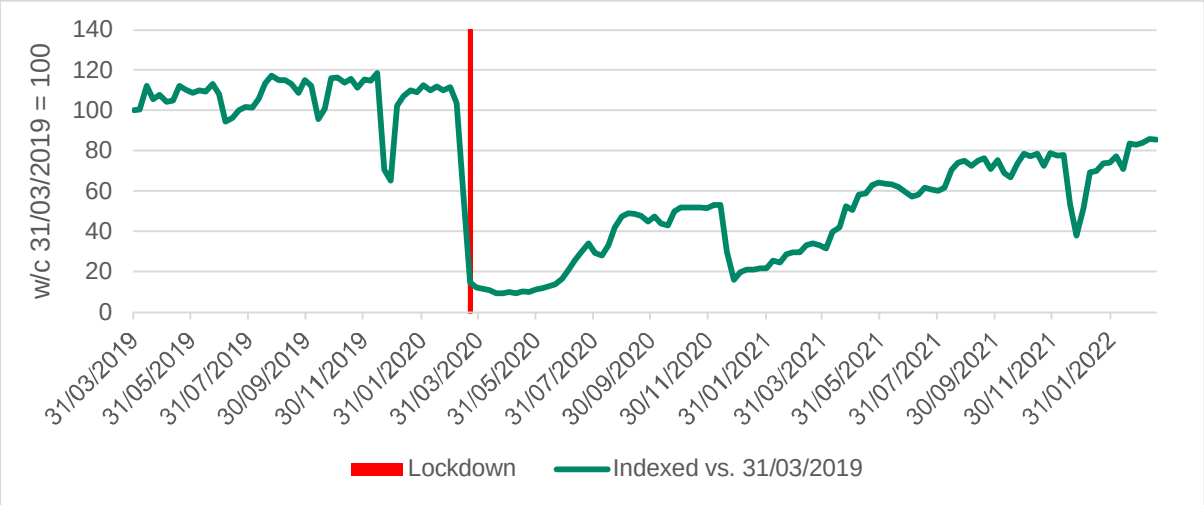


Figure 5.23: First Bus Patronage 2019-2022 Indexed vs. March 2019

The figure below provides an overview of bus patronage on the Stagecoach services in the study area, indexed against January 2019. It also highlights the significant impact that the pandemic has had on bus use on the corridor.

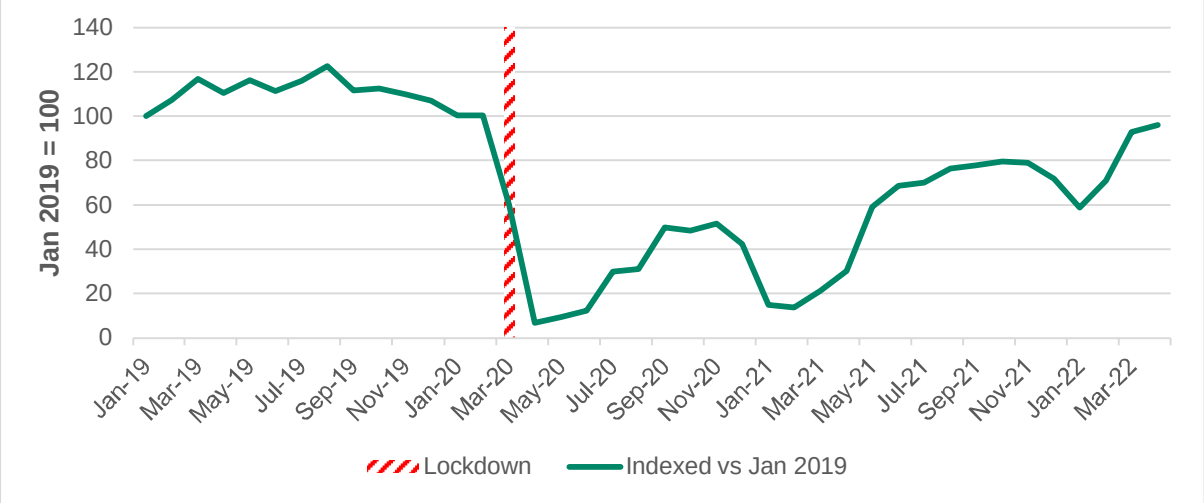


Figure 5.24: Stagecoach Bus Patronage 2019-2021 Indexed vs January 2019

5.5.7 Emissions

In January 2021, the world's first fleet of double-decker hydrogen buses were launched into service in Aberdeen. As part of the project, a fleet of 15 zero-emission vehicles are being run by First Bus primarily on the Service 19 route along the A93 corridor[37].

The Bus Alliance Report provides an indication of the average CO_2 emissions from bus services along the corridor, highlighting Euro 5 emissions for Stagecoach Service 201.

[37] It should be noted that the fleet of hydrogen buses was taken off service in February 2022 due to a technical issue.

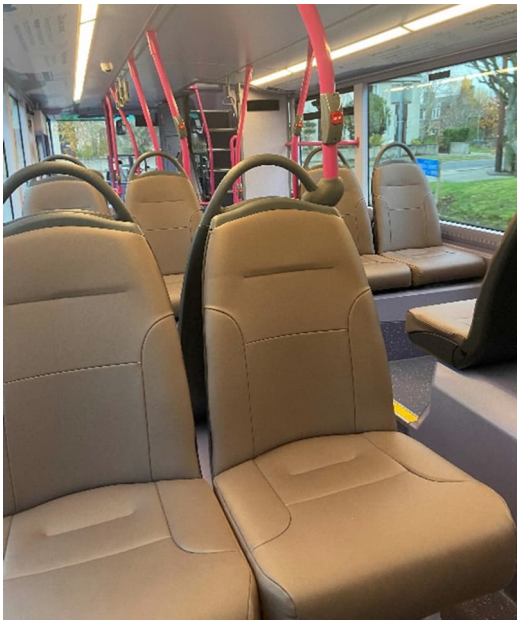



Figure 5.25: First Bus Service 19 - Hydrogen Fleet

5.5.8 Bus Journey Times

The table below presents a selection of journey time changes for bus services along the study corridor since 2006.

Table 5.9: Bus Journey Time Changes since 2006

From	To	Service	Journey Time (minutes)					% Change since 2006
			2006	2016	2019	2020	2021	
Banchory	Bus Station	201	58	81	68	71	77	+33%
Peterculter	Broad Street	19	36	50	50	44	46	+28%

- Bus journey times on the corridor have remained relatively consistent in recent years, with a journey time decrease of 4 minutes on both services between 2016 and 2021.
- However, there has been a notable increase in bus journey times since 2006, with a 19 minute increase on the 201 service and a 10 minute increase on the 19 service.

5.5.9 Bus Satisfaction

A public survey was undertaken by Aberdeenshire Council between October 2019 and December 2019 to capture views on how best to provide bus services in the region and how spend should be prioritised on these services. Overall, there were 1,631 responses to the survey, with nearly 300 responses recorded from the Marr area. The diagram below shows satisfaction with bus services amongst those responding from the Marr area.

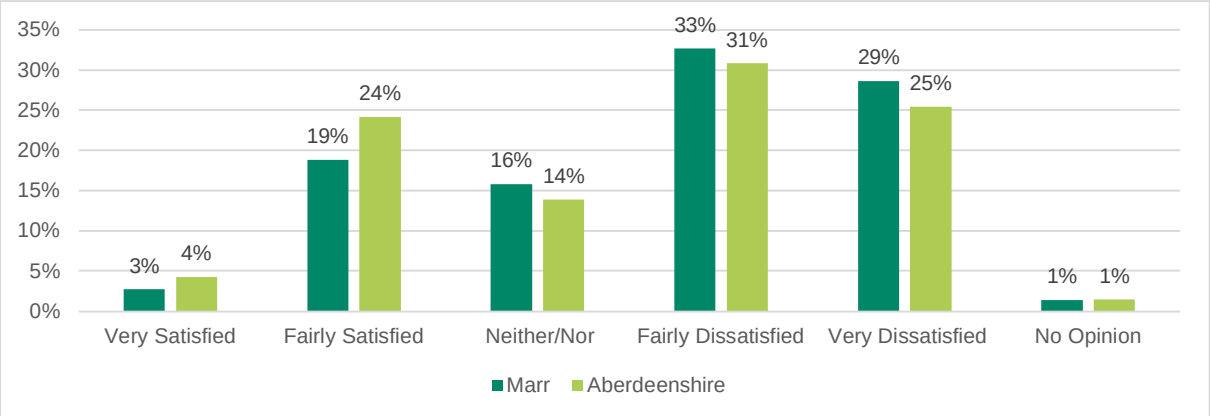


Figure 5.26: Bus Satisfaction in Marr and Aberdeenshire

- Satisfaction with bus services in Marr is slightly lower than the average for Aberdeenshire, with 22% indicating that they were 'very satisfied' or 'fairly satisfied' with the bus services, compared to 28% for Aberdeenshire.

The diagram below shows barriers to bus use amongst non-bus users in the Marr area.

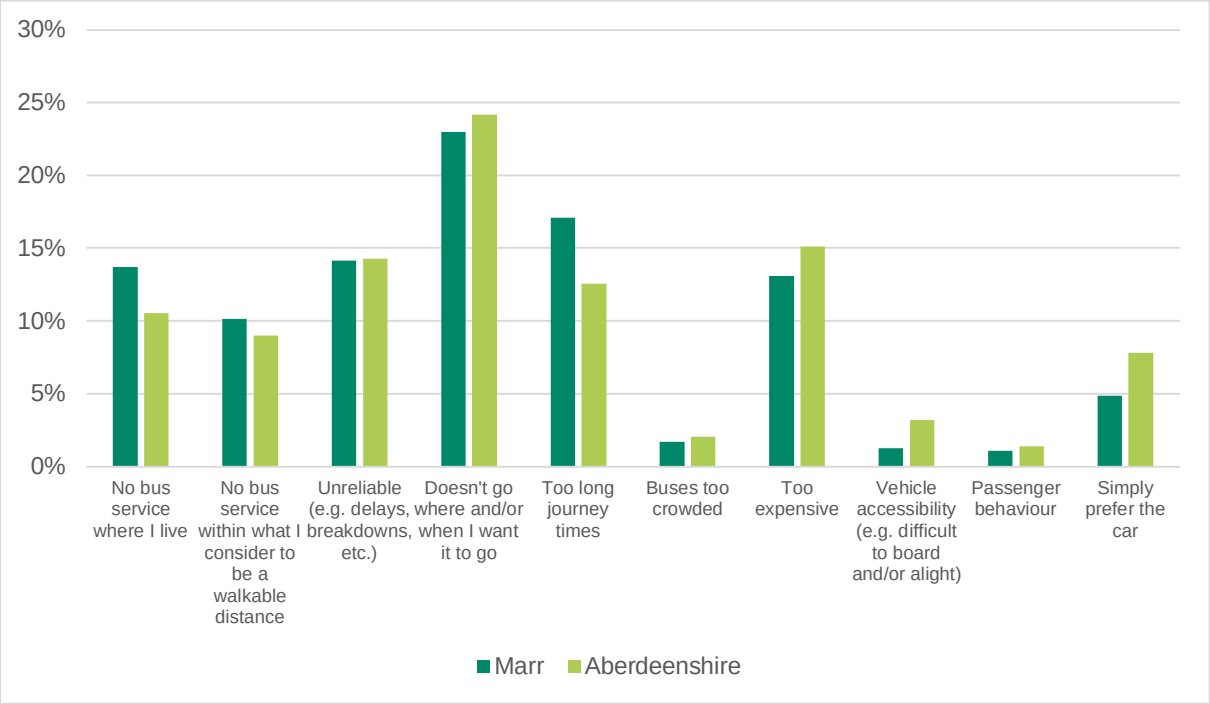


Figure 5.27: Barriers to Bus Use in Marr and Aberdeenshire

- The principal reason recorded for not travelling by bus in Marr was because of bus services not going where or when people want it to, which was also the principal reason across Aberdeenshire.
- Other commonly reported barriers in Marr include long journey times, unreliability, lack of services where people live and cost.

5.6 Bus Journey Time Variability

A high-level analysis of bus stop reliability (delay and dwell times) has been conducted across bus stops serving First Bus services along the A93 corridor. **Figure 5.28** to **Figure 5.33** illustrate the location of these stops with the average recorded delay at each by time period.

It should be noted that:

- All times are in seconds;
- The data is for March to June 2019 (inclusive) and figures presented are averages calculated across each journey undertaken during this time period;
- The analysis has been split by time of day according to the following categories: AM Peak (0700-1000), Inter Peak (IP) (1000-1600), and PM Peak (1600-1900);
- There are two bus services recorded as serving the stops (Service 16B and 19) – the analysis has not been split by service number and it is noted that the Service 19 represents ~99.9% of the records; and
- 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.

Figure 5.28: Average Delay, Eastbound, AM Peak

Figure 5.29: Average Delay, Eastbound, Inter Peak

Figure 5.30: Average Delay, Eastbound, PM Peak

In the eastbound direction, the difference in the average delay values across the stops is relatively negligible between the time periods. However, the inter peak period is recorded as being more delayed on average than the morning or evening peak times, with values straying more often to over 60 seconds or, in some cases, over 120 seconds. The evening peak sees slightly less delays on the Aberdeen City end of the corridor compared to the other time periods.

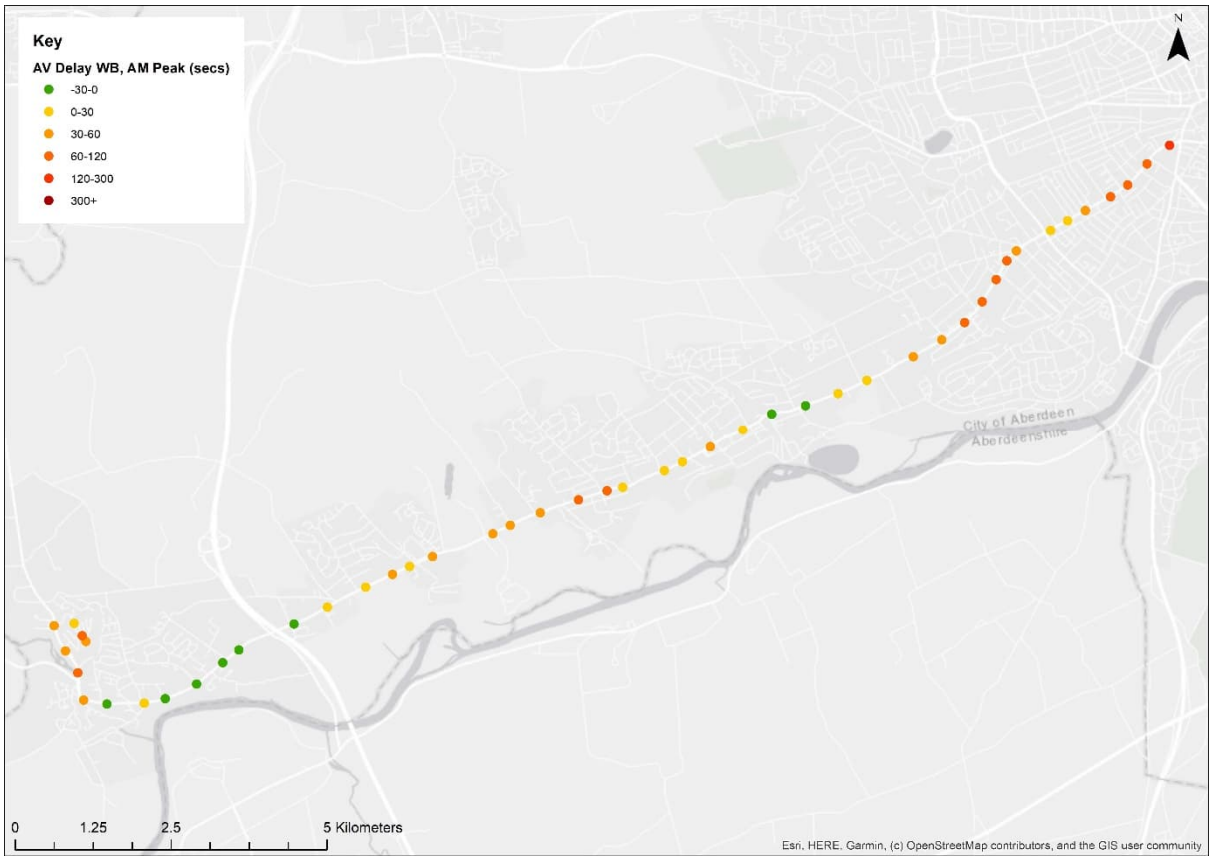


Figure 5.31: Average Delay, Westbound, AM Peak

Figure 5.32: Average Delay, Westbound, Inter Peak

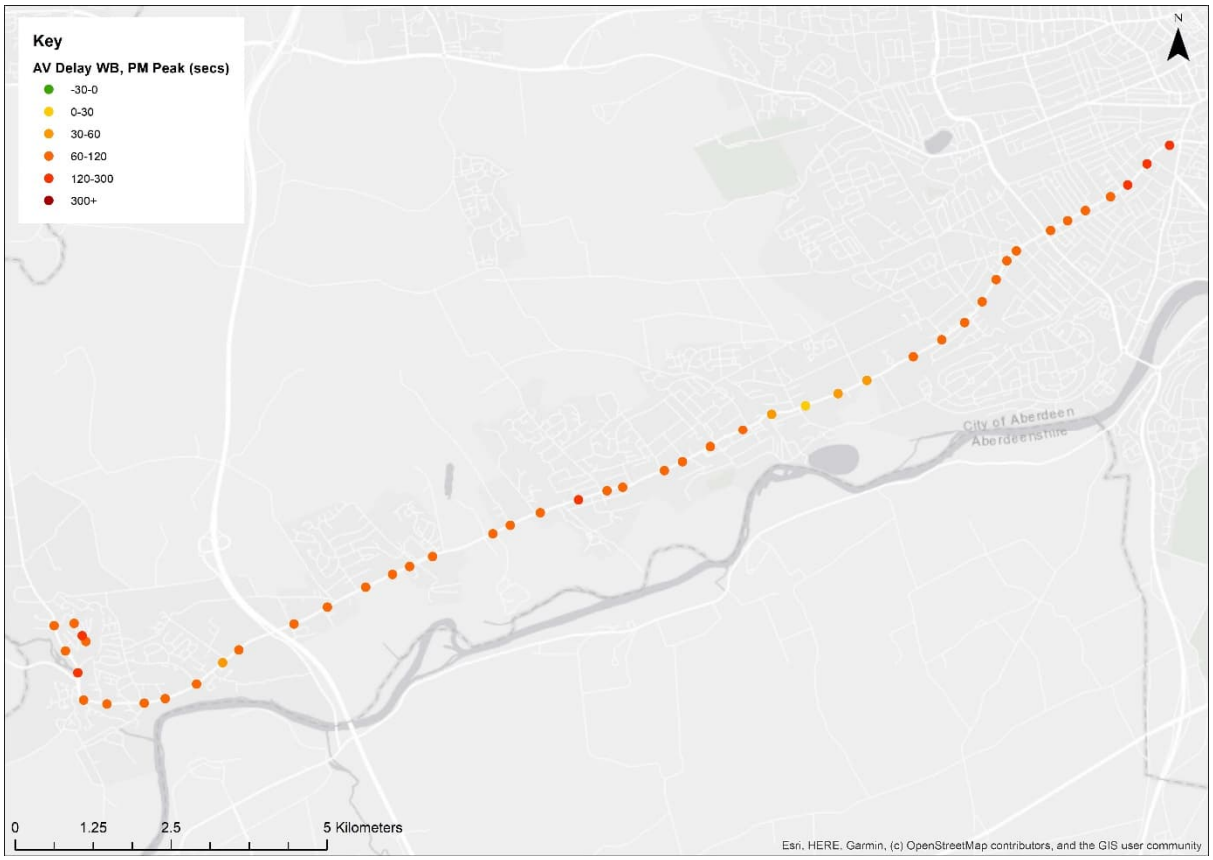


Figure 5.33: Average Delay, Westbound, PM Peak

In the westbound direction, the inter peak period is again more delayed on average across the stops. The morning peak period in this direction is the least delayed on average and there are some negative average delay values recorded, particularly towards the Peterculter end of the corridor.

Table 5.10 shows a summary of the average length of delay/dwell times by direction and time period.

Table 5.10: Delay and Dwell Times by Direction and Time Period

Direction	Delay (seconds)			Dwell (seconds)		
	AM Peak	Inter Peak	PM Peak	AM Peak	Inter Peak	PM Peak
Eastbound	117	140	112	27	24	25
Westbound	37	155	93	26	21	24
Both Directions	77	147	103	26	23	24
Peterculter Terminus	34	120	73	139	103	124

There is a clear increase in delays during the inter peak period (10:00-16:00) in both directions. The westbound direction is generally more delayed during this period, but less delayed during the AM and PM peaks. Dwell times are relatively consistent across the stops, with expected increases at the terminus in Peterculter. There is no correlation between the average length of delay and the dwell time at the stops.

5.7 Journey Time Analysis

A high level comparison of journey times by car, bus and cycle to key destinations has been undertaken using Google Maps. This analysis considered inbound journeys arriving by 09:00 on Thursday 21st October 2021 and return journeys leaving after 17:00 on Thursday 21st October 2021. A select number of journey findings are presented below, with full details included in **Appendix A**.

Table 5.11: Car, Bus and Cycle Journey Time Analysis

	Car Journey Time (mins)	Bus Journey Time (mins)	Cycle Journey Time (mins)
Banchory to Aberdeen Bus Station	40	67	99
Crathes to Aberdeen Bus Station	35	53	78
Drumoak to Aberdeen Bus Station	35	47	60
Peterculter to Aberdeen Bus Station	26	39	38
Milltimber to Aberdeen Bus Station	24	34	31
Bieldside to Aberdeen Bus Station	24	31	24
Cults to Aberdeen Bus Station	20	26	20
Mannofield to Aberdeen Bus Station	8	11	7
Banchory to Aberdeen Royal Infirmary	45	90	105
Crathes to Aberdeen Royal Infirmary	40	76	83
Drumoak to Aberdeen Royal Infirmary	40	70	66
Peterculter to Aberdeen Royal Infirmary	28	55	44
Milltimber to Aberdeen Royal Infirmary	35	50	36
Bieldside to Aberdeen Royal Infirmary	26	47	30
Cults to Aberdeen Royal Infirmary	22	42	26
Mannofield to Aberdeen Royal Infirmary	18	18	16

- Journey times are generally longer by bus than by car and often significantly so. This is particularly notable for access to key destinations that are not on or in close proximity to the study corridor such as ARI. This reflects the need for interchange on these journeys where direct services are not available.
- Within Aberdeen City (Peterculter, Milltimber, Bieldside, Cults, Mannofield), cycle journey times are shown to be shorter than the respective journey times by bus.
- Across all routes, journey times by bus were found to be 530 minutes longer than journey times by bike and 2,046 minutes longer than journey times by car.

5.8 Rail Services

There are currently no rail lines or services operating along the study corridor. Settlements along the A93 were historically connected to the rail network through the Deeside Railway, which provided a rail link from Aberdeen to Ballater. The former railway line is now used as a long distance active travel route via the Deeside Way.

In July 2021, a group called 'Campaign for North East Rail' published its Detailed Case[38] for proposals to reinstate historic railway lines in the North East of Scotland. This includes assessment to support the aspiration to restore the Deeside Railway as far as Banchory, with an integrated bus link to Braemar that would meet every train.

The RTS 2040 references the recent feasibility work that was undertaken to investigate the potential for reopening of the rail line to Fraserburgh and Peterhead[39], noting that the work concluded that demand was unlikely to be sufficient to justify the capital cost and the revenue would not be sufficient to cover the operational costs of the reopening. Taking into account the findings of that work, the RTS 2040 notes that it is considered that it would be even more challenging to build a positive business case for reopening of the Deeside Line due to high car ownership levels on the corridor, development on parts of the route and its existing popularity as an active travel corridor. However, it concludes that alignments should be protected, and the situation kept under review as policies around carbon abatement, changes in demand, and changes in appraisal may make this more viable in the future.

[38] https://www.campaignfornortheastrail.org/proposals
[39] It should be noted that the Campaign for North East Rail group has been awarded Just Transition funding for a new feasibility study examining a proposal to reinstate railway lines in the region, including to Fraserburgh, Peterhead and Banchory.

5.9 Road Network

5.9.1 Overview

The A93 route itself forms the majority of the road network along the study corridor between Banchory and Aberdeen City. As shown in the diagram below, the route is classified as tertiary to the east of Holburn Street following revisions to the roads hierarchy within Aberdeen City.

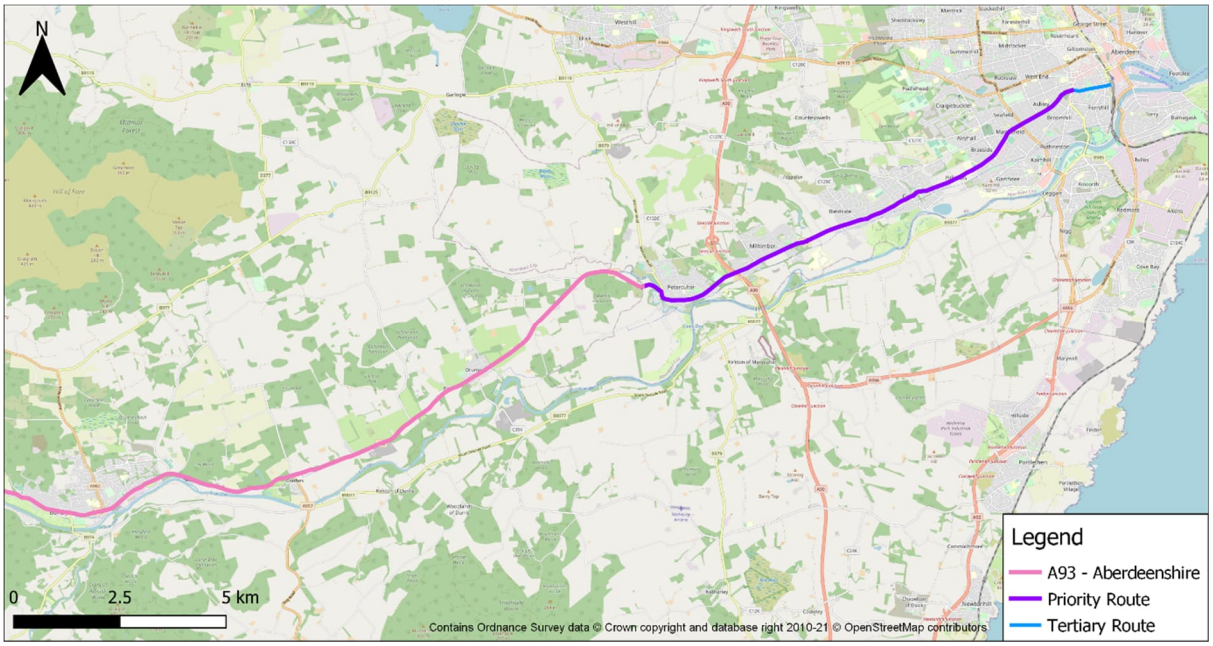


Figure 5.34: Banchory - Aberdeen City Study Corridor Road Network

- The A93 connects Aberdeen and Braemar via Cults, Peterculter, Banchory, Aboyne and Ballater. From Braemar, the A93 continues south to Blairgowrie and Perth. Within the Aberdeenshire section of the study area, it is a single carriageway route with a variable speed limit. There is a 60mph speed limit outwith residential areas in Aberdeenshire; this slows to between 20mph (e.g., within Banchory Town Centre) and 40mph (e.g., through Park (west of Drumoak)). Within Aberdeenshire, Aberdeenshire Council is responsible for the operation and maintenance of the A93.
- Within Aberdeen City, the A93 is formed by the North Deeside Road, St John's Terrace and Great Western Road, connecting Peterculter, Milltimber and Cults to the city centre. A strategic connection to the AWPR is provided at the Deeside Junction. This provides connections south to Stonehaven, Perth and Dundee and a direct connection to the A90(T) north of Aberdeen. Within ACC's revised roads hierarchy, the A93 is maintained as a priority route, indicating that it is a primary corridor for movement, suitable for large volumes of traffic. It is generally a single carriageway route, with widening on approach to some junctions. There are advisory cycle lanes on significant stretches of the route, providing an on-road active travel option. The speed limit is 30mph along its length and ACC is responsible for the operation and maintenance of this section of the study corridor.
- The eastern extent section of the study corridor (east of Holburn Street) comprises Willowbank Road, Springbank Terrace and Wellington Place. Within ACC's revised roads hierarchy, this section of the corridor has been reclassified as a tertiary route, meaning that it is a local route serving local destinations and facilitating access from secondary destinations to principal destinations. The road is single carriageway with a 30mph speed limit and ACC is also responsible for the operation and maintenance of this section of the study corridor.

5.9.2 Traffic Volumes

The diagram below summarises the different sources of count information that have been used to gauge traffic volumes on the corridor, using information provided by ACC.

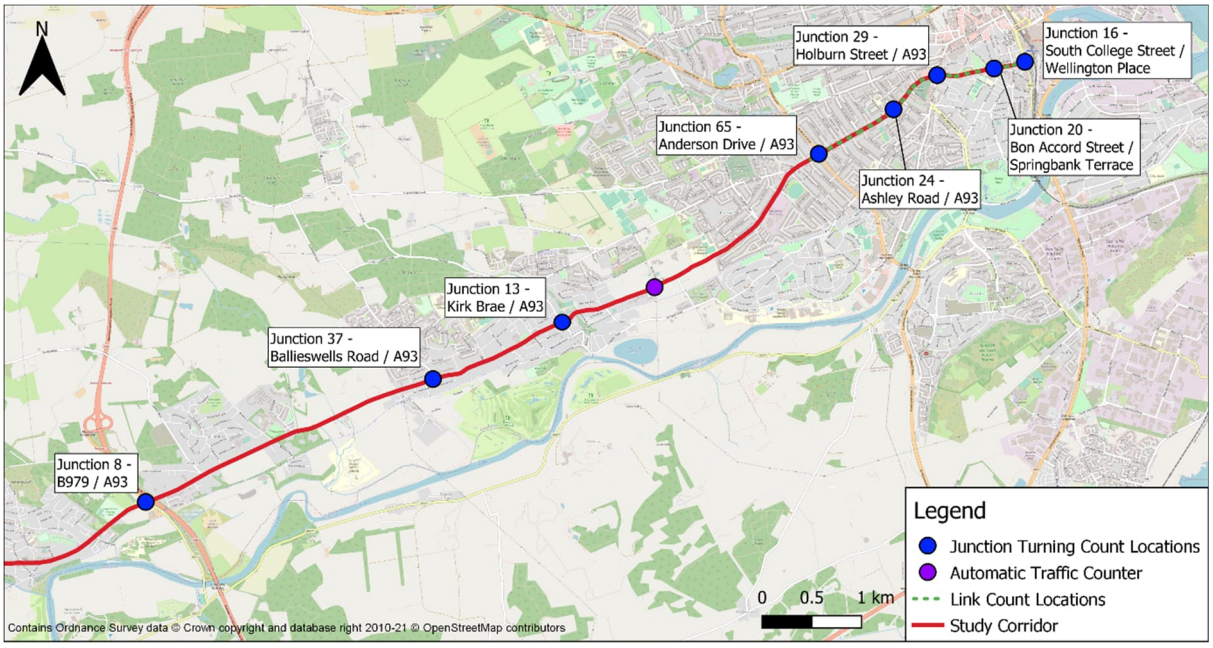


Figure 5.35: Sources of Traffic Count Information (provided by ACC)

5.9.2.1 Junction Turning Counts

To support the update of the Aberdeen Sub-Area Model (ASAM), classified junction turning counts (JTCs) were undertaken at several junctions along the corridor (see **Figure 5.35**). The information has been used to produce network flow diagrams to outline the number of vehicles making specific movements at each junction. Surveys were undertaken on 08 October 2019 for Junction 8 – B979 / A93; Junction 37 – Ballieswells Road / A93 and Junction 13 – Kirk Brae / A93. The other junctions were surveyed on 04 February 2020. The surveys undertaken were 12-hour counts from 07:00-19:00.

The network flow diagrams provide an overview of traffic flows between 07:00-10:00 (AM Period) and 16:00-19:00 (PM Period) and focus on 'All Vehicle exc. Cycles'. In each of the figures, the value in the green box corresponds to the traffic value of that movement, whilst the grey box indicates the corresponding junction movement.

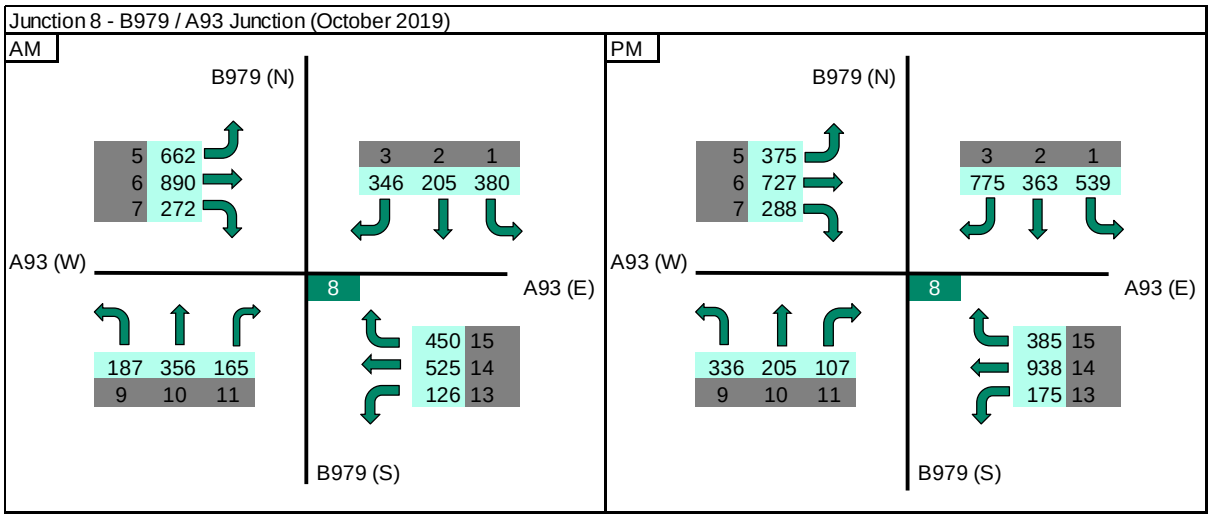


Figure 5.36: JTCs at B979 / A93 Junction

- In the AM, the main traffic movements come from vehicles travelling from A93 (W) (1,824 in total), with nearly half (49%) continuing straight ahead at the junction to stay on the A93; 36% turning left to access the AWPR and 15% turning right onto the B979 (S).
- In the PM, the main traffic movements come from vehicles travelling from the B979 (N) (1,677 in total), with nearly half (46%) turning right to travel westbound on the A93, 32% turning left to travel eastbound on the A93

and 22% continuing straight ahead to the B979 (S). Westbound movements on the A93 were also high at the junction during the PM peak.

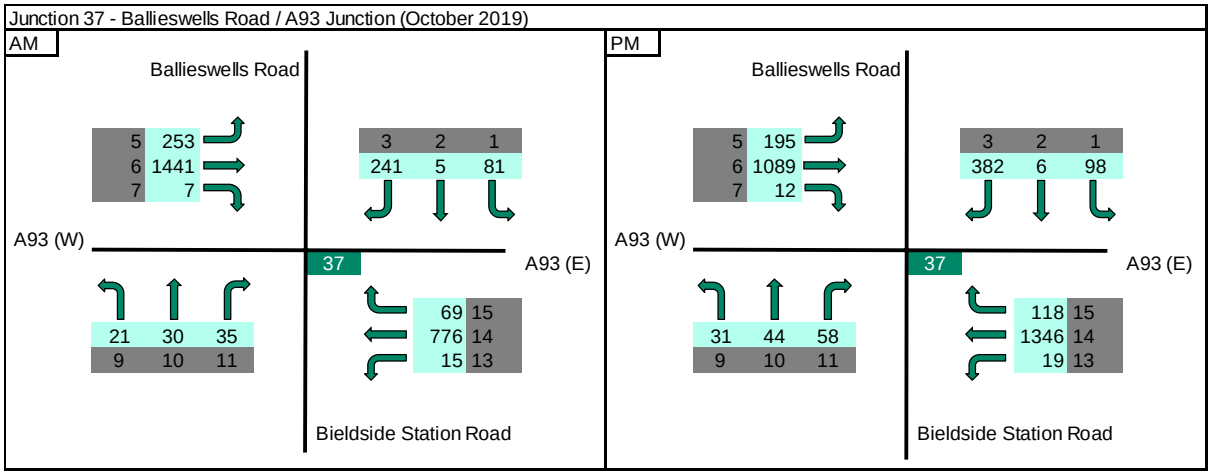


Figure 5.37: JTCs at Ballieswells Road / A93 Junction

- In the AM, the main traffic movements come from vehicles travelling from A93 (W) (1,701 in total), with 85% continuing straight ahead at the junction to stay on the A93; 15% turning left onto Ballieswells Road and less than 1% turning right onto Bieldside Station Road.
- In the PM, the main traffic movements come from vehicles travelling from A93 (E) (1,483 in total), with 92% continuing straight ahead at the junction to stay on the A93; 8% turning right onto Ballieswells Road and less than 1% turning left onto Bieldside Station Road.

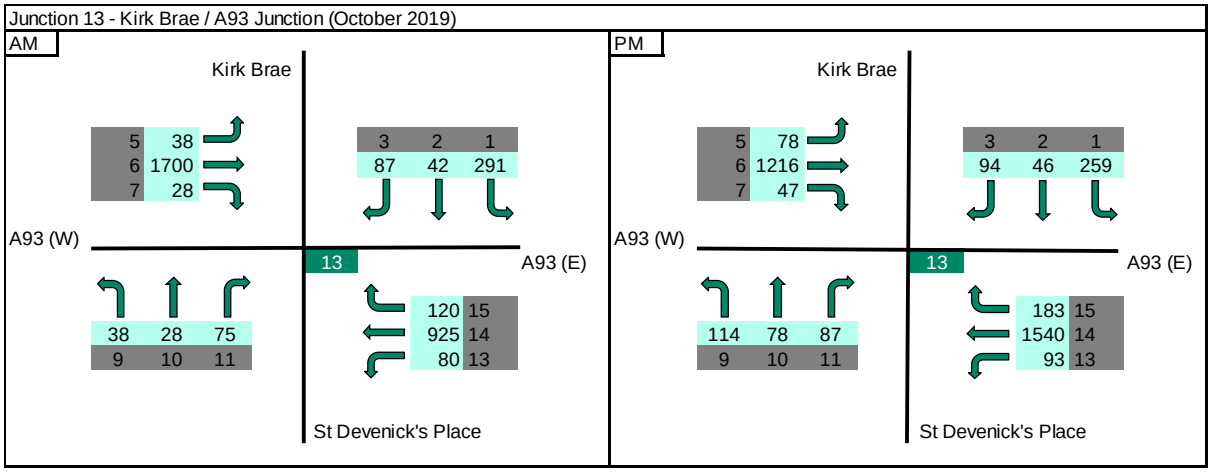


Figure 5.38: JTCs at Kirk Brae / A93 Junction

- In the AM, the main traffic movements come from vehicles travelling from A93 (W) (1,766 in total), with 96% continuing straight ahead at the junction to stay on the A93; 2% turning left onto Kirk Brae and less than 2% turning right onto St Devenick's Place.
- In the PM, the main traffic movements come from vehicles travelling from A93 (E) (1,816 in total), with 85% continuing straight ahead at the junction to stay on the A93; 10% turning right onto Kirk Brae and 5% turning left onto St Devenick's Place.

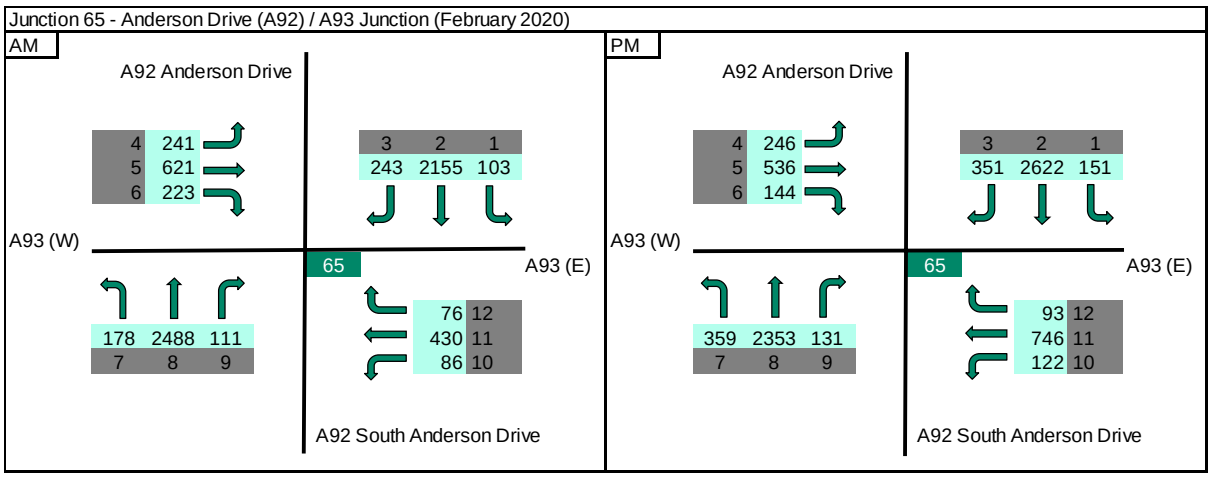


Figure 5.39: JTCs at Anderson Drive / A93

- In the AM, the main traffic movements come from vehicles travelling from South Anderson Drive (2,777 in total), with 90% continuing straight ahead at the junction to stay on the A92; 6% turning left to travel westbound on the A93 and 4% turning right to travel eastbound on the A93.
- In the PM, the main traffic movements come from vehicles travelling from Anderson Drive (N) (3,124 in total), with 84% continuing straight ahead at the junction to stay on the A93; 11% turning right to travel westbound on the A93 and 5% turning left to travel eastbound on the A93.
- For vehicles already on the A93, the majority remained on the A93 corridor through this junction in both directions and in both time periods.

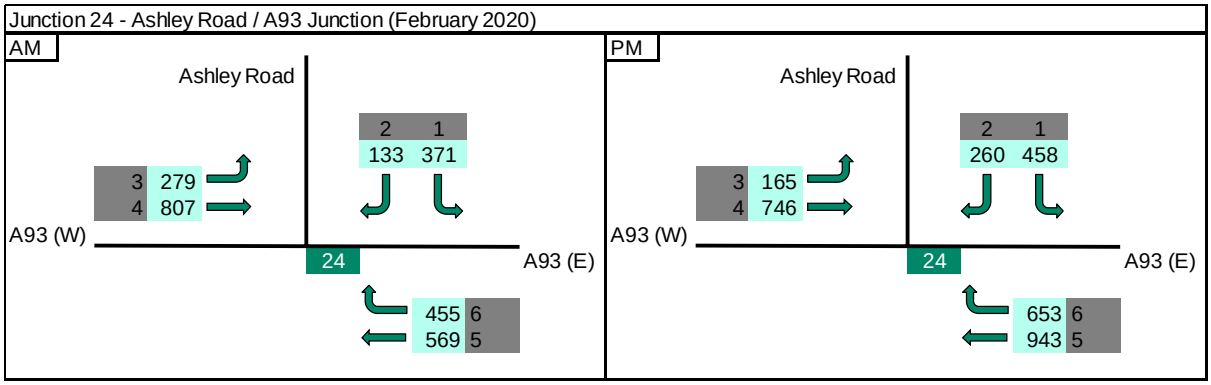


Figure 5.40: JTCs at Ashley Road / A93 Junction

- In the AM, the number of vehicles travelling along the A93 is similar in both directions (1,086 eastbound and 1,024 westbound). A higher proportion of vehicles travelling westbound turn right onto Ashley Road (44%) compared to eastbound traffic turning left onto Ashley Road (26%). From Ashley Road, more vehicles turn left onto the A93 to travel eastbound (74%).
- In the PM, the main traffic movements come from vehicles travelling from A93 (E) (1,596 in total), with 59% continuing straight ahead at the junction to stay on the A93 and 41% turning right onto Ashley Road. The same trend is shown in the PM peak for vehicles turning onto the A93 from Ashley Road, with 64% turning left to travel eastbound and 36% turning right to travel westbound.

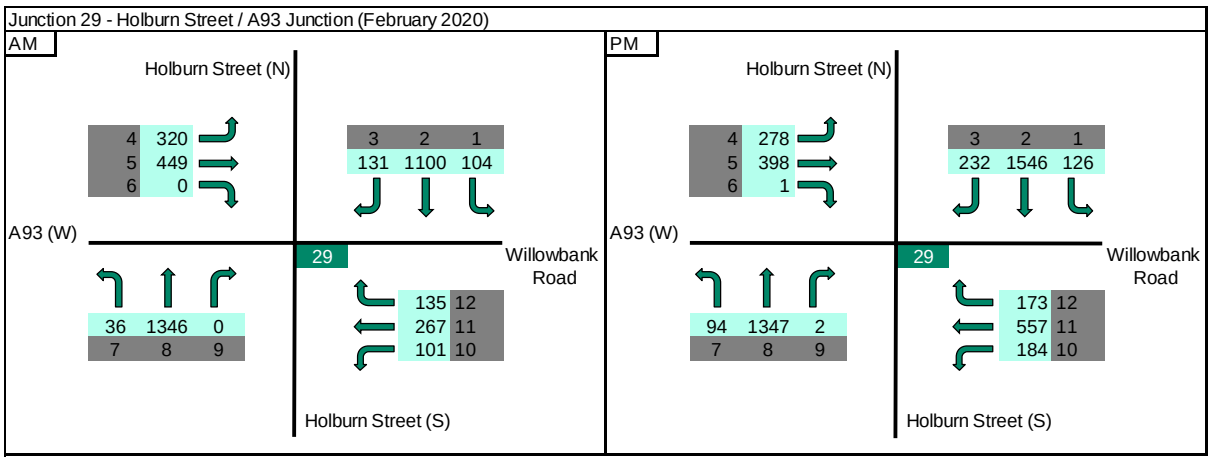


Figure 5.41: JTCs at Holburn Street / A93 Junction

- In the AM, the main traffic movements come from vehicles travelling from Holburn Street (N) and Holburn Street (S) (1,335 from Holburn Street (N) and 1,382 from Holburn Street (S)). In both directions, the dominant movement is straight ahead to remain on Holburn Street (97% northbound and 82% southbound).
- In the PM, the main traffic movements come from vehicles travelling from Holburn Street (N) (1,904 in total), with 81% continuing straight ahead at the junction to stay on Holburn Street; 12% turning right to travel westbound on the A93 and 7% turning left onto Willowbank Road.
- For vehicles already on the A93, the majority remained on the A93 corridor through this junction in both directions and in both time periods.

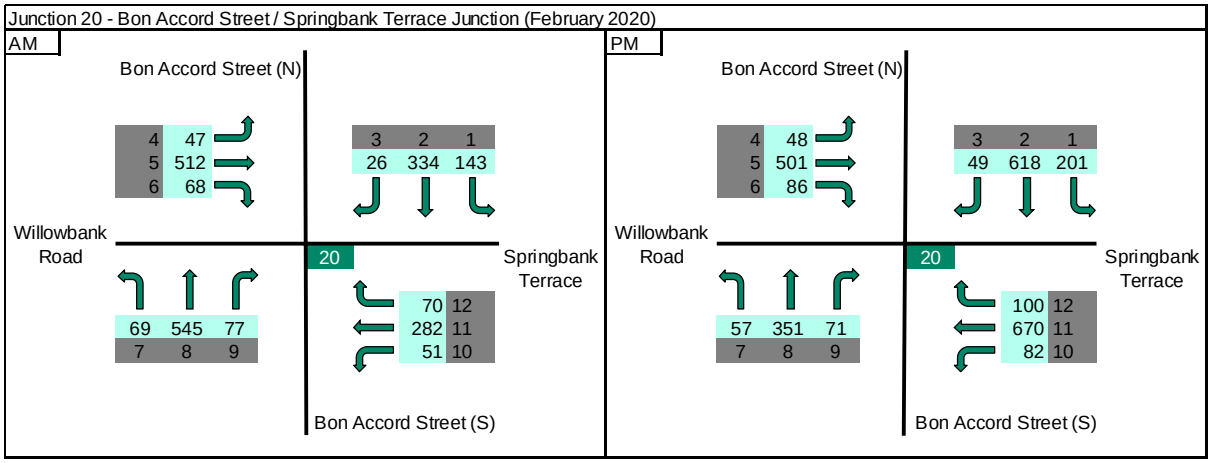


Figure 5.42: JTCs at Bon Accord Street / Springbank Terrace

- In the AM, the highest traffic flows are vehicles travelling from Bon Accord Street (S) (691) and vehicles travelling eastbound from Willowbank Road (627). The majority of those on Bon Accord Street are travelling straight ahead at the junction (79%) and the majority of those on Willowbank Road are travelling straight ahead at the junction onto Springbank Terrace (82%).
- In the PM, the highest traffic flows are vehicles travelling from Bon Accord Street (N) (868) and vehicles travelling westbound from Springbank Terrace (852). The majority of those on Bon Accord Street are travelling straight ahead at the junction (71%) and the majority of those on Springbank Terrace are travelling straight ahead at the junction onto Willowbank Road (79%).

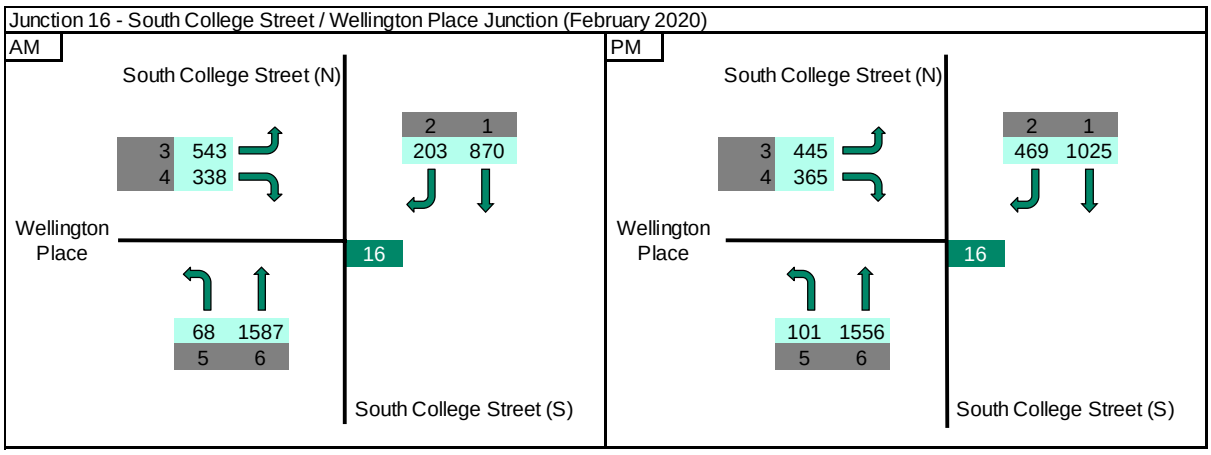


Figure 5.43: JTCs at South College Street / Wellington Place Junction

- In the AM, the main traffic movements come from vehicles travelling from South College Street (S) (1,655), with 96% continuing straight ahead at the junction to stay on South College Street and 4% turning left onto Wellington Place.
- In the PM, the main traffic movements again come from vehicles travelling from South College Street (S) (1,657), with 94% continuing straight ahead at the junction to stay on South College Street and 6% turning left onto Wellington Place.

5.9.2.2 Automatic Traffic Counter

There is an automatic traffic counter (ATC) located to the west of Bairds Brae (Pitfodels) on the A93. The diagram below illustrates a weekly summary of the average daily traffic flows in both directions on the A93 since March 2020.

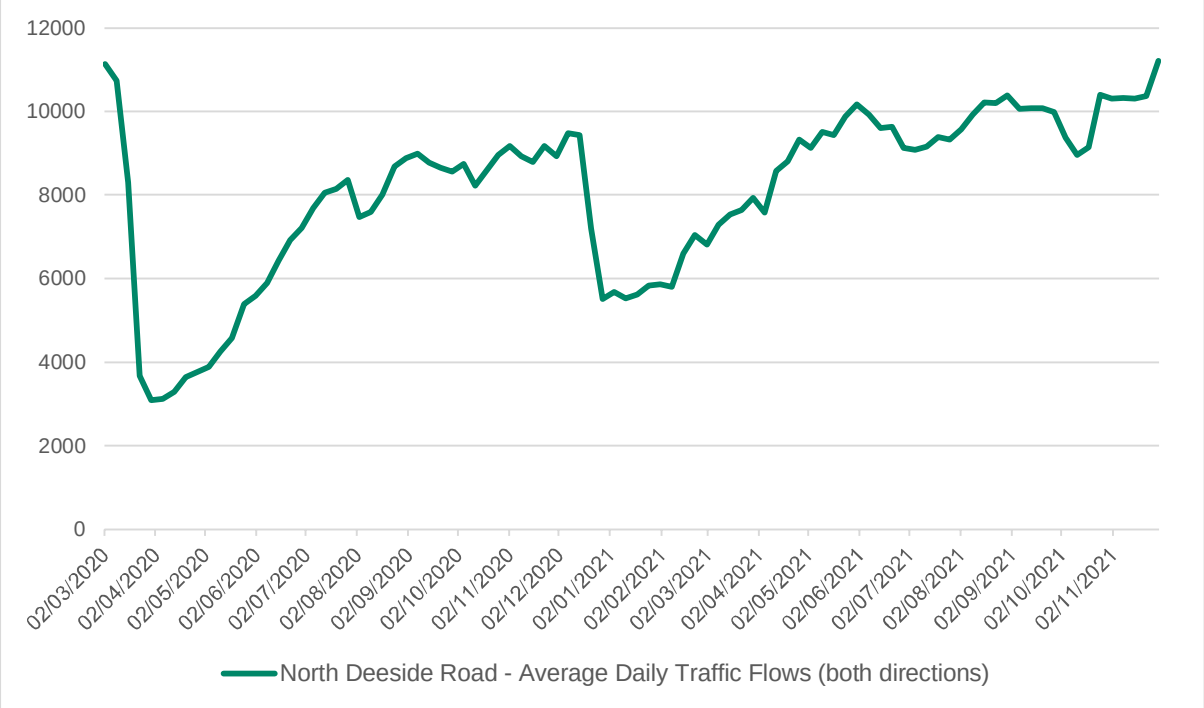


Figure 5.44: ATC Weekly Summary – Average Daily Traffic Flows (Source: ACC)

- The above diagram highlights the significant impact that the initial lockdown in March 2020 had on traffic volumes along the corridor, dropping to a low of 3,094 at the end of March (a 72% decrease compared to the beginning of the month).
- Traffic volumes started to rise again from May 2020 to a high of 9,480 at the beginning of December 2020 before falling below 6,000 associated with increased restrictions over Christmas and into 2021.
- Throughout 2021, traffic volumes gradually increased to a high of 11,218 at the end of November, surpassing the 11,135 vehicles recorded at the beginning of March 2020.

The table below provides a monthly summary from the North Deeside Road counter for 2019, 2020 and 2021.

Table 5.12: ATC Monthly Summary – Average Daily Traffic Flows (Source: ACC)

	Average Daily Traffic Flows in Both Directions				
	2019	2020	2021	% Change (2020-2021)	% Change (2019-2021)
January	10,701	10,275	5,564	**-46%**	**-48%**
February	11,385	10,892	6,325	**-42%**	**-44%**
March	11,403	8,126	7,377	**-9%**	**-35%**
April	11,113	3,365	8,510	**153%**	**-23%**
May	11,689	4,451	9,402	**111%**	**-20%**
June	11,689	6,268	9,768	**56%**	**-16%**
July	11,689	7,968	9,259	**16%**	**-21%**
August	13,533	7,928	9,924	**25%**	**-27%**
September	13,105	8,810	10,127	**15%**	**-23%**
October	11,980	8,662	9,500	**10%**	**-21%**
November	11,618	8,943	10,400	**16%**	**-10%**
December	10,818	8,520	9,729	**14%**	**-10%**

- The average daily traffic flows were lower throughout each month of 2021 relative to 2019. This may reflect the continued impact of the COVID-19 pandemic on travel patterns (e.g., increased working from home), which could persist as a long-term societal change into the future.
- From April onwards, traffic flows for 2021 were higher than 2020 and significantly so from April to June.

5.9.2.3 Link Counts

ACC provided link count data from the City Centre Model along the eastern section of the study corridor. Annual average daily flows (AADF) were provided for various links as shown below.

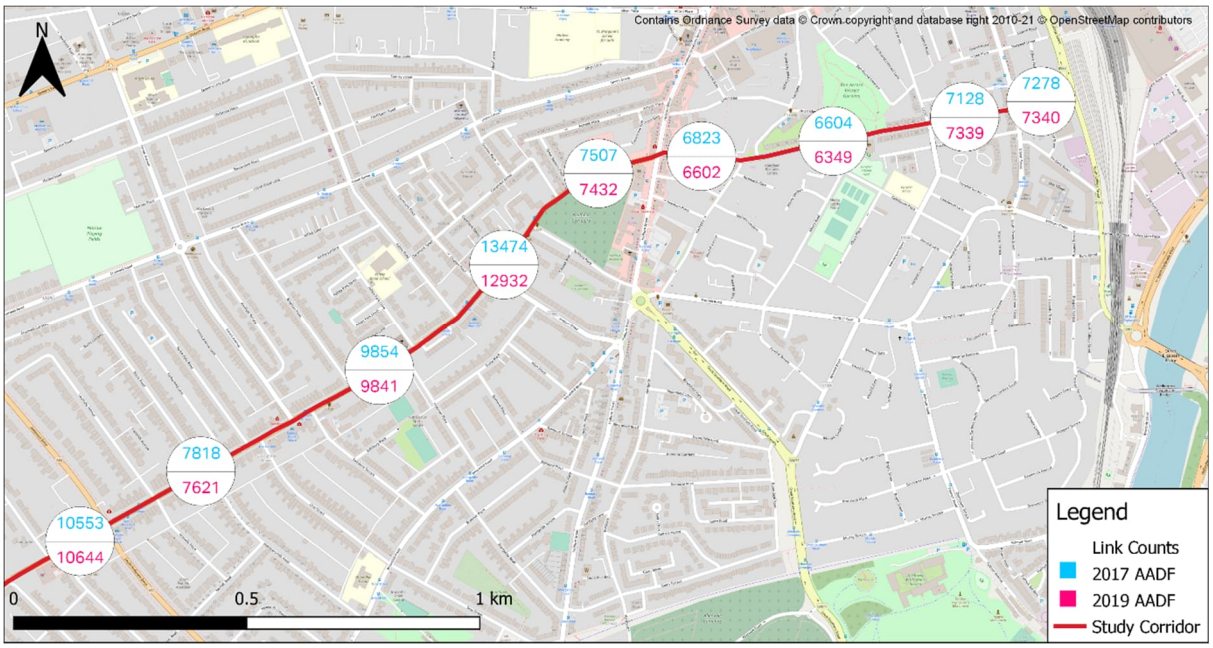


Figure 5.45: A93 AADF Link Counts

- There was an AADF decrease across the majority of links between 2017 and 2019, possibly reflecting the role of the AWPR is redistributing traffic in the region.
- The highest flows were recorded at the Holburn Road junction, which could suggest that Holburn Road is being used as part of an orbital route with Ashley Road.

5.9.3 Road Safety

Table 5.13 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. Plans showing incident locations for each section are provided in **Appendix B**.

Table 5.13: Road Safety Incidents along Study Corridor (2016-2020)[40]

	Pedestrians			Pedal Cycles			Buses			All Vehicles		
	Slight	Serious	Fatal	Slight	Serious	Fatal	Slight	Serious	Fatal	Slight	Serious	Fatal
Year	**Section 1: Aberdeenshire**											
2016	0	0	0	0	0	0	0	0	0	0	1	0
2017	0	0	0	0	0	0	1	0	0	5	1	0
2018	1	1	0	1	0	0	0	0	0	5	1	0
2019	1	0	0	0	0	0	0	0	0	3	0	0
2020	0	0	0	0	0	0	0	0	0	0	1	0
Year	**Section 2: Peterculter – Cults**											
2016	0	0	0	0	0	0	0	0	0	3	0	0
2017	0	0	0	0	1	0	0	0	0	1	1	0
2018	1	0	0	2	1	0	0	0	0	4	2	0
2019	0	0	0	0	0	0	0	0	0	1	2	0
2020	0	0	0	0	0	0	0	0	0	0	1	0
Year	**Section 3: Cults – City Centre**											
2016	0	0	0	1	0	0	0	0	0	1	0	0
2017	0	0	0	0	0	0	0	0	0	0	1	0
2018	0	0	0	1	0	0	0	0	0	1	1	0
2019	0	0	0	1	0	0	0	0	0	2	1	0
2020	1	0	0	0	0	0	0	0	0	2	0	0

- There were no fatal incidents recorded during this time period on the study corridor. However, it should be noted that there was a fatal incident involving a motorcyclist between Peterculter and Drumoak in October 2021.
- The highest number of incidents involving vulnerable users (pedestrians and cyclists) were recorded along the Peterculter to Cults section of the corridor, including two serious incidents involving pedal cycles. These were recorded within Cults, at the A93 junctions at Kirk Brae and Westerton Road.
- Overall, there were 28 slight incidents, 13 serious incidents and zero fatal incidents recorded along the study corridor between 2016 and 2020.
- In addition to the above, a serious incident occurred on the A93 between Peterculter and Drumoak in July 2021.

5.9.4 Car Sharing

Nestrans supports a carshare database[41] through Getabout, where organisations can use their own private groups within the scheme. The total number of participants signed up to this scheme has generally been increasing year on year since 2007/08 from 811 to 3,547 in 2019/20, an increase of 337% as reported in the latest Nestrans monitoring report[42]. It is possible that actual numbers of those car sharing are higher than reported numbers due to the amount of informal car sharing that takes place between work colleagues in the region. Whilst car sharing has been discouraged throughout the COVID-19 pandemic, it is unclear how the impacts of the pandemic will be reflected in car sharing levels in future monitoring years.

[40] Created using information from CrashMap - https://www.crashmap.co.uk/
[41] https://liftshare.com/uk/community/getabout
[42] https://www.nestrans.org.uk/wp-content/uploads/2020/07/Monitoring-report-2020.pdf

5.9.5 Electric Vehicles

The diagram below outlines the number of licensed ultra-low emission vehicles (ULEVs)[43] along the A93 corridor[44] since the beginning of 2014.

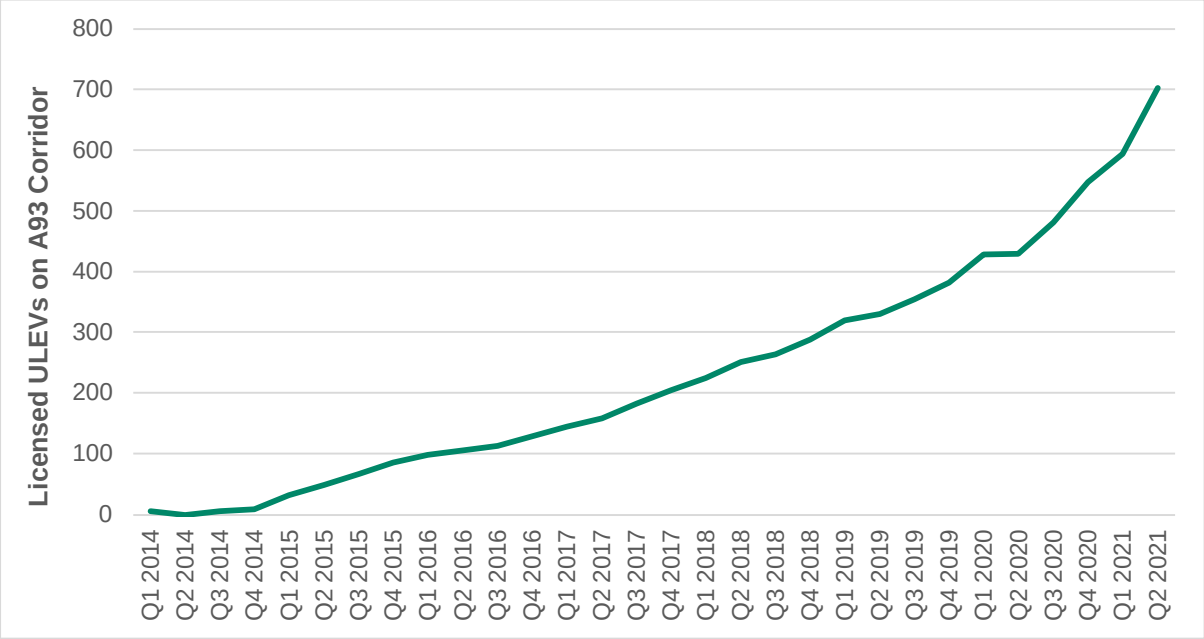


Figure 5.46: Ultra-Low Emission Vehicles Licensed on the A93 Corridor 2014-2021[45]

- There has been a significant increase in the number of licensed ultra-low emission vehicles on the corridor in recent years to a high of 703 in Q2 2021.

The diagram below shows the location of electric vehicle (EV) charging infrastructure in relation to the study corridor based on ChargePlace Scotland data.

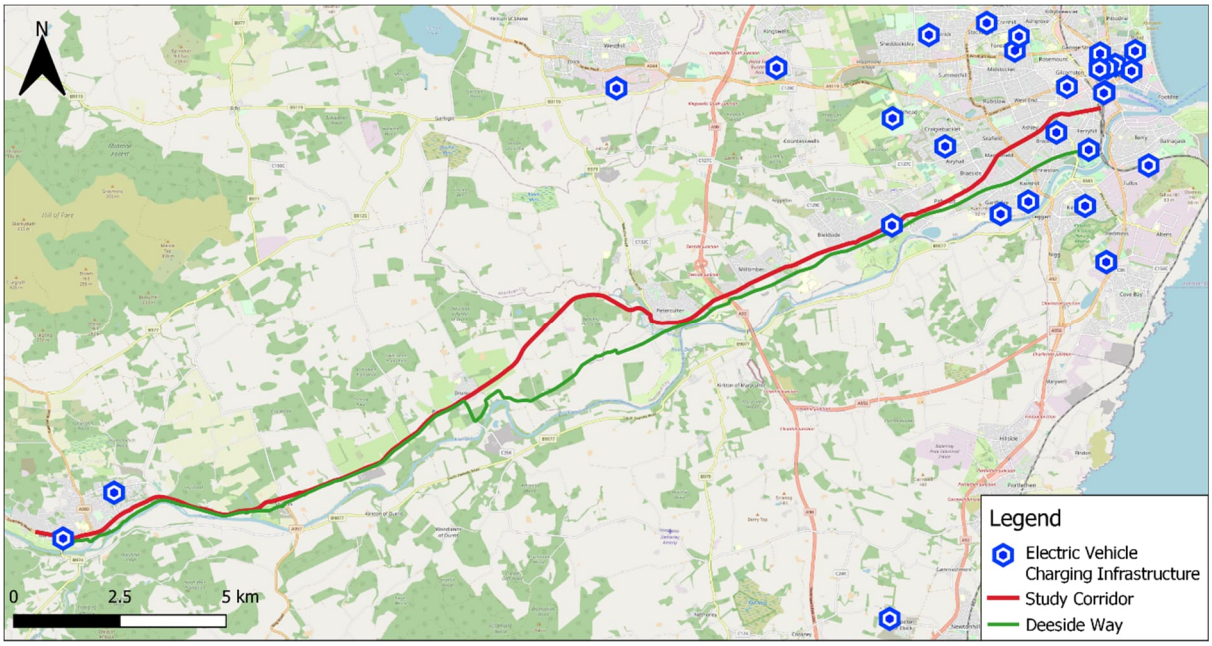


Figure 5.47: EV Charging Infrastructure

- There is limited EV charging infrastructure along the study corridor, particularly for communities between Banchory and Cults.

[43] Ultra-low emission vehicles (ULEVs) are vehicles that are reported to emit less than 75g of carbon dioxide (CO_2) from the tailpipe for every kilometre travelled. In practice, the term typically refers to battery electric, plug-in hybrid electric and fuel cell electric vehicles.
[44] Postcode districts used to define the A93 corridor include AB10, AB11, AB13, AB14, AB15, AB31, AB34 and AB35.
[45] Department for Transport, Table VEH0134a, https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01

5.10 Freight

5.10.1 Freight Routes

The diagram below provides an overview of freight routes along the study corridor.

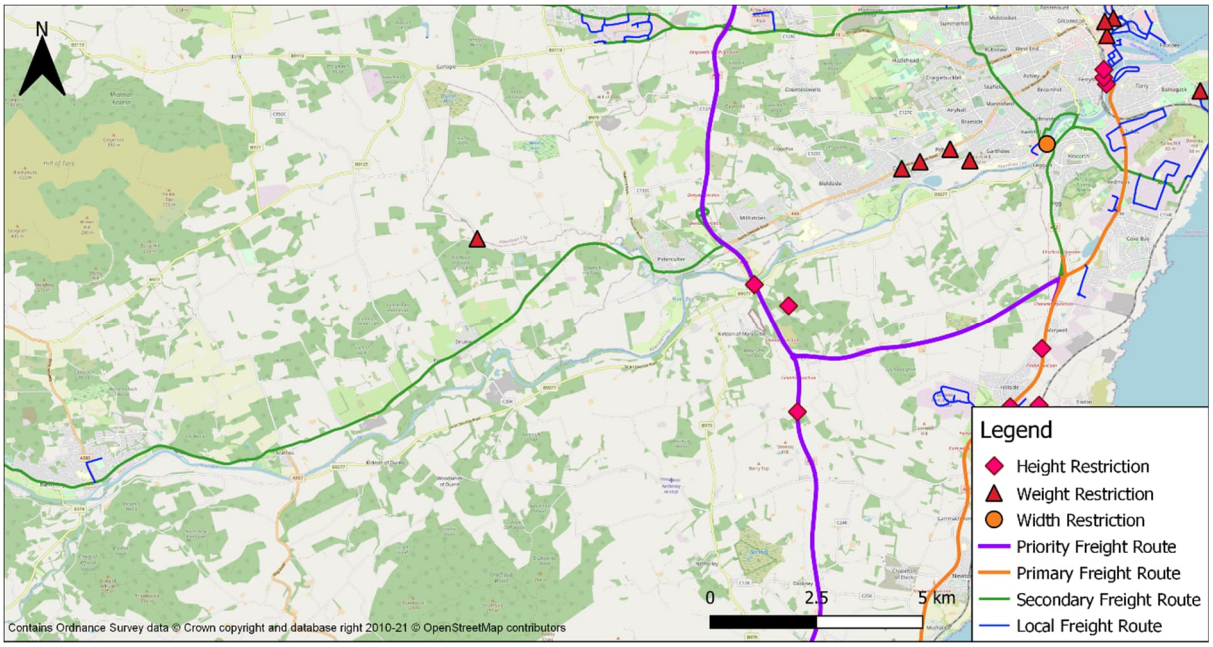


Figure 5.48: Freight Routes

- The A93 corridor between Banchory and the AWPR Deeside Junction is a **secondary** freight route. As per the principles of the roads hierarchy, such routes should not be used or promoted for through freight traffic.
- To the east of the AWPR Deeside Junction, the A93 is not a freight route and there are weight restrictions (7.5T) on three roads connecting North Deeside Road to Inchgarth Road – St Devenick's Place, Westerton Road and Pitfodels Station Road.

5.10.2 Freight Counts

The diagram below presents average daily two-way freight flows for count locations in the west of the study corridor using information from ACC and Aberdeenshire Council counters. It should be noted that due to limitations with the data available, 2018 information is presented for five of the six sites, which is prior to the opening of the AWPR.

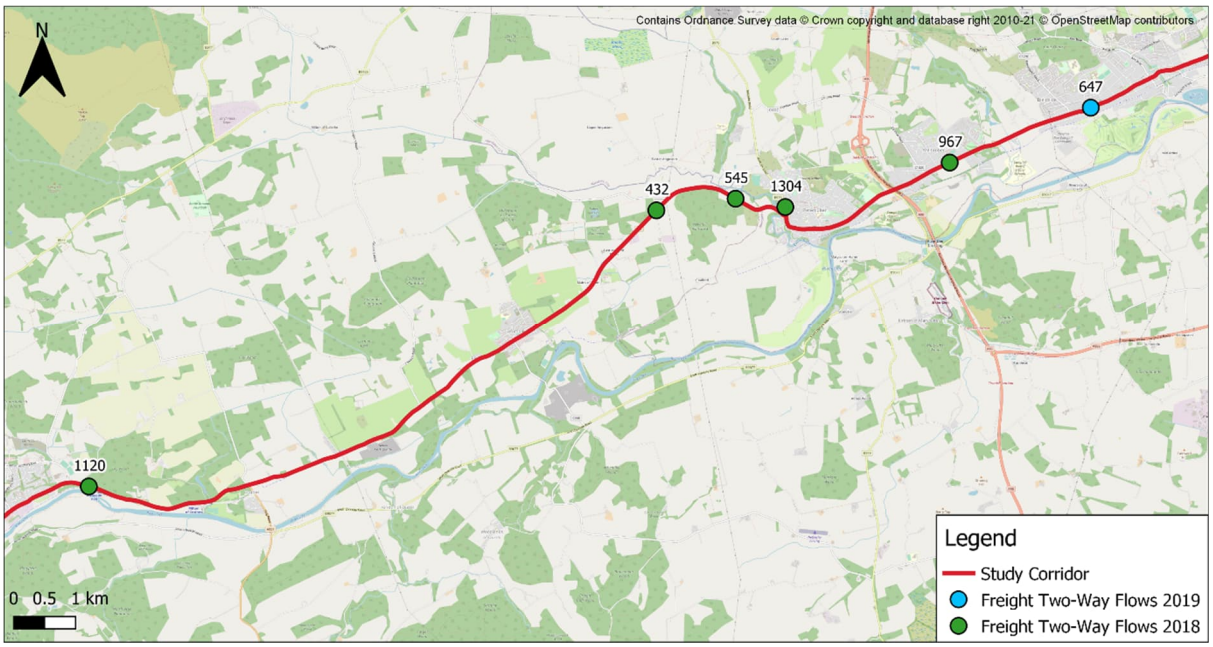


Figure 5.49: Average Daily Two-Way Freight Flows (Source: ACC and Aberdeenshire Council)

The diagram below presents average daily freight flows from 2017 and 2019 along links in the eastern section of the corridor using information from ACC's City Centre Model.

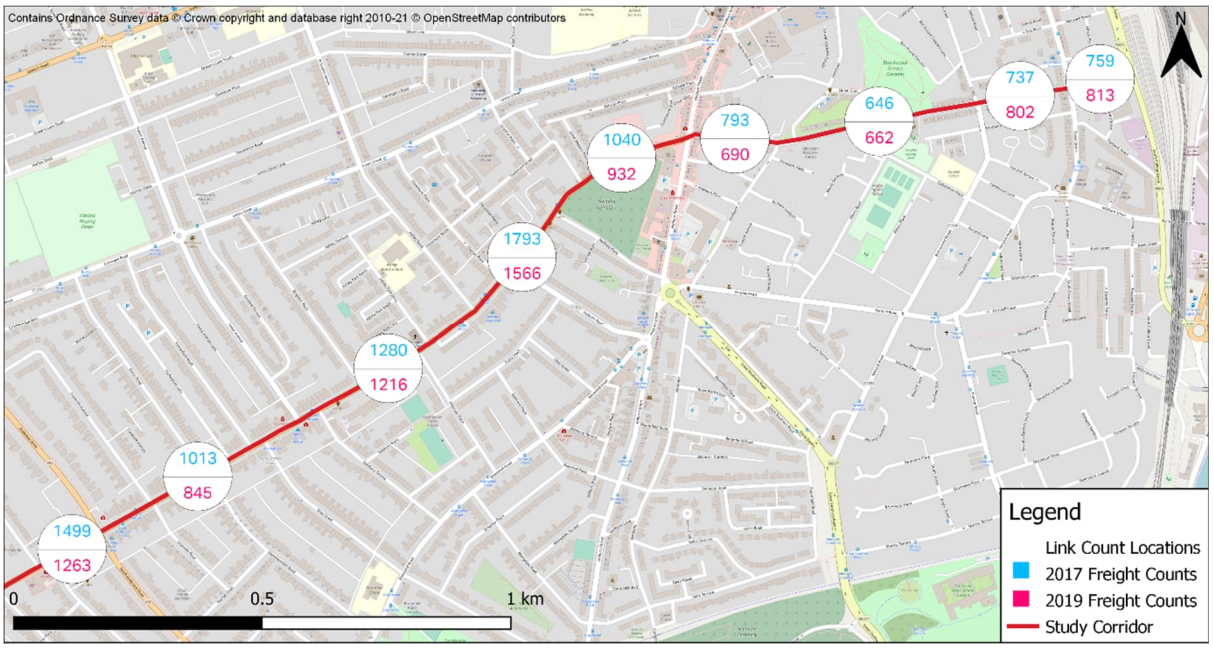


Figure 5.50: A93 AADF Link Counts – Freight Vehicles (HGVs and LGVs)[46]

- Freight flows along the corridor are relatively low, reflecting that the A93 is not a primary freight route. Counts are generally higher in the east of the corridor between Anderson Drive and Holburn Street than in the west of the corridor in Peterculter and Milltimber. To the east of Holburn Street, freight flows decrease to South College Street.

[46] Information provided from ACC City Centre Model

6. Planning Context

6.1 Introduction

This section provides an overview of the planning context of the study area, providing information on relevant development allocations and planning applications along the corridor.

6.2 Local Development Plan Review

6.2.1 Aberdeenshire Council

The Aberdeenshire Proposed Local Development Plan (LDP) 2020 was published for consultation in May 2020. The relevant areas within the plan have been reviewed and are summarised as follows. Some allocations in the Proposed LDP 2020 remain from the earlier 2017 publication of the plan and this has been noted within the 'LDP' column of the tables that follow.

6.2.1.1 Banchory

The allocations for Banchory in the Proposed LDP 2020 are shown in the diagram below.

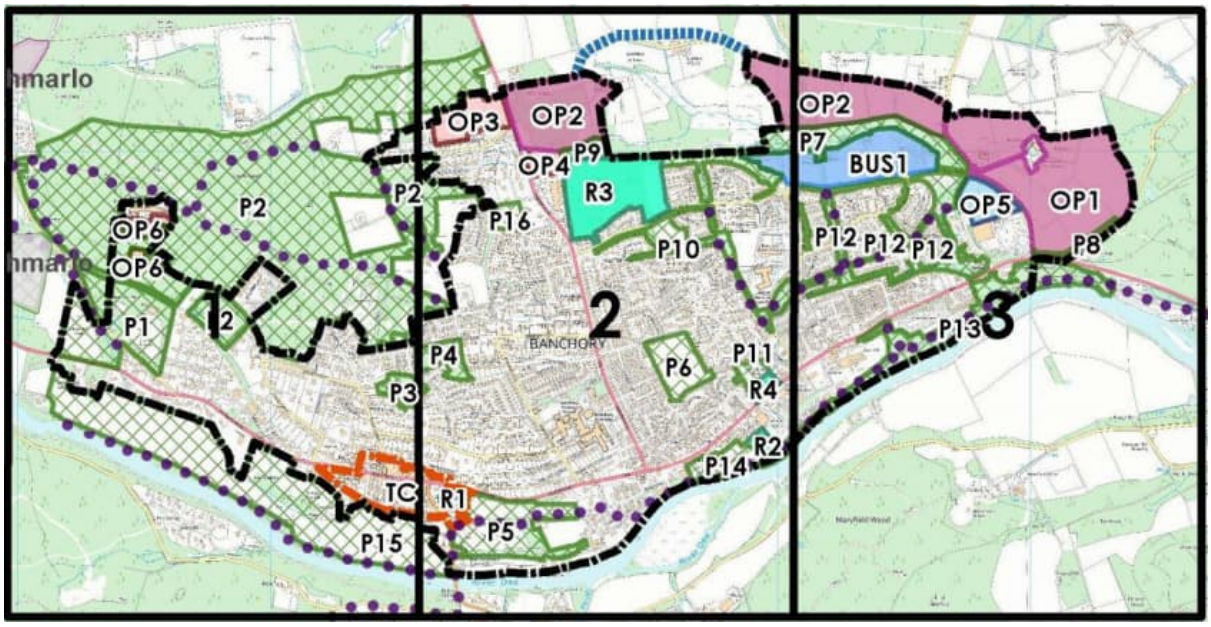


Figure 6.1: Banchory Development Allocations in the Proposed LDP 2020

Further details of the allocations are provided in the table below.

Table 6.1: Details of Development Allocations in Banchory

Ref	LDP	Description	Progress
OP1	2017	Mix of uses including a 32 home demonstration eco-village, tourism uses, and community uses including playing fields, an all-weather pitch and a Park and Ride facility. The site has a 5-year effective build out of 25 units.	Subject to pending planning application (APP/2019/1306). Technical matters resulting in hold up. Notwithstanding, projected delivery 2022-2026.
OP2	2017	345 homes and 2ha of business land	Project completion beyond 2028.
OP3	2017	50 homes	Delivery projected 2022-2024. Change in developer may delay things slightly but completion is expected within the new Plan period.
OP4	2017	15 homes	Subject to FPP (APP/2018/2493) with decision issued July 2020. Delivery projected 2022-2024.

Ref	LDP	Description	Progress
OP5	New	Retail (class 1) uses restricted to floor areas over 6000m^2 for bulky comparison outlets where town centre sites are not available.	No update available – awaiting adoption of new LDP.
OP6	New	40 homes	No update available – awaiting adoption of new LDP.

6.2.1.2 Crathes

As shown in the diagram below, there are no housing allocations in the Proposed LDP 2020 for Crathes. There are three areas of protected land within Crathes.

Figure 6.2: Crathes Allocations in the Proposed LDP

The LDP 2017 included OP1, which was a housing allocation for 45 homes to the west of the A957 and south of the Deeside Way. This site was projected for completion in 2021 and therefore has not been included within the Proposed LDP.

6.2.1.3 Drumoak

The allocations for Drumoak in the Proposed LDP 2020 are shown in the diagram below.

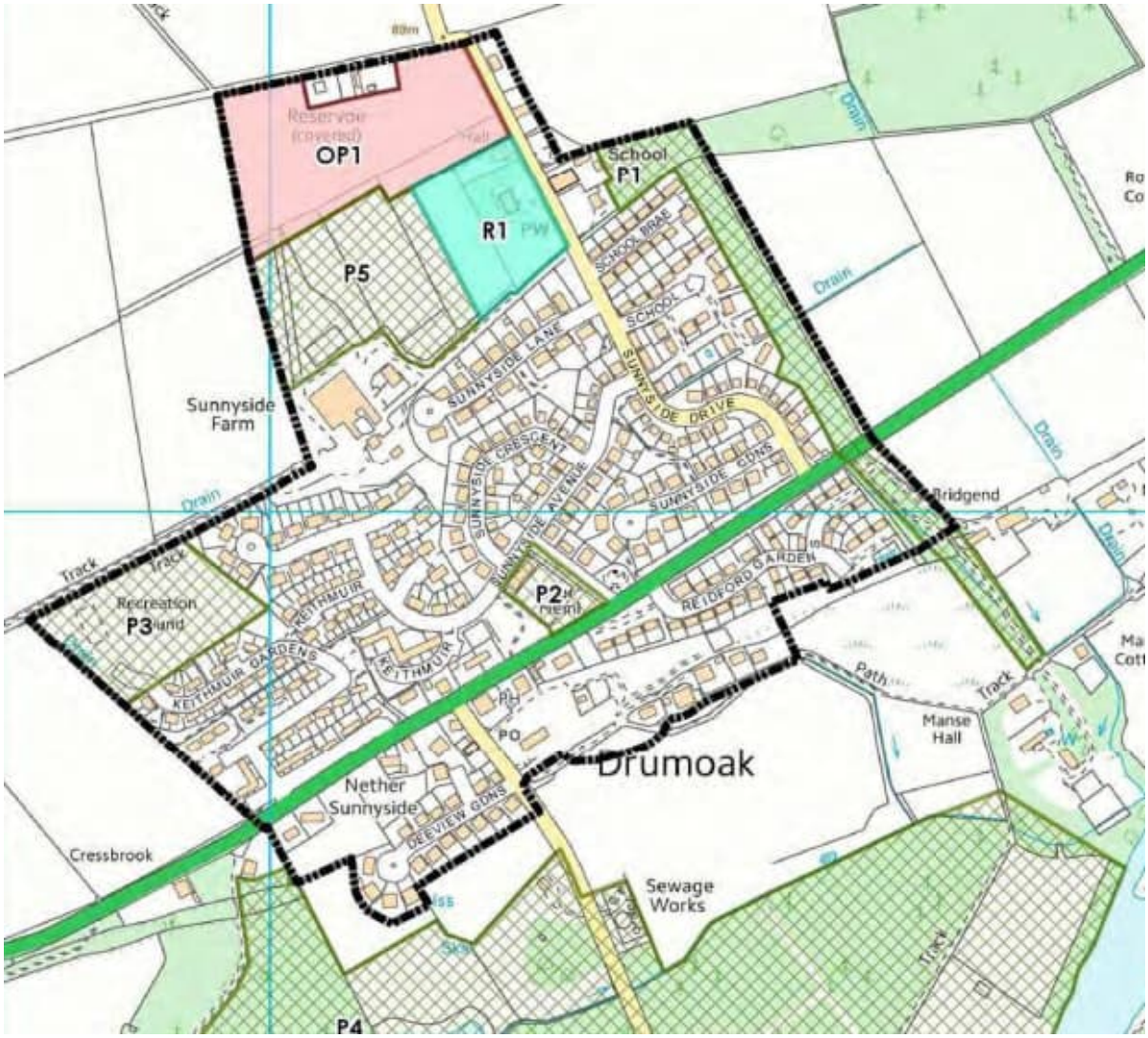


Figure 6.3: Drumoak Development Allocations in the Proposed LDP 2020

Further details of the allocations are provided in the table below.

Table 6.2: Details of Development Allocations in Drumoak

Ref	LDP	Description	Progress
OP1	2017	44 homes	11 units still remain, projected for completion in 2023. Proposed to be carried forward to next LDP as OP1 for 11 homes.

6.2.1.4 Inchmarlo

Although Inchmarlo is located outwith the study area, it is considered that the scale of development planned could have an impact on the study corridor. The allocations for Inchmarlo in the Proposed LDP 2020 are shown in the diagram below.

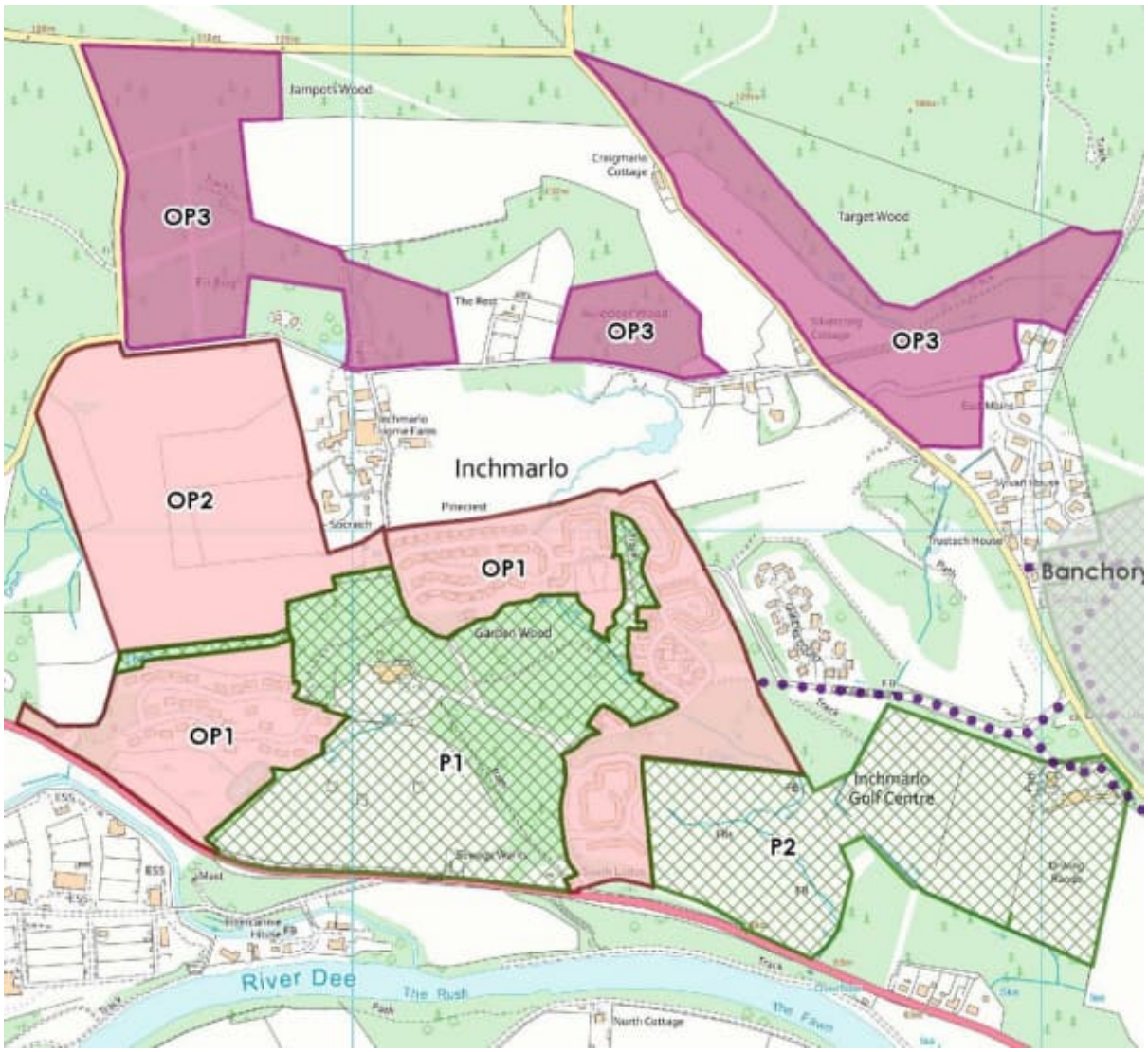


Figure 6.4: Inchmarlo Development Allocations in the Proposed LDP 2020

Further details of the allocations are provided in the table below.

Table 6.3: Details of Development Allocations in Inchmarlo

Ref	LDP	Description	Progress
OP1	2017	Allocation for 60 homes, intended to meet the retirement housing needs of the area.	A Masterplan for the site was approved in 2015 and build out has commenced. There is a remaining capacity at the site of 49 units, with the 5-year effective build out rate being 36 units.
OP2	New	Newly allocated site for 120 homes and is also intended to meet retirement housing needs in the area.	No update available – awaiting adoption of new LDP.
OP3	New	Newly allocated site for a mix of uses including 85 homes, tourism, leisure and business including a hotel with hotel lodges.	No update available – awaiting adoption of new LDP.

6.2.2 Aberdeen City Council

Within the ACC local authority area, there are 13 allocations within the Proposed LDP 2020 which are of relevance to the A93 Multi-Modal Corridor Study. These are shown in the diagram below.

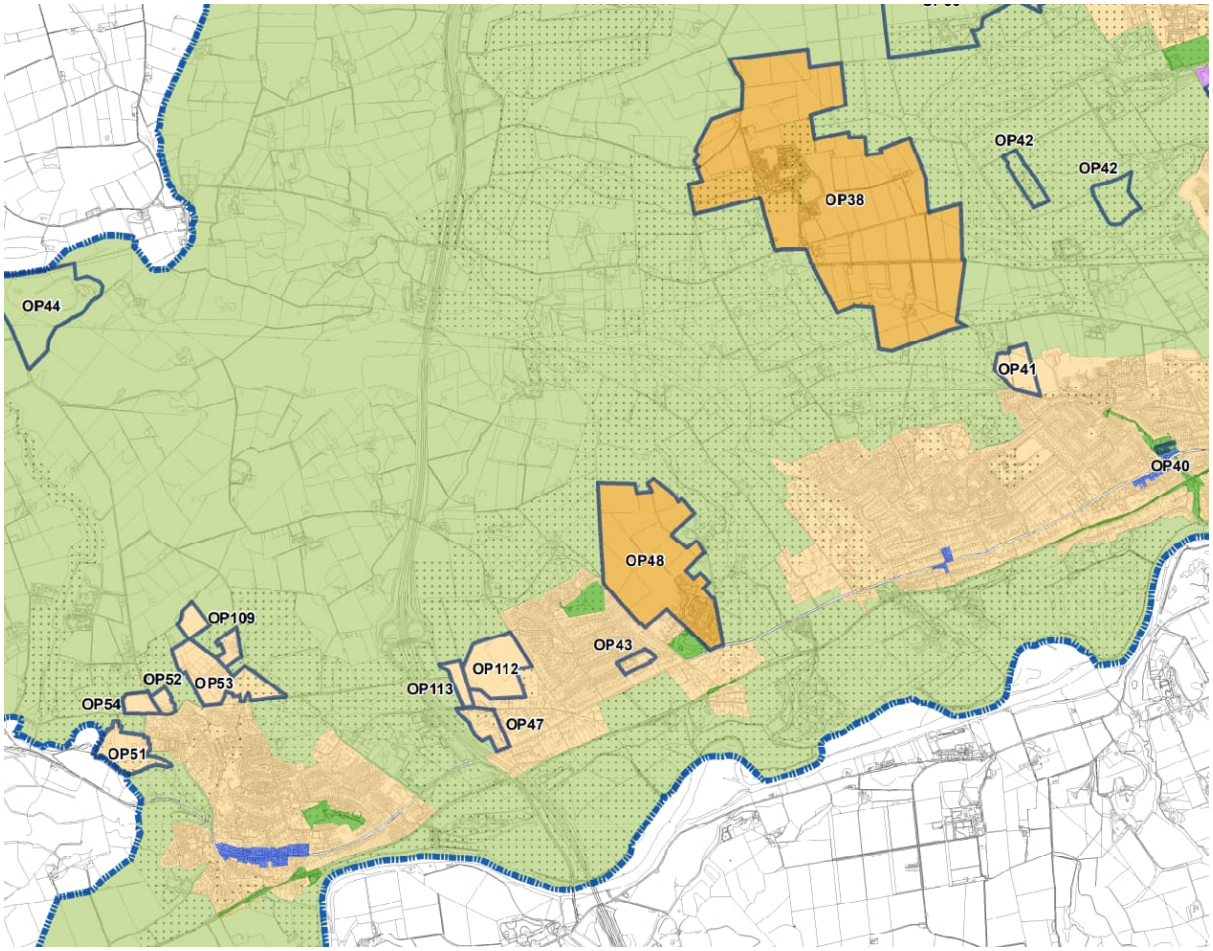


Figure 6.5: ACC Proposed Local Development Plan 2020 Allocations

Further details of the allocations are provided in the table below.

Table 6.4: Details of Development Allocations in Aberdeen City

Settlement	Ref	LDP	Description	Progress
Peterculter	OP51	2017	19 homes, a hydroelectric scheme, fish pass, football pitch, changing facilities and car parking	Allocation constrained.
	OP52	2017	8 homes	Allocation constrained.
	OP53	New	250 homes	No update available – awaiting adoption of new LDP.
	OP54	New	10 homes	No update available – awaiting adoption of new LDP.
	OP109	2017	19 homes	Allocation constrained.
Milltimber	OP43	2017	Site of Milltimber Primary School. Likely to be available for residential development with a capacity of 102 units.	Allocation constrained.
	OP47	2017	5 homes	Allocation constrained.
	OP48	2017	550 homes and 5 hectares (ha) of employment land	A Development Framework and Masterplan have now been approved. 448 units remain to be completed.
	OP112	2017	10 homes	Permission granted for 30 units.

Settlement	Ref	LDP	Description	Progress
	OP113	2017	8 homes	Permission granted for 11 units.
Cults	OP40	2017	38 homes	Allocation constrained.
	OP41	2017	280 homes	Development framework now approved. 137 units remain to be completed.
Countesswells	OP38	2017	3000 homes and 10 hectares of employment land	2,619 units remain to be completed, with an expected 5-year effective build out of 950 homes.
Garthdee	OP89	New	35 homes	No update available – awaiting adoption of new LDP.

In addition to the above, there are two allocations of relevance to the study corridor in the 2017 LDP that have not been carried through to the Proposed LDP 2020. The LDP 2017 allocation OP46 is a small residential allocation in the west of Milltimber for 5 homes. To date, 2 homes have been completed with the remaining 3 units anticipated to be completed in the next five years. The LDP 2017 allocation OP114 is an allocation in the south of Milltimber for 60 homes and 1,225m^2 of office/retail space. This allocation currently has no build out at the site but is expected to be completed in the next five years.

6.3 Planning Applications

This section provides a review of live planning applications within the study area vicinity as of January 2022.

6.3.1 Aberdeenshire Council

There are two relevant planning applications within the Aberdeenshire section of the study corridor.

Planning Application Reference APP/2019/1306 – Decision (Approved)

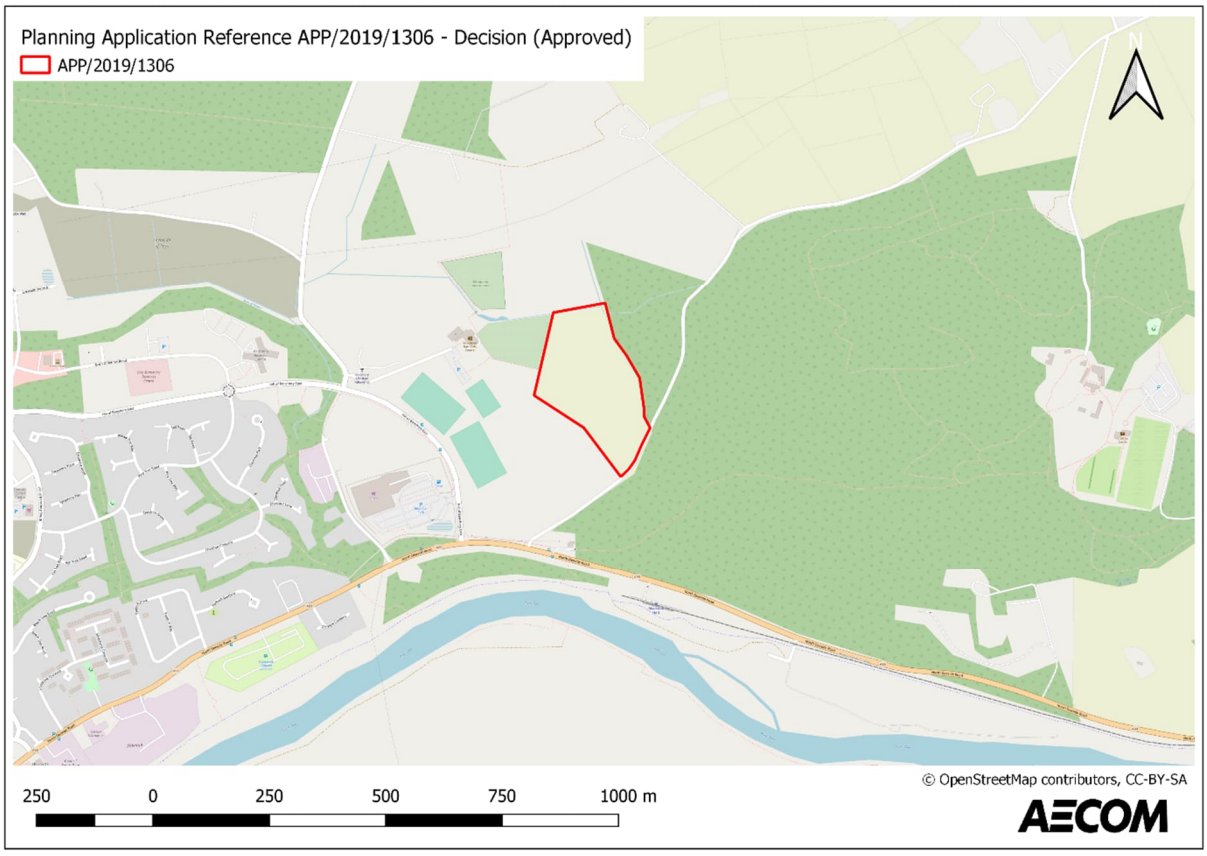


Figure 6.6: Planning Application Reference APP/2019/1306

- This application refers to the OP1 allocation in Banchory within the Proposed LDP 2020. It comprises 32 housing units with associated infrastructure and open space. The application was approved in November 2021.

Planning Application Reference APP/2020/0685 – Decision (Approved)

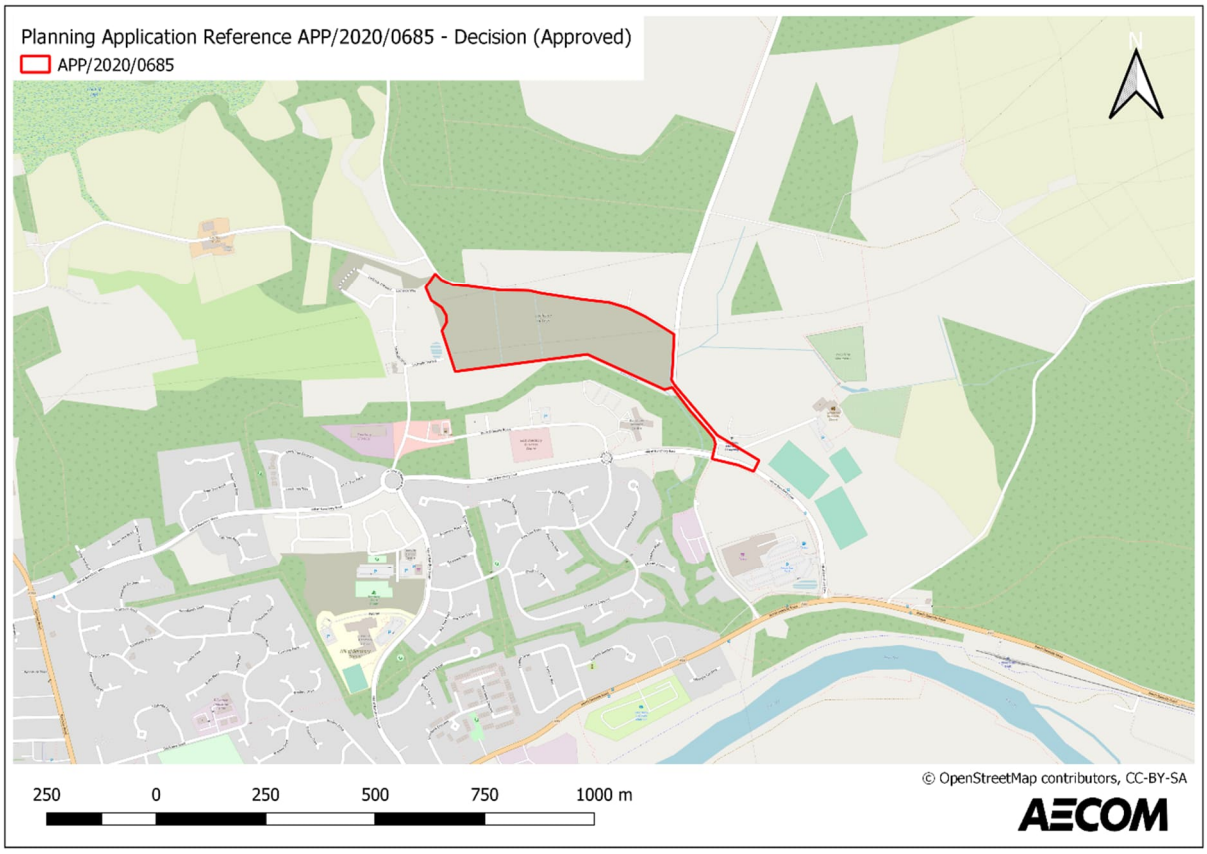


Figure 6.7: Planning Application Reference APP/2020/0685

- This application refers to the OP2 allocation in Banchory within the Proposed LDP 2020. It comprises 390 houses as well as commercial and business development.
- The application received approval in December 2020. This application follows previous applications for the site with planning references APP/2018/2796 and APP/2014/1973 which were approved in March 2019 and August 2017 respectively.

6.3.2 Aberdeen City Council

There are eight relevant planning applications within the Aberdeen City section of the study corridor.

Planning Application Reference 200535/PPP – Decision (Refused, Appeal in Progress)

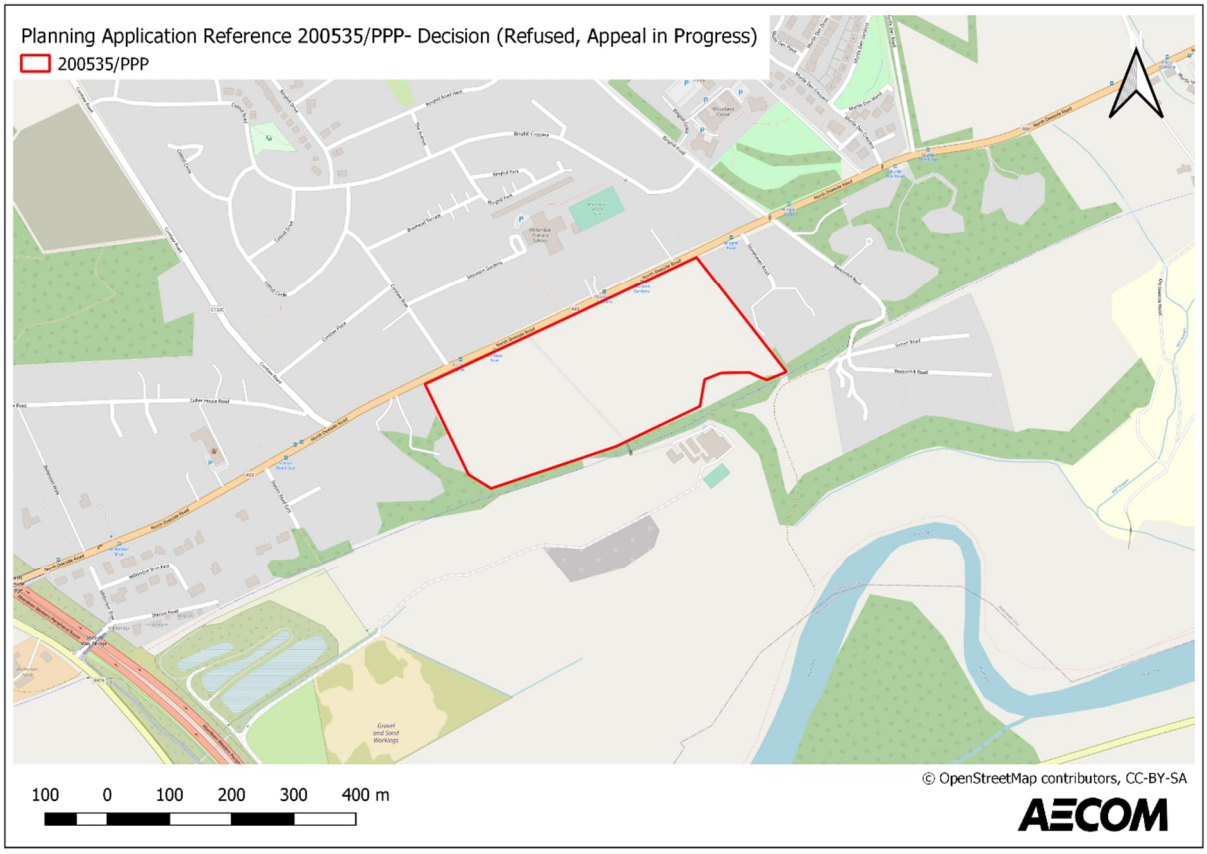


Figure 6.8: Planning Application Reference 200535/PPP

- This application is for the construction of a residential-led mixed use development of up to 99 residential units and retail of up to 2,000m^2 with associated infrastructure.
- The site was allocated within the 2017 LDP, however the application was initially refused due to the proposals being contrary to ACC's green belt policy which was considered to carry a greater weight than the LDP allocation. The application proposed a larger number of units than was originally accounted for in the LDP allocation. An appeal against the decision is currently in progress.

Planning Application Reference 181224/PPP – Decision (Pending)

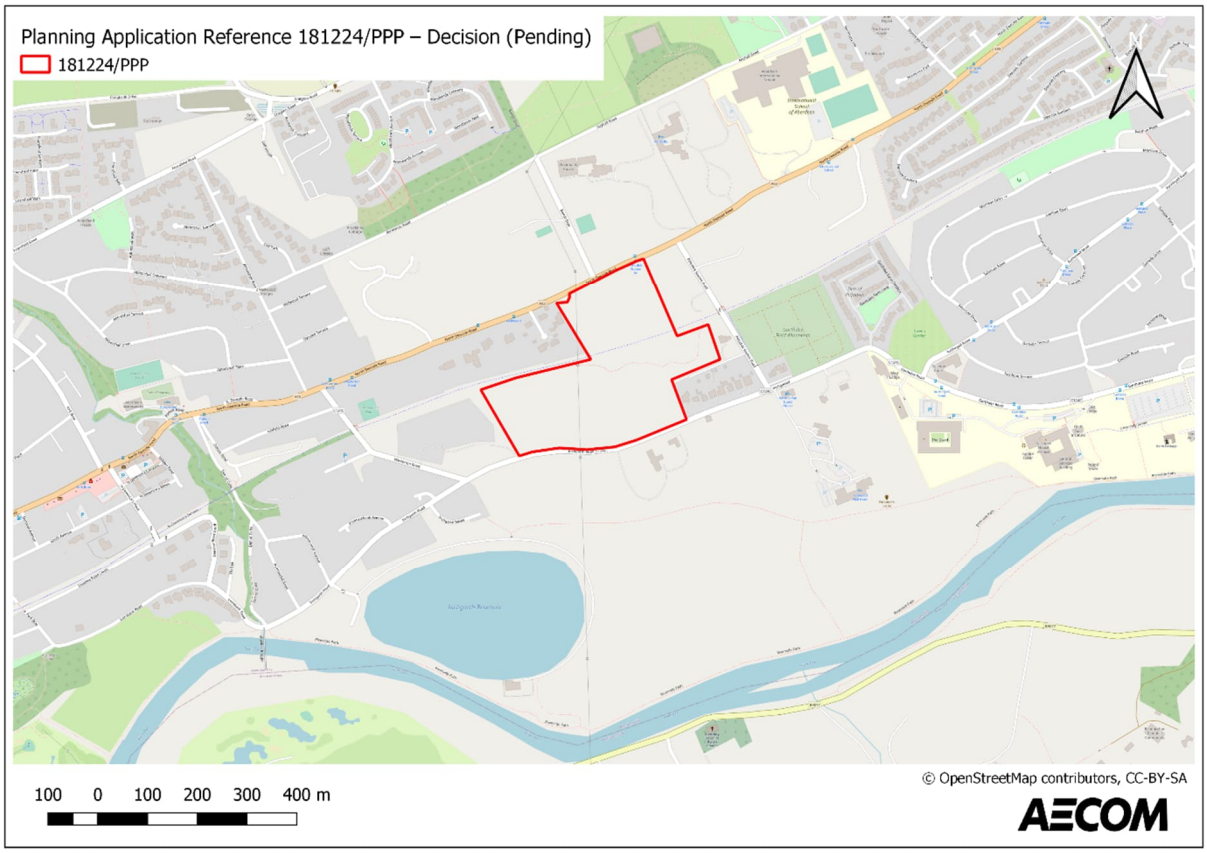


Figure 6.9: Planning Application Reference 181224/PPP

- This application is for a residential-led development for the retired/elderly (including affordable housing), a 50 bed care home and approximately 500m^2 of ancillary retail/community use, with public open space and associated infrastructure including a link road between the A93 and Inchgarth Road.
- The decision on the application is currently pending.

Planning Application Reference 120177 – Decision (Approved, site currently under construction)

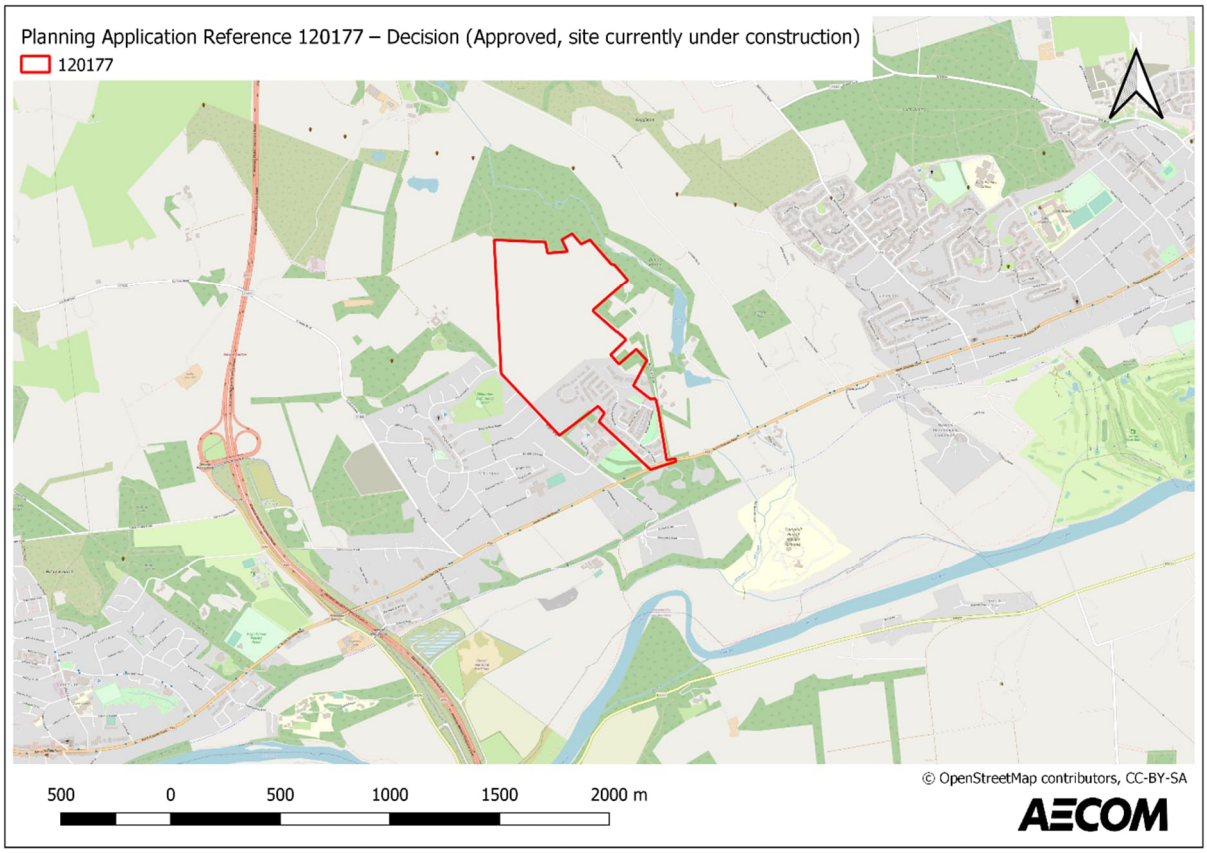


Figure 6.10: Planning Application Reference 120177

- This application refers to the OP48 allocation in Milltimber within the Proposed LDP 2020. It includes the creation of a two-phased sustainable residential and mixed use extension to Milltimber, comprising 550 houses.
- The site has built around 20% of the capacity with a further 130 units expected to be built in the next 5 years.

Planning Application Reference 190857/PAN – Decision (Further Consultation Required)

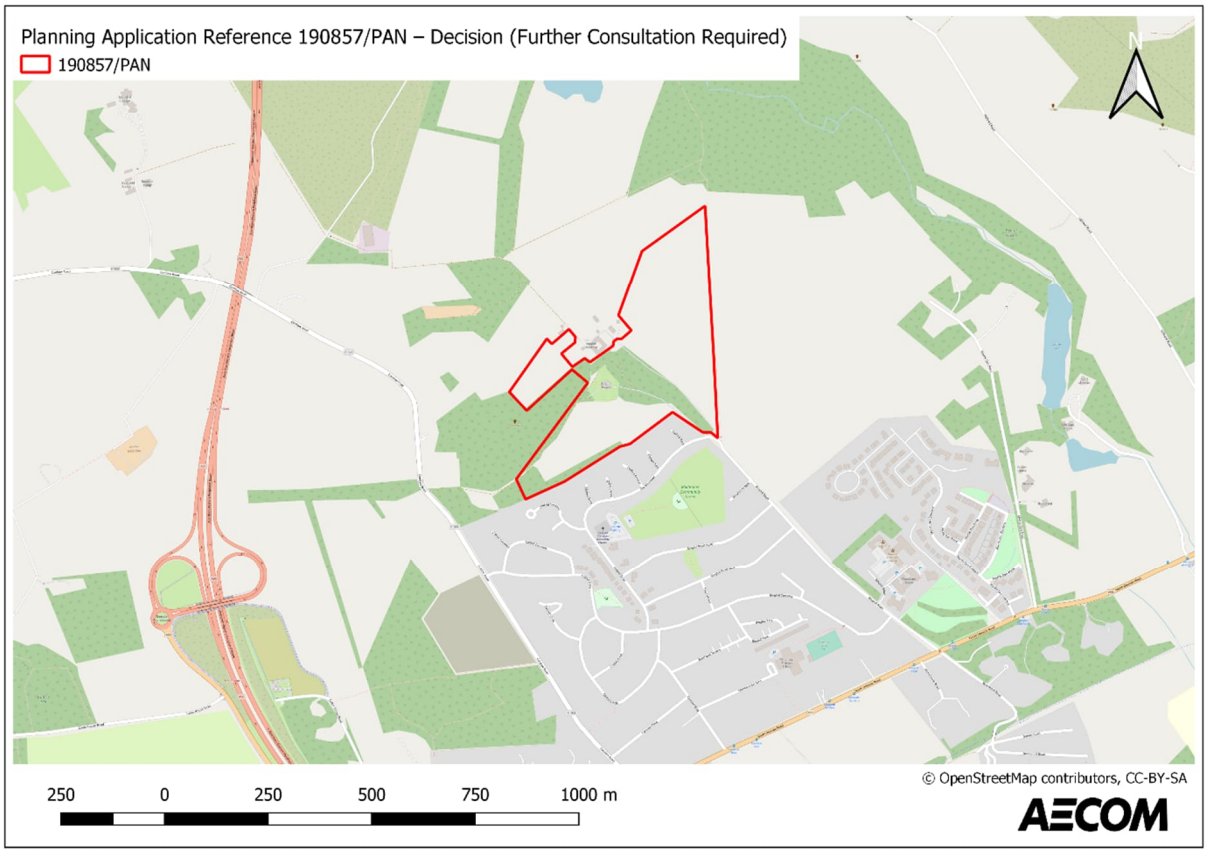


Figure 6.11: Planning Application Reference 190857/PAN

- This application is for a mixed-use major development incorporating a new retirement community, the extension to and conversion of Binghill House to a care home, new purpose built retirement and residential accommodation of up to 140 units and other supporting uses including retail and community allotments.
- A decision on the application made in May 2019 stated that consultation on the proposed development was insufficient and that a further pre-application consultation report was required.

Planning Application Reference 180661/PAN – Decision (Approved)

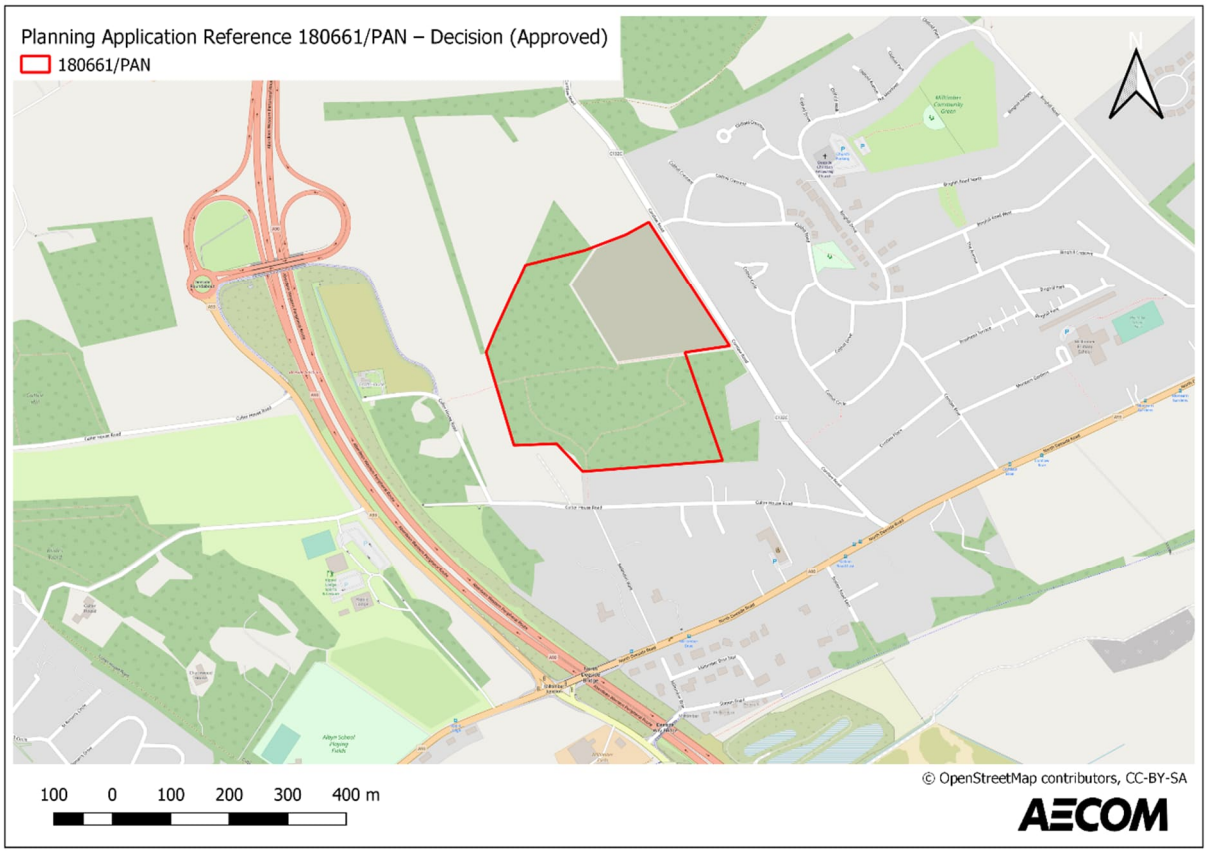


Figure 6.12: Planning Application 180661/PAN

- This application refers to the OP112 allocation in Milltimber within the Proposed LDP 2020. It is for a residential development containing up to 40 homes and associated infrastructure and landscaping.
- The application was approved in May 2018.

Planning Application Reference 170109/PAN – Decision (Further Consultation Required)

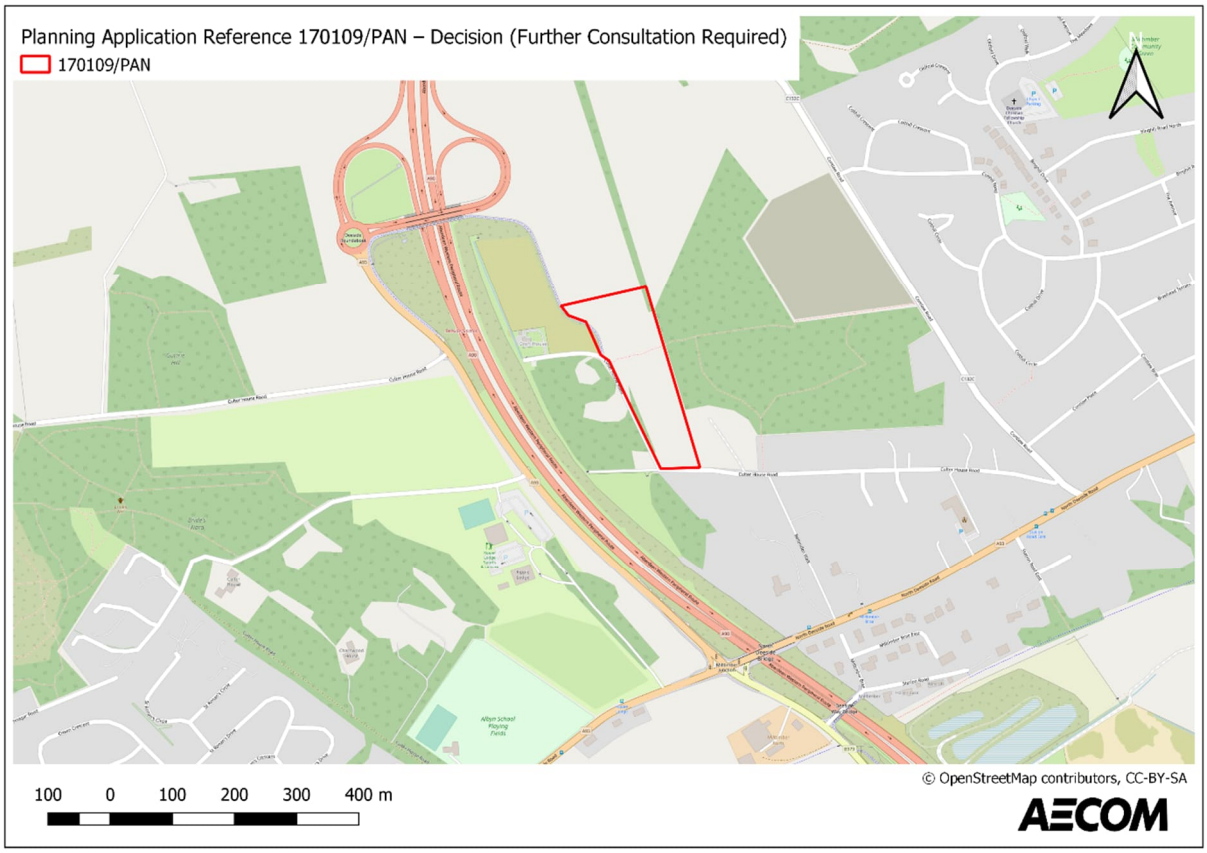


Figure 6.13: Planning Application Reference 170109/PAN

- This application refers to the OP113 allocation in Milltimber within the Proposed LDP 2020. It is for a residential development of approximately 16 units with associated access roads and public space.
- The planning application was determined in February 2017 with the decision that further consultation was required.

Planning Application 140438 – Decision (Approved with Legal Agreement)

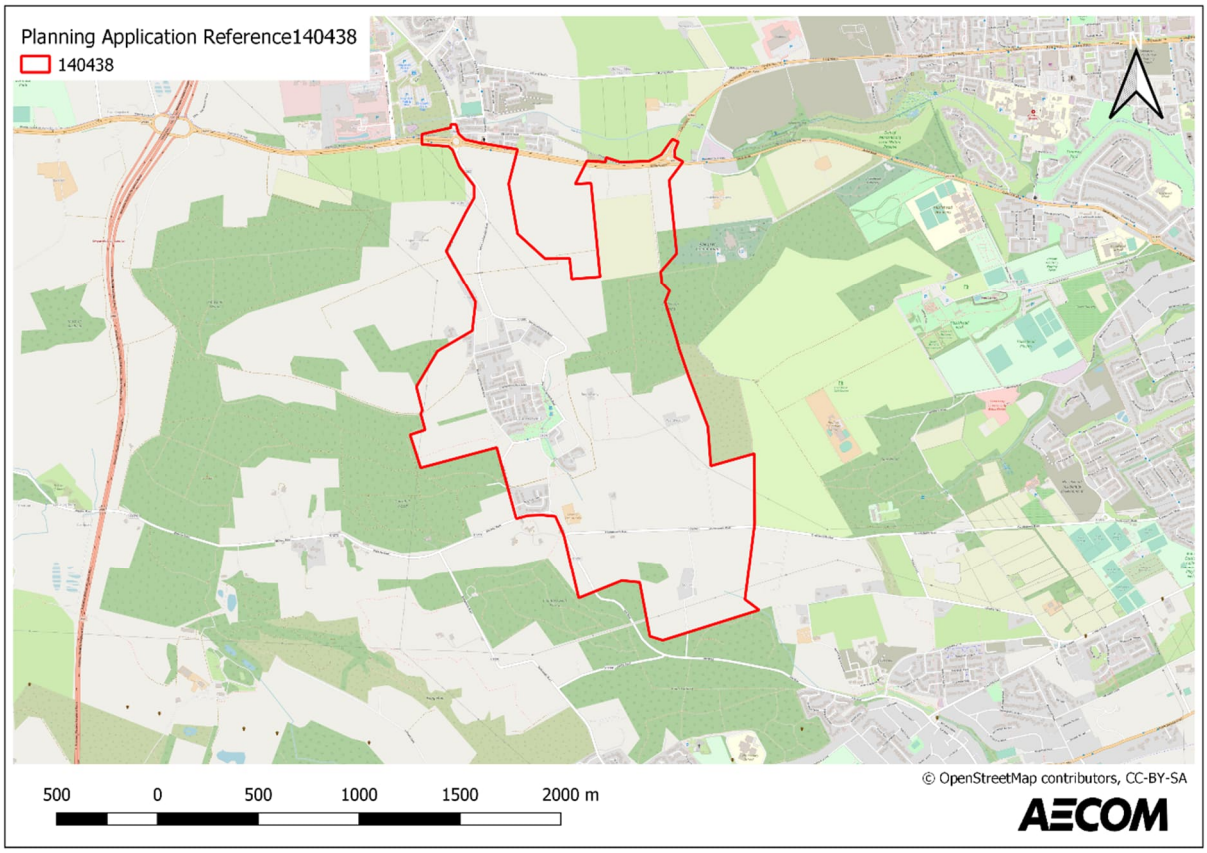


Figure 6.14: Planning Application Reference 140438

- This application refers to the Countesswells Development and is allocated in the ACC Proposed LDP 2020 as OP38. This is the largest development in the study area and has the capacity to eventually include 3,000 homes, employment, education, retail and community land with new access roads and landscaping. The site currently has a remaining capacity of 2,619 homes with 915 homes expected to be built in the next 5 years.
- The application was approved with Legal Agreement in April 2016. Initial phases of development have been built out while further applications have been submitted to address conditions set by ACC as build out at the site progresses.

Planning Application Reference 210936/PAN – Decision (Further Consultation Required)

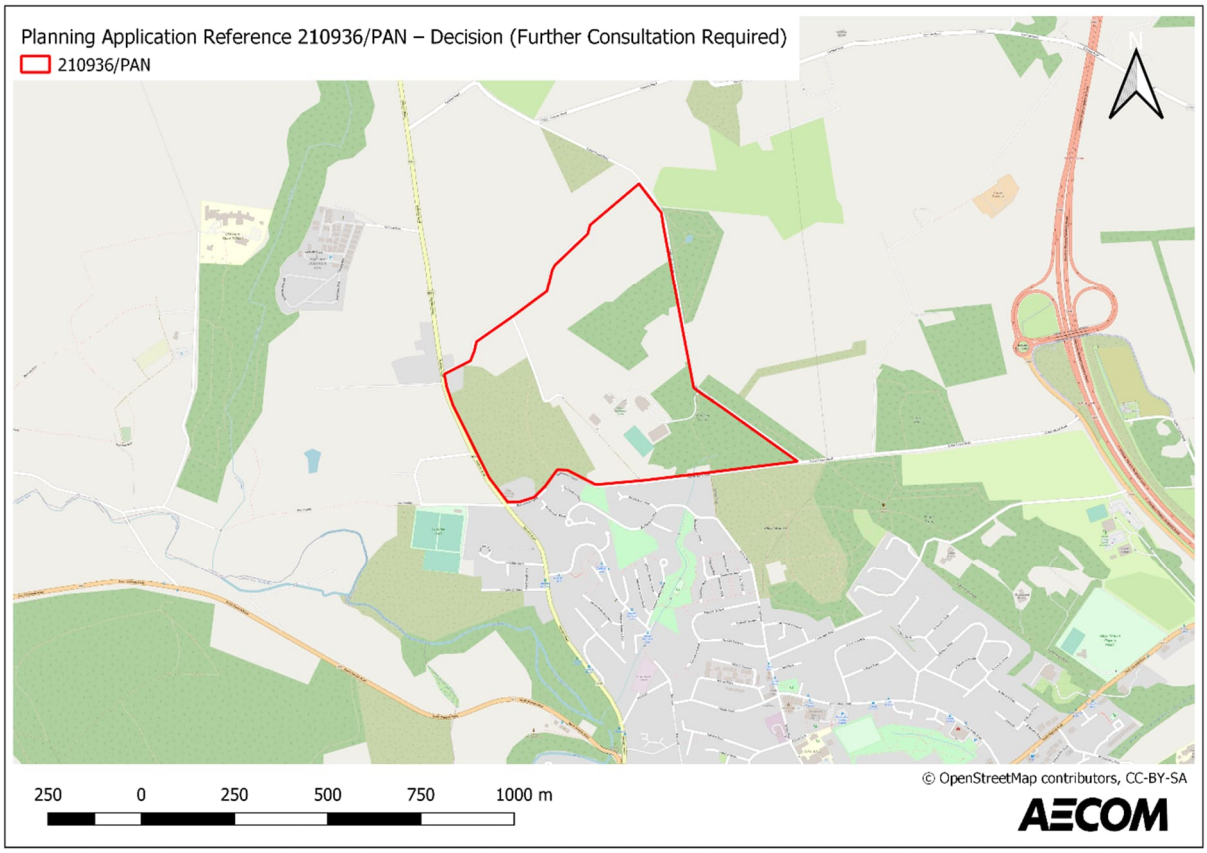


Figure 6.15: Planning Application Reference 210936/PAN

- This application refers to a major residential development of approximately 250 units of affordable and private housing with associated infrastructure and community space as well as an energy centre.
- It was determined that further consultation is required with immediate neighbours of the development.

7. Environmental Context

7.1 Introduction

This chapter provides an overview of the environmental considerations which are present along and in the vicinity of the A93 corridor. The study area extends for approximately 28km along the A93 from Aberdeen in the east, where the study area is predominantly urban to Banchory in the west, where the study area is predominantly rural. In describing the environmental context consideration has been given to 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 (AQMA) within the study area.

This chapter is supported by Environmental Constraints Mapping provided in **Appendix C**.

7.2 Ecology and Biodiversity

Ecological designations have been identified from the NatureScot[47] and Scotland's Environment[48] websites. There are three sites designated for nature conservation interests within the study area as shown on **Figure 1** in **Appendix C**. These comprise:

- The River Dee Special Area of Conservation (SAC), which is designated for the presence of Annex II species, freshwater pearl mussel (Margaritifera margaritifera), Atlantic salmon (Salmo salar), and Otter (Lutra lutra). The River Dee SAC varies in its proximity to the A93 study corridor due to how the river meanders. At Milton Wood to the west of Crathes, a tributary which forms part of the River Dee SAC designation is crossed by the A93.
- Loch of Park Site of Special Scientific Interest (SSSI) (biological) is 800m north of the study corridor and lies 1.5km to the west of the village of Drumoak. The notified features of the SSSI include basin fen and wet woodland.
- Old Wood of Drum (SSSI) (biological) is 1.3km from the study corridor at its closest point and lies directly north of Drumoak and the study corridor. Upland oak woodland is cited as the qualifying feature for the SSSI.

A review of Ancient Woodland Inventory data available on Scotland's Environment map shows that ancient woodland is scattered throughout the study area. The majority of this woodland comprises Long-Established ancient woodland (of plantation origin). Small sections of ancient woodland intersect with the A93 at some locations: the approximate locations of which are to the west of Drumoak; Newmill Hill; to the west of Bieldside; and in between Cults and Braeside.

7.3 Landscape

A review of the landscape character types has been undertaken on the NatureScot website. The study area is characterised by a number of varying landscapes, extending from the eastern edge of the Grampian foothills to the urban centre of Aberdeen. As shown on **Figure 2** in **Appendix C**, moving from west to east along the study corridor, the landscape character types comprise broad wooded valley, undulating open farmland, farmed valley and river valley; and urban as the study area reaches Aberdeen.

7.4 Land Use

A review of existing land use has been undertaken from satellite imagery as well as the Land Capability for Agriculture (LCA). The LCA classification within the study area is shown on **Figure 3** in **Appendix C**. This ranks

[47] https://sitelink.nature.scot/map
[48] https://map.environment.gov.scot/sewebmap/

land based on its potential productivity and cropping flexibility. Upon review of this data the land capabilities of the study area show that the western portion of the A93 study corridor is mainly routed through land classed as capable of supporting mixed agriculture, with land at the town of Banchory classed as urban. To the east of the study corridor, in Aberdeen, the land capability is classed as urban. These areas comprise a mix of homes, shops and businesses.

7.5 Water Environment and Flood Risk

The majority of the study area is considered to have a low level of flood risk, which is defined as having less than 0.1% chance of flooding within any one year. There are small areas with high and medium surface water flooding risk scattered throughout the study corridor. Along the course of the River Dee, which runs adjacent to the study corridor, there is a high likelihood of river flooding which is defined as a 10% chance of a flood event occurring each year. There are several watercourses within the study area, including (from west to east) Bo Burn, Leuchar Burn, Culter Burn, Brodiach Burn/Ord Burn and Den Burn. Only Bo Burn and Culter Burn cross the A93 study corridor. Of all the watercourses identified, Bo Burn and Brodiach Burn/Ord Burn were considered of 'bad' quality status in 2014. The latest reported figures for these water courses in 2020 highlight that the quality has improved to 'moderate'.

The River Dee catchment from Banchory to Peterculter was considered to have a 'moderate' quality status in 2021. From Peterculter to the tidal limit of the River Dee, the catchment was considered to have a 'bad' quality status in 2021. Pressures from the modifications to bed, banks and shores from urban and rural land use, impacting on the physical conditions of the river, and water abstractions for the public water supply, impacting on water flows and levels, are cited as responsible for the 'bad' quality status of the river.

7.6 Cultural Heritage and Archaeology

There are a number of historical environmental records within the study area, which are illustrated in **Figure 1** in **Appendix C**.

Within 5km of the study area, there are approximately 26 scheduled monuments (monument or archaeological site of national or international importance). These range from cairns (Bogton cairn) to ancient settlements (Normandyke Roman camp). Within 500m of the study area, there are three scheduled monuments comprising Balbridie timber hall, which is 250m south of the A93 to the south of the River Dee; Bieldside cairn 300m north of the A93 and Crathes Castle neolithic timber hall 450m north of the A93.

There are four conservation areas within the study area: Pitfodels, Great Western Road, Ferryhill and Bon-Accord Crescent/Crown Street, with listed buildings concentrated in these areas. The A93 is routed through the Pitfodels conservation area for approximately 1km, the Great Western Road conservation area for approximately 2km and the Bon-Accord Crescent/Crown Street conservation area for 300m.

The highest concentration of listed buildings is in the Bon Accord Crescent/Crown Street conservation area, where there are over 200 listed buildings located. Of these, 116 are Category B listed and 103 are Category C listed.

In addition, there are three Garden and Designed Landscape Areas, all of which are the setting for Category A listed buildings. These include:

- Crathes Castle (located adjacent to the A93 study corridor), regarded as 'outstanding' for artistic, historic, horticultural, and architectural interests;
- Park House (located adjacent to the study area), designated as 'outstanding' for its scenic and architectural interests; and
- Drum Castle (located approximately 0.5km from the A93 corridor), designated as 'outstanding' for its historical, architectural and nature interests.

7.7 Air Quality

The study area intersects with the Aberdeen City Centre AQMA at Holburn Street and Anderson Drive, with restrictions in place for nitrogen dioxide (NO_2) and particulate matter (PM_{10}). The AQMAs can be seen on **Figure 1** in **Appendix C**.

7.8 Outdoor Access and Recreation

The Deeside Way is a long-distance path running for 41 miles from Aberdeen to Ballater. It forms part of the National Cycle Network (Route 195) and is used by walkers, cyclists and horse riders. Within the study area, there are two sections: Aberdeen to Drumoak which runs for 17km and is largely separated from the A93 and Drumoak to Banchory which runs for 11km in close proximity to the A93 with some short sections utilising the A93 itself.

7.9 Key Points

The key points emerging from the review of the environmental context are:

- There are small areas with a high likelihood of surface water flooding scattered throughout the study corridor, and along the course of the River Dee which runs adjacent to the study corridor.
- There are four conservation areas for historical environmental records, and three Garden and Designed Landscapes within the study area.
- The Deeside Way runs adjacent to the study corridor, occasionally sharing the footway of the A93 study corridor. It forms part of the National Cycle Network and is also a core path.

8. Stakeholder Consultation

8.1 Introduction

In order to further explore problems, issues, constraints and opportunities on the study corridor, an extensive programme of consultation has been undertaken to support the study. This chapter summarises the key outcomes from the engagement exercise.

8.2 Approach

A robust public and stakeholder consultation strategy is an essential part of the transport appraisal process, required to assess problems, issues, constraints and opportunities and to thereafter inform the assessment of option implementability in terms of public acceptability.

A number of steps were involved in delivering the first stage of the consultation process, as outlined below.

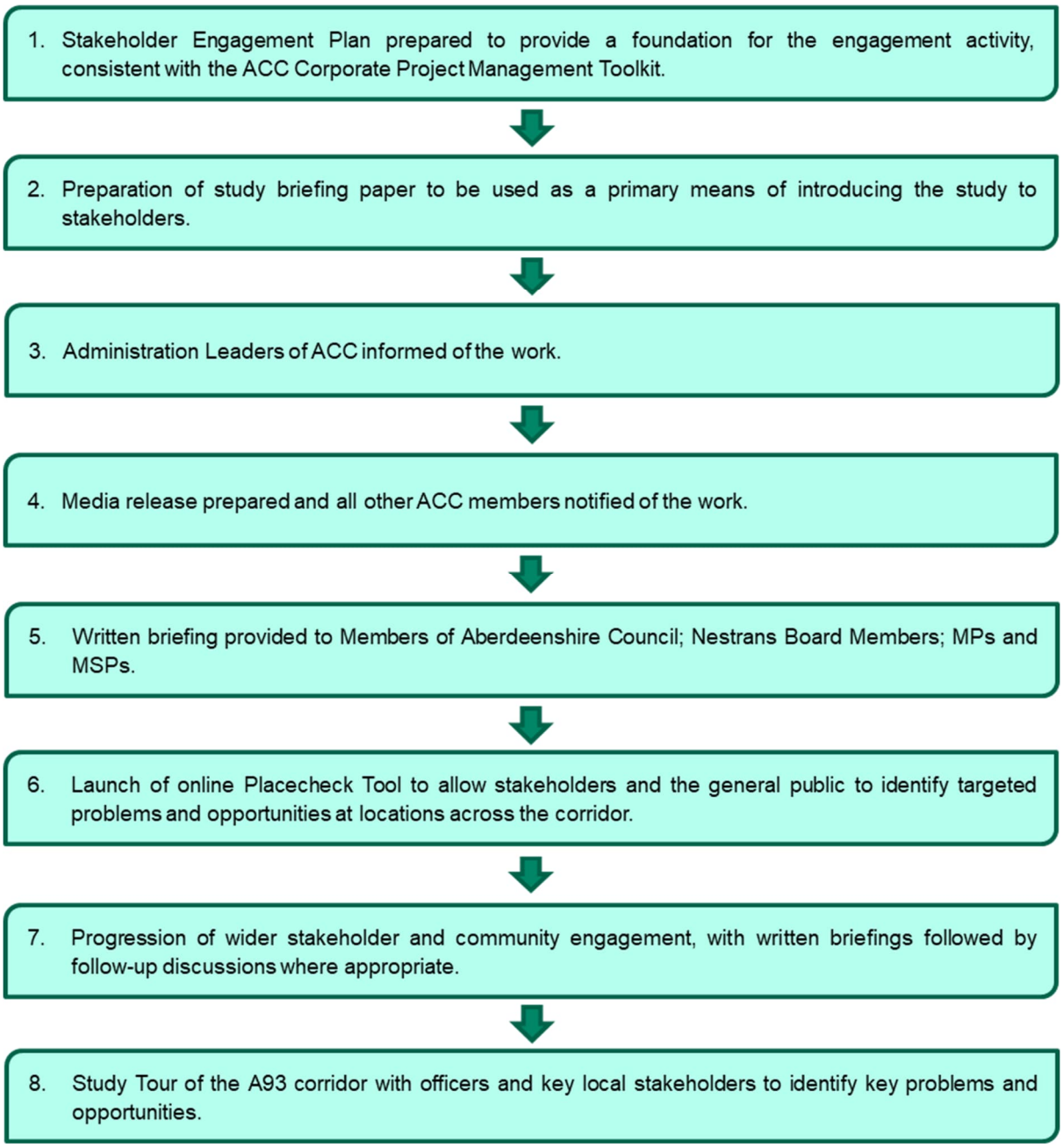


Figure 8.1: Stakeholder Engagement Activities

The diagram below provides an overview of those providing feedback as part of the study.

Figure 8.2: Stakeholders Providing Feedback as part of the Study

8.3 Key Findings

8.3.1 Stakeholder Discussions

The table below presents the key findings from the stakeholder consultation meetings and workshops.

Table 8.1: Summary of Findings from Stakeholder Discussions

Stakeholder	Key Findings
Aberdeen Cycle Forum	• Deeside Way is negatively impacted by a lack of lighting provision, lack of regular maintenance (leaf sweeping and winter gritting) and limited wayfinding between the A93 and Deeside Way. • Capacity concerns on the Deeside Way due to the constrained width. • Poor connections between the Deeside Way and A93. • Access points on and off the Deeside Way are not well suited to bikes, due to steps, steep ramps, gates and barriers. • Advanced stop lines along the route do not have suitable cycle lane lead ins to access and gain benefit. • West of Peterculter the Deeside Way is less direct, less coherent and less well surfaced. Between Peterculter and Drumoak, the Deeside Way becomes more remote from the A93 corridor. Hence this section offers good potential for improvement by way of segregated cycle paths on-road or close and parallel to the A93. • Cyclists currently use other minor roads and the South Deeside Road to avoid cycling on the A93. • To create a continuous route, the infrastructure needs to continue onward to city centre destinations and to connect up with other schemes.
ACC, AC and Nestrans Officers	• Provision of real-time information at bus stops is currently targeted at central locations however there is a wish for wider roll out. • There is a lack of awareness of how to access live bus information. Furthermore, there is a reluctance to access this information via apps. • Key problems identified included on-street parking; the variety of users and width of the Deeside Way; bus journey times and comfort; and congestion along the corridor. • Key opportunities identified included widening / segregation along the Deeside Way; provision of bus lane(s) and signal priority. • Location specific problems identified include the junction with Anderson Drive (A92); on-street parking in Cults, Peterculter and Banchory; Deeside Way crossings of Milltimber Brae and Pittengullies Brae; the junction with B979 Malcolm Road and the Deeside Way between Peterculter and Crathes. • Constraints identified include the adopted road network width; lighting; path widths; maintenance; and flooding. • Risk and uncertainties identified include future development; technology; travel behaviour; environment; local policy; and deliverability.
ACC Environment	• Conflict between users is the number one issue raised by members of the public, with conflicts often involving cyclists travelling very quickly, though it was noted that the number who complain only make up a small proportion of users. • There are a number of considerations with regards lighting, including the maintenance burden that would be introduced for the Council, the potential disruption to wildlife and problematic messaging around walking in the dark. • Path widening could disrupt biodiversity and would have an impact on drainage. • Main accessibility complaint on the Deeside Way is the steepness and condition of the stepped accesses. • The Deeside Way is not one of the priority routes for winter maintenance and resources have to be balanced across the network. Gritting can have an adverse effect on wildlife in the area and can lead to increased flooding in some locations. • The Deeside Way is a green corridor and there is an aspiration to ensure it is retained as such.
Banchory Walking to Health Group	• There is a reluctance to use public transport since the COVID-19 pandemic. • Limited suitable and direct public transport from people's homes to the shops in Banchory. An on-demand bus service was discontinued due to COVID-19 and it would benefit from having set times if it were to restart.

Stakeholder	Key Findings
	• The bus stop on the High Street (in Banchory) opposite Mount Street is located too far from the formal pedestrian crossing. • Fast cyclists have forced other users to stop using the Deeside Way. • Additional signage along the Deeside Way should be implemented to encourage cyclists to slow down.
Culter; Cults, Bieldside and Milltimber; and Garthdee Community Councils	• Tarmac on the Deeside Way has encouraged cyclists to travel at fast speeds. • People with sight problems have stopped using the Deeside Way as a result of the fast-approaching cyclists scaring / interfering with guide dogs. • Lighting along Deeside Way would have an impact on wildlife and the local residents. • Education and awareness raising of best practices when using the Deeside Way would be beneficial. • The access routes to the Deeside Way could be improved. • There is a lack of live bus information on the First Bus app. • Poor frequencies of evening and Sunday bus services. • Issues with the accessibility of new hydrogen buses, particularly towards the rear of the lower deck. • The current bus timetables are conservative, resulting in buses waiting to avoid being early. • There are very few bus services which are circular, most of them simply go in and out of the city. A bus service from Culter to Westhill and Kingswells would be helpful. • Narrow footways in Milltimber are exacerbated by overhanging hedges on the footway. • Segregated, safe lanes for bikes would be better but would be difficult to implement. • On-road cycle lanes are insufficient and result in cyclists having to negotiate the weakest part of the road surface. • On-street parking / parking on double yellow lines is a key issue in Peterculter – difficulties of negotiating parked cars, particularly for HGVs and buses. Inadequate provision of off-road parking in Peterculter and Cults results in cars parking illegally. • There is a significant amount of informal Park & Ride on the A93, and it would be beneficial to formalise this. • Revised speed limit of 30mph on sections of the A93 is generally being adhered to and is regarded as being positive for active travel users of the corridor. However, additional flashing speed limit signs would be welcomed. • A one-way system may help to improve traffic flow and the bottleneck caused when traffic is turning into Pitfodels Station Road from North Deeside Road. • When heading east, the right turn at Anderson Drive is problematic - it would benefit from a filter lane.
First Aberdeen	• Issues with the layout of the hydrogen buses towards the rear of the lower deck and lack of seating. • There are pinch points along the route at the AWPR, A92 junction (at Anderson Drive) and at Kirk Brae. • The high number of cyclists using the route can delay buses due to the lack of overtaking opportunities. • Prioritising east-west movements at the A93/A92 junction would improve bus journey times. • There needs to be greater incentive for operators to invest in the route in terms of bus priority infrastructure. • Decision to pedestrianise Union Street between Bridge Street and Market Street forces cars to divert, which could cause knock-on effects elsewhere on the network.
Inchmarlo, Brathens and Glassel Community Council	• There is a lack of live bus information. • The cost of the bus and long journey times make the bus unattractive to use. • There is a conflict between cyclists travelling at high speeds and other users on the Deeside Way. • Lack of sustainable travel connections between Inchmarlo and Banchory.

Stakeholder	Key Findings
	• Lack of suitable all-day parking facilities in settlements along the corridor for commuters. • Stagecoach service 201 should operate as an express service once it enters the city boundary. • Scope to implement a 'Park and Pedal' facility - potential location is the area of land where the Deeside Way meets the AWPR. • Deeside Way to be widened and tarmacked - allowing for separation of cyclists and pedestrians and allow for directional lanes to be introduced. • Demand Responsive Transport (DRT) service to connect Inchmarlo with the core bus service in Banchory.
Robert Gordon University	• The Anderson Drive/Great Western Road junction is problematic for active travel users, with fast approaching traffic and long wait times for pedestrians and narrow pavements. • Relocate parking outside shops in Cults to another area to allow for cycle lanes to be implemented. • Deeside Way is not well signposted, particularly for access points. • Deeside Way would benefit from a specific maintenance plan to allow for it to be used as an active travel route throughout the year. • The lack of lighting along the Deeside Way affects usage of the path during the shorter days due to safety concerns. It is also difficult to see other path users if lights and/or reflective clothing are not worn. • The Banchory section of the 201 service is not direct along the route of the A93 due to routeing via Hill of Banchory, which leads to delays. A more direct route, or fewer stops, should be investigated, perhaps with additional express services at peak times. • Banchory-Aberdeen bus journeys would benefit from having more competitive prices. • Potential for placing stations of the upcoming city-wide eBike hire scheme along the corridor.
Scottish Ambulance Service	• Ambulances are forced onto the other side of road when turning left onto B979 from A93 at Malcolm Road. • Sweeping bend on the Rob Roy Bridge causes issues for ambulances. • Ambulances do not use the A93 when transferring patients due to the poor surface making the journey uncomfortable for patients. • The current bus service is not suitable for shift workers. • There are no direct bus services to ARI - passengers are required to change in the city centre which makes using the bus for commuting to the hospital unattractive.
Stagecoach	• There has been a rationalisation of services during the last few years which has affected the core service (201) on the A93. • Lumphanan, Torphins and Tarland are served but have a challenging service pattern – time vs value is a key challenge. • There are constraints on service penetration within Banchory itself (e.g., through Hill of Banchory) due to pressure from those travelling from further west wishing a more direct link into Aberdeen. • It is unclear if the Crathes mini P&R has a P&R function or if it is just a convenient communal place to park. The catchment area is difficult to define. People from Banchory / Drumoak are unlikely to travel to Crathes to catch the bus into Aberdeen. • 'Sunday drivers' on the A93 are an issue which can cause some delay to bus operations. • There will be a redistribution of the bus fleet across core corridors once the new fleet of 22 electric double decker buses are introduced. Electric vehicles are not appropriate for the A93 corridor due to length of route. • Some journeys throughout the day require 70+ seats to cope with the number of school passengers. • No engineering facilities in Ballater and the remoteness of the corridor has impacted the response time to incidents which has a knock-on effect on service reliability.

Stakeholder	Key Findings
	• Low-floor vehicles are better for those with mobility issues; however, the long-distance route better lends itself to coaches as they provide more comfort. • The variation of the vehicle fleet on this corridor can create difficulties for those looking to undertake multi-modal journeys (e.g., bikes on buses) as there is uncertainty over whether vehicles will be able to accommodate them. • Available space on the corridor is limited which impacts the ability of buses to pass slower moving traffic such as cyclists. • Banchory is susceptible to flare up with congestion at peak times. • Stagecoach receives complaints about the Corsee Road, Burnett Road, Mount Street loop – some residents complain of buses passing too close to parked cars; however, buses are routed this way as this is the only option for turning services. • It would be beneficial to ascertain whether there is a better/more suitable terminus location – Raemoir Road/Hill of Banchory is still used for this. • The study should consider how best to prioritise east-west movements at the A93 junction with Anderson Drive (the A92).
Torphins Community Council	• Demand for an increased number of connecting paths to the A93 from neighbouring villages. • Demand for improved sustainable connections between Torphins and Banchory. • Demand for a series of cafés along the Deeside Way to encourage visiting tourists to use active modes of transport. • Bus is not a suitable mode of transport for people who work outwith the city centre due to there being no direct bus route. • Implement a feeder service taking passengers to the core service i.e., from Torphins to Banchory. • It would be beneficial for bikes to be allowed to be taken on board buses. • More secure cycle parking facilities. • The cost of the bus and long journey times make the bus unattractive. An express service would help improve bus journey times.
Visit Aberdeenshire	• Lack of road signage to tourist attractions and services on the A93 for those travelling on the AWPR. • A93 should expect to see an increase in tourist-related traffic facilitated by cruise traffic associated with the new Aberdeen South Harbour. • A93 corridor will be a strategic route to the Gravitate North East mountain biking trail centre located on the edge of Durris Forest. • A93 is part of the North East 250 touring route which aspires to provide more electric charging points. • There is a demand for increased cycle parking for tourists.

8.3.2 Study Tours

To aid identification of problems and opportunities along the study corridor, AECOM led two Study Tours on the A93 corridor. The first Study Tour was attended by representatives from ACC, Aberdeenshire Council, Nestrans and other key stakeholders. Five locations along the corridor were visited during the Study Tour. As shown below, this included the A92 (Anderson Drive) / A93 (Great Western Road) Junction, Cults, AWPR Deeside Junction, Peterculter and Banchory.

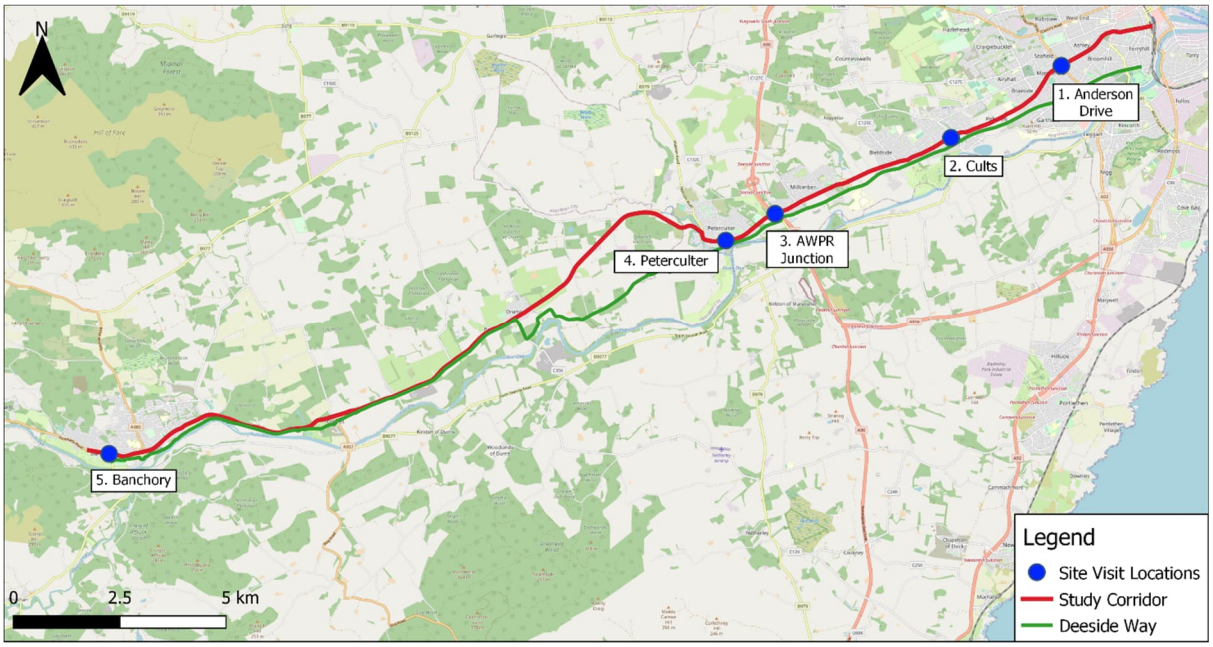


Figure 8.3: Study Tour Visit Locations

A summary of the key findings is presented below, with full details included as part of **Appendix D**.

- At the Anderson Drive / Great Western Road Junction, the key issues raised related to on-road provision for cyclists, traffic signal phasing, traffic volumes and accessibility for pedestrians. Opportunities discussed included a review of traffic signal phasing, revisions to junction geometry and reduction to vehicle speeds.
- Key issues in Cults related to on-street car parking, footway provision and overall maintenance. Opportunities discussed included the potential for placemaking, segregated cycling infrastructure and improved bus stop provision.
- At the AWPR Deeside Junction, it was noted that staggered signalised crossings can be difficult for active travel users to navigate. Potential active travel opportunities noted at the junction include implementing segregated cycling facilities and improving links to the Deeside Way.
- In Peterculter, issues were raised relating to on-street parking, however, it was acknowledged that a greater proportion is likely attributed to residents' parking compared with on-street parking in Cults. Safety issues were raised for all users at the junction with Malcolm Road (B979) through lack of visibility and the requirement for vehicles eastbound on the A93 wishing to turn onto Malcolm Road needing to cross onto the other side of the carriageway to complete the manoeuvre. Opportunities discussed included the potential for placemaking, improved formal crossing provision, traffic calming interventions and formalisation of Park and Ride opportunities at the former rail station.
- Key issues in Banchory related to the convoluted bus route increasing bus journey times (though it should be noted that 58% of passengers board on the Hill of Banchory loop as opposed to 42% along the High Street[49]), on-street parking on the High Street and a lack of crossing facilities. Opportunities identified included reducing vehicle speeds, improving carriageway surfacing, cycle lane provision, improved north-south connections, footway widening, improving provision of cycle parking and more direct bus routeing.
- Key issues discussed regarding the Deeside Way included conditions for equestrian users, conflict between users of the route, connections to and from the Deeside Way and lighting considerations. Opportunities discussed included maintaining a verge next to the path for equestrian users, education, improved lighting, improvements at Pittengullies Brae and improved surfacing within the Aberdeenshire section of the route.

[49] Information provided by Stagecoach

The second Study Tour was attended by three elected members of Aberdeenshire Council and focused on locations within Drumoak, Crathes and Banchory. A summary of the key findings is presented below:

- The volume and speed of traffic using the A93 deters the majority of active travel users from travelling on it and the footway width and condition was raised as a concern due to uneven surfacing and lack of accessibility for wheelchair users within communities.
- People can be deterred from public transport use by the length of bus journey times and reliability of the services. In addition, the emphasis on online tickets and information is not suitable for all users and particularly not for elderly users.
- Various issues were raised with the Deeside Way, including access to the Deeside Way at Drumoak, conflict between users on the route, poor surfacing between Drumoak and Banchory and the routeing of the Deeside Way between Peterculter and Crathes.
- Opportunities discussed for the Deeside Way included the potential for improved wayfinding signage, improved surfacing and alternative routeing. In terms of bus travel, it was suggested that an express Stagecoach service within Aberdeen City may increase the attractiveness of this mode.

8.3.3 Placecheck

To allow stakeholders and the general public to identify targeted problems and opportunities at locations across the corridor, an online 'Placecheck' was available from Friday 29th October 2021 until Wednesday 1st December 2021. 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 383 comments were received from 94 different participants, with the split across response categories shown below.

Table 8.2: Split of Responses to the Online Placecheck

Category	Number	Percentage
Things I like	36	9%
Things I don't like	135	35%
Things to work on	212	55%

An initial cleaning of responses was undertaken to identify any comments that did not require further analysis. 72 comments were identified as not requiring further analysis. Common reasons included comments relating to areas outwith the study area (27), positive statements about the study corridor that did not translate to a transport opportunity (20), repeated comments from the same user (7), and issues being considered as part of other ongoing studies (6).

The remaining 311 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 311.

Table 8.3: Description of Themes emerging from Placecheck Exercise

Theme	Description	Number of Times Raised
Cycling infrastructure	Comments relating to lacking infrastructure between Banchory and Peterculter (11), the poor quality of the existing advisory cycle lanes on the A93 between Peterculter and the city centre (10), opportunities for contraflow cycling (generally to support connections between the Deeside Way and Union Street in the city centre) (8), opportunities for new cycle lane locations (6) and opportunities for cycle parking (2). Other comments related to cycling infrastructure to support new active travel connections, segregation on the Deeside Way and the lack of infrastructure on the AWPR Slip Road.	48
Signage and information	Comments relating to wayfinding signage on the Deeside Way (9), information signage on the A93 and Deeside Way regarding other users (5), wayfinding signage to the Deeside Way (4), signage to facilities from the Deeside Way (4), tourist information signage (3), speed limit signage (2) and signage to other path facilities (2).	31

Theme	Description	Number of Times Raised
Traffic speeds	Comments relating to reduced speed limits (15), implementation of traffic calming measures (11), traffics speeds discouraging active travel (7), lack of speed limit enforcement (1), on-street parking acting as an effective speed control measure (1) and one comment promoting the return of the 40mph limit along this section to reduce dangerous overtaking and tailgating (1).	30
Driver behaviour	Comments relating to vehicles travelling in excess of the speed limit (10), vehicles lacking respect for cyclists (e.g., by overtaking too close or in inappropriate locations) (8), vehicles parking on pavements (5), vehicles entering or parking in the advisory cycle lanes (4), vehicles ignoring yellow line restrictions (2) and vehicles and taxis idling on Banchory High Street (1).	29
Surfacing	Comments relating to surfacing on the Deeside Way in Aberdeenshire (16), including 7 comments promoting extension of the tarmac surface, comments relating to poor quality of the carriageway surface (4) and the surfacing of other off-road paths (3).	24
Active travel connectivity	Comments relating to new path connections, including to the south of the River Dee (12) and Torphins (4).	24
Railway/Tram	Comments relating to reopening of the Deeside railway line (23) and implementation of a tram network (5). Three comments emphasised the need to retain the active travel route alongside any railway/tram implementation.	24
Maintenance	Comments relating to maintenance on the Deeside Way (10), cycle lane on the A93 (5), maintenance of other paths between Peterculter and Drumoak (3), maintenance of the A93 road surface (2) and maintenance of the road surface on Milltimber Brae (2).	23
Accessibility	Comments relating to issues with accessing the Deeside Way, including at Pittengullies Brae (4), Duthie Park (3), Holburn Street (2), Hargate (1), Auchinyell Road (1) and Mannofield (1). Other comments included on-street parking and illegal parking reducing accessibility for wheelchair users (2), sections of the Deeside Way where the surface makes the route unusable for those with mobility issues (2) and the barriers at Park Bridge being inaccessible for recumbent cycles and cargo bikes (1).	17
Parking	Comments relating to on-street parking creating a dangerous environment for active travel users, particularly in Banchory (5), Peterculter (4), Cults (2) and Bieldside (1). One comment proposing free parking in Banchory to promote use of businesses along the High Street.	16
Deeside Way routeing	Comments relating to the routeing of the Deeside Way within Aberdeenshire, particularly in Drumoak (9) and Crathes (6) where Deeside Way users are required to use the pavement on the south side of the carriageway. One comment relating to proposed alternative routeing of the Deeside Way in the section between Peterculter and Coalford.	16
Active travel priority	Locations along the corridor proposed for new active travel bridges, including Milltimber Brae (3), Rob Roy Bridge (2), Pittengullies Brae (1) and Anderson Drive (1). Other comments relating to opportunities for active travel through the closure of Park Bridge (6), early release for cyclists at traffic signals (1), enhanced priority for pedestrians on Banchory High Street (1) and enhanced priority for sustainable modes on Anderson Drive (1).	16
Pedestrian infrastructure	Comments relating to lacking pedestrian infrastructure, particularly between Peterculter and Drumoak and opportunities for upgrades to existing paths to enhance pedestrian connectivity.	15
Crossing facilities	Comments include locations where new active travel crossing facilities would be beneficial (10), locations that are considered dangerous for crossing currently (2), issues with existing crossing facilities (1) and the potential for upgrade of existing crossing facilities (1). Milltimber Brae was noted most frequently as a location for new crossing facilities (3).	14
Bus journey times	Problem categories relating to long bus journey times and its lack of competitiveness relative to car travel.	12
Public transport connectivity	Problem categories relating to a lack of public transport services connecting to locations on the A944 such as Westhill and Aberdeen Royal Infirmary (5), South Deeside (3), Torphins and Stonehaven. One comment relating to the closure of Park Bridge to vehicles preventing access to the 201 bus service for those living to the south of the river.	11
Junction layout	Junction locations along the corridor that are problematic and would benefit from review – Dee Street, Hill of Banchory East, Malcolm Road (2),	9

Theme	Description	Number of Times Raised
	Pittengullies Brae, Abbotshall Road, Pitfodels Station Road, A92 Anderson Drive, Holburn Street.	
Width	Opportunities for widening of the Deeside Way (4) and paths in other locations (e.g., on the north side of the A93 between Drumoak and Mains of Drum) and issues with narrow roads including Pitfodels Station Road, Crown Street and Countesswells Road.	8
Bus reliability	Problem categories relating to late running of services, missing services and bus breakdowns – comments generally targeted at the Stagecoach 201 service.	7
Park Bridge reopening to vehicles	Problem categories relating to the negative impacts of the Park Bridge closure to vehicles including increased vehicle miles, reduced connectivity between communities on either side of the river and increased traffic in Peterculter as a result of the bridge being closed to vehicles.[50]	6
Bus stops	Problem categories relating to the location of bus stops and infrastructure at bus stops e.g., lack of lighting.	4
Conflict between users	Problem categories relating to conflicts at some entry points to the Deeside Way, conflicts between users on the Deeside Way itself due to cyclists travelling at high speeds and proposals for segregation between pedestrians and cyclists on the route.	4
Bus routeing	The bus routeing within Banchory acts as a deterrent to using the bus (2) and the bus routeing along the A93 within Aberdeen City makes it inconvenient for those living to the north of the A93 up a steep hill (1).	3
Express bus services	Opportunity to introduce express bus services at certain times of the day to reduce bus journey times from Aberdeenshire. Suggestions include reducing the number of stopping locations within Aberdeen City and providing a more direct service along the A93 within Banchory.	3
Bus frequency	Bus service frequency is a deterrent to using the bus, including comments from Torphins, Banchory and Drumoak.	3
Lighting	The lack of lighting on the Deeside Way limits its use during winter months and lighting provision would increase feelings of safety.	3
Environment	Constrained sections of the Deeside Way that are prone to flooding and sections of path prone to icy conditions.	2
Future travel patterns	Uncertainty over future travel patterns.	2
Tourism	Opportunity to promote the Deeside Way to tourists e.g., through cafés, shops, information panels etc.	2
Demand responsive services	Opportunity to implement demand responsive bus services for settlements north and south of the A93 corridor.	1
Bus vehicle fleet	Opportunity to implement hydrogen vehicles for bus travel[51].	1
Cost of bus services	Cost of bus services is a deterrent to using the bus.	1
Multi-modal journeys	Opportunity to encourage multi-modal journeys by ensuring bikes can be taken on buses.	1
Placemaking	Opportunity to add more seating areas along the Deeside Way.	1

8.3.4 School Engagement

Three workshop sessions were completed as part of the initial phase of engagement – two with Primary 7 classes at Banchory Primary (10th May 2022) and one with an S2 Geography class at Cults Academy (16th May 2022). At all workshops, 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. Pupils at Cults Academy were then asked to design their own Streets using StreetMix online.

[50] It should be noted that the same number of comments were received in support of the continued closure of Park Bridge to vehicles, due to the opportunities it provides for active travel.
[51] Assumed to be in relation to Stagecoach services as the First 19 service fleet is already hydrogen-based.

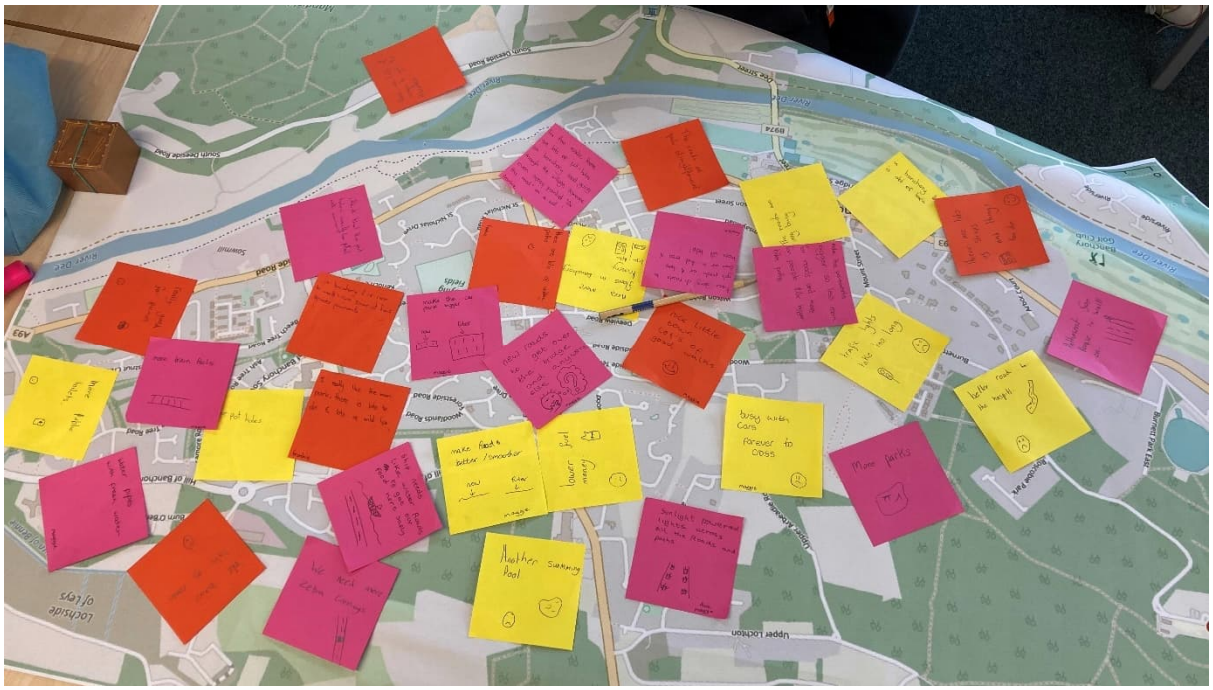


Figure 8.4: School Engagement Workshop Exercise

Approximately 88 pupils took part across the three workshops, including 63 at Banchory Primary and 25 at Cults Academy. The table below provides a summary of the key points of feedback from the workshops with pupils.

Table 8.4: Key Findings from the School Engagement Workshops

Things I like	Things I don't like	Things to work on
• Reduction of the speed limit between Peterculter and Cults • Provision of bus stops in Bieldside • Deeside Way • Facilities in Peterculter and Cults • Quiet roads that are safe for walking e.g. Cults Avenue and Cairn Road • Wide pavements and crossing points in Milltimber • Easy to make journeys on foot in Peterculter • Recreational walks in Foggieton Woods • First Bus app • Path connections providing shortcuts through communities	• Poor bus service provision to the south of the River Dee e.g. via South Deeside Road • High cost of bus services • Poor bus service reliability • Narrow pavements, including on North Deeside Road and Westerton Road • High speeds of traffic, including on North Deeside Road and South Deeside Road • Topography of the area presents a challenge to active travel • Condition of roads • High volumes of traffic • Poor path connections and poor condition where path connections exist • Lack of crossing points • Delays at the A93/Ballieswells Road Junction • Long wait time for pedestrians at the A93/Kirk Brae Junction • A93/Malcolm Road Junction • Deeside Way is not wide enough for pedestrians and cyclists • Volume of parked cars on Quarry Road	• Increased number of crossing points • Increased pavement widths • Improved surfacing of paths • Improved dedicated cycling infrastructure • Introduction of e-bike hire • Improved accessibility of buses for wheelchair users and prams • Improved comfort on buses • Introduction of a school bus for pupils travelling from Milltimber • Improved bus journey times • Increased parking in communities, particularly in proximity to schools • Introduction of speed reduction measures on North Deeside Road • Increased number of electric car charging points • Increased street lighting in communities • Improved access across the River Dee • Consolidation of bus stops in Cults

9. Problems and Opportunities

9.1 Introduction

This chapter identifies actual and perceived problems, issues, constraints and opportunities (PICOs) within the study area. Within STAG, PICOs are described as follows:

- **Problem:** existing and future problems within the transport and land use system;
- **Issue:** uncertainty that the study may not be in a position to resolve, but must work within the context of;
- **Constraint:** representing the bounds within which a study is being undertaken; and
- **Opportunity:** changes to improve the transport and land use system to realise opportunities;

The findings that have been presented in previous chapters have been used to inform the identification of existing and future problems and opportunities along the study corridor, including a review of relevant policy documents, a review of previous studies, review of relevant data sources and outcomes from consultation.

Throughout this chapter, localised PICOs 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

9.2 Localised Corridor Review

9.2.1 Banchory (West)

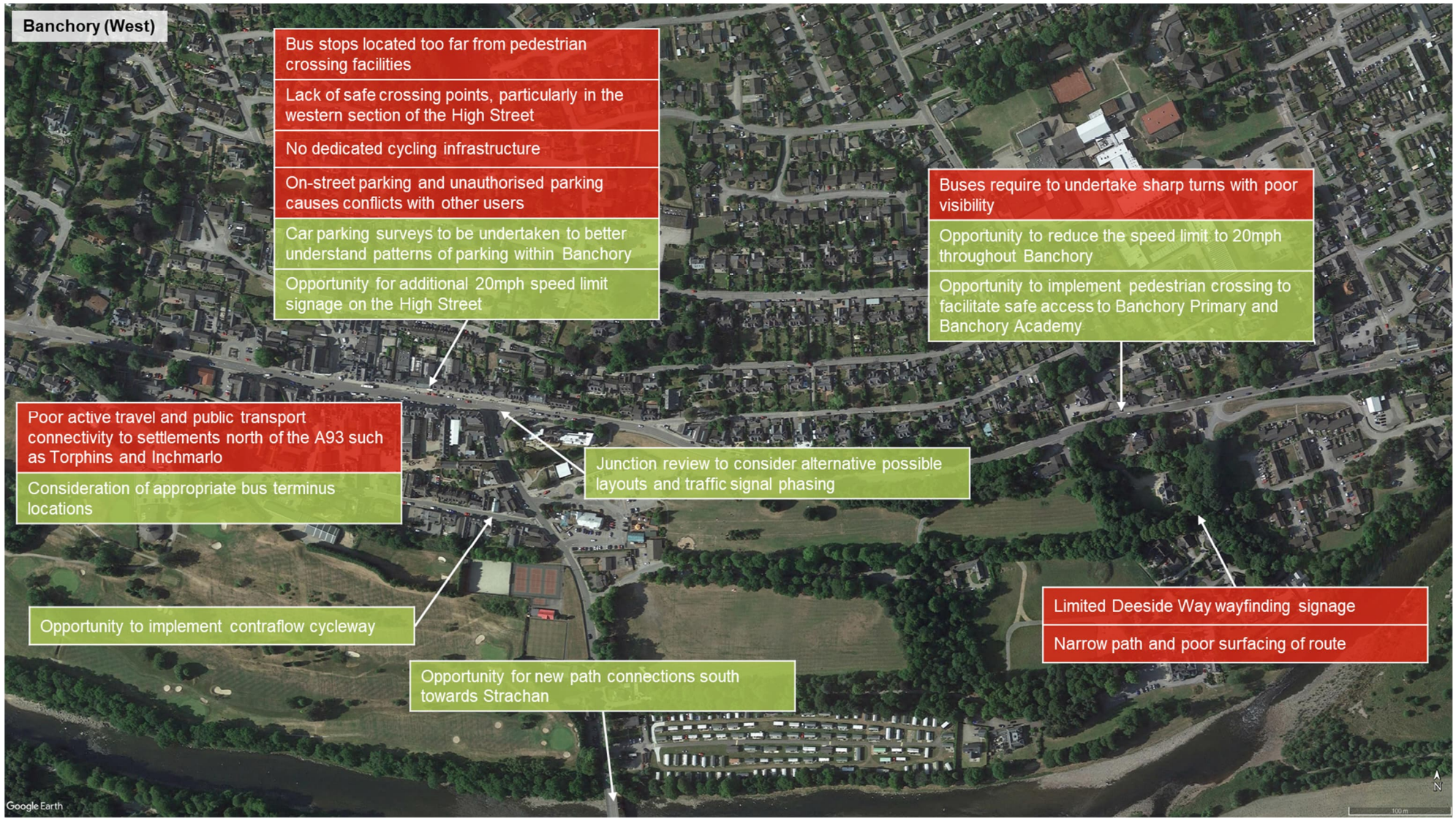


Figure 9.1: Banchory (West) PICOs (Image Source: Google Earth)

9.2.2 Banchory (East)

Figure 9.2: Banchory (East) PICOs (Image Source: Google Earth)

9.2.3 Crathes

Figure 9.3: Crathes PICOs (Image Source: Google Earth)

9.2.4 Drumoak

Figure 9.4: Drumoak PICOs (Image Source: Google Earth)

9.2.5 Drumoak to Peterculter

Figure 9.5: Drumoak to Peterculter PICOs (Image Source: Google Earth)

9.2.6 Peterculter (West)

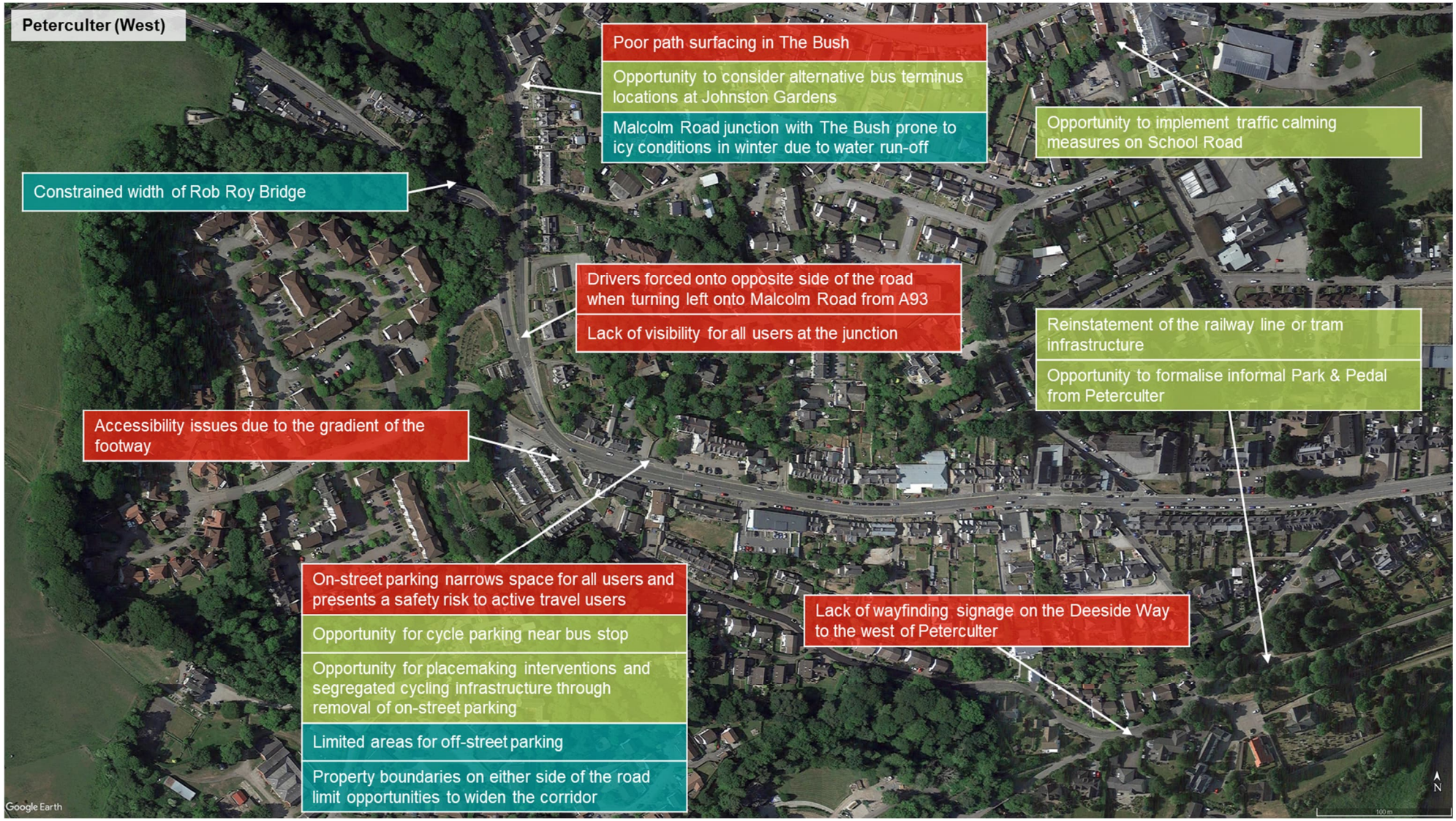


Figure 9.6: Peterculter (West) PICOs (Image Source: Google Earth)

9.2.7 Peterculter (East)

Figure 9.7: Peterculter (East) PICOs (Image Source: Google Earth)

9.2.8 AWPR Deeside Junction

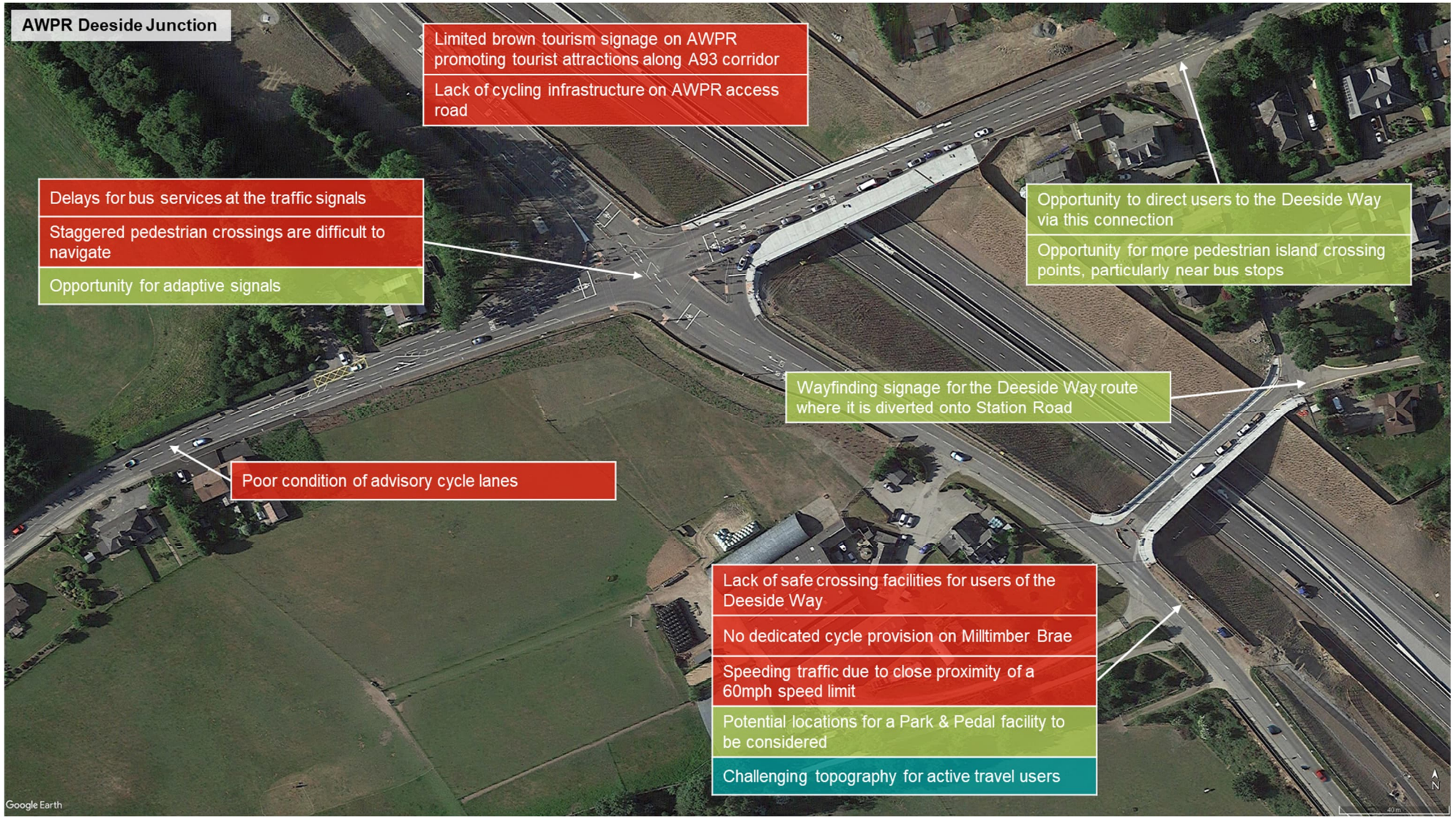


Figure 9.8: AWPR Deeside Junction PICOs (Image Source: Google Earth)

9.2.9 Milltimber

Figure 9.9: Milltimber PICOs (Image Source: Google Earth)

9.2.10 Cults (West)

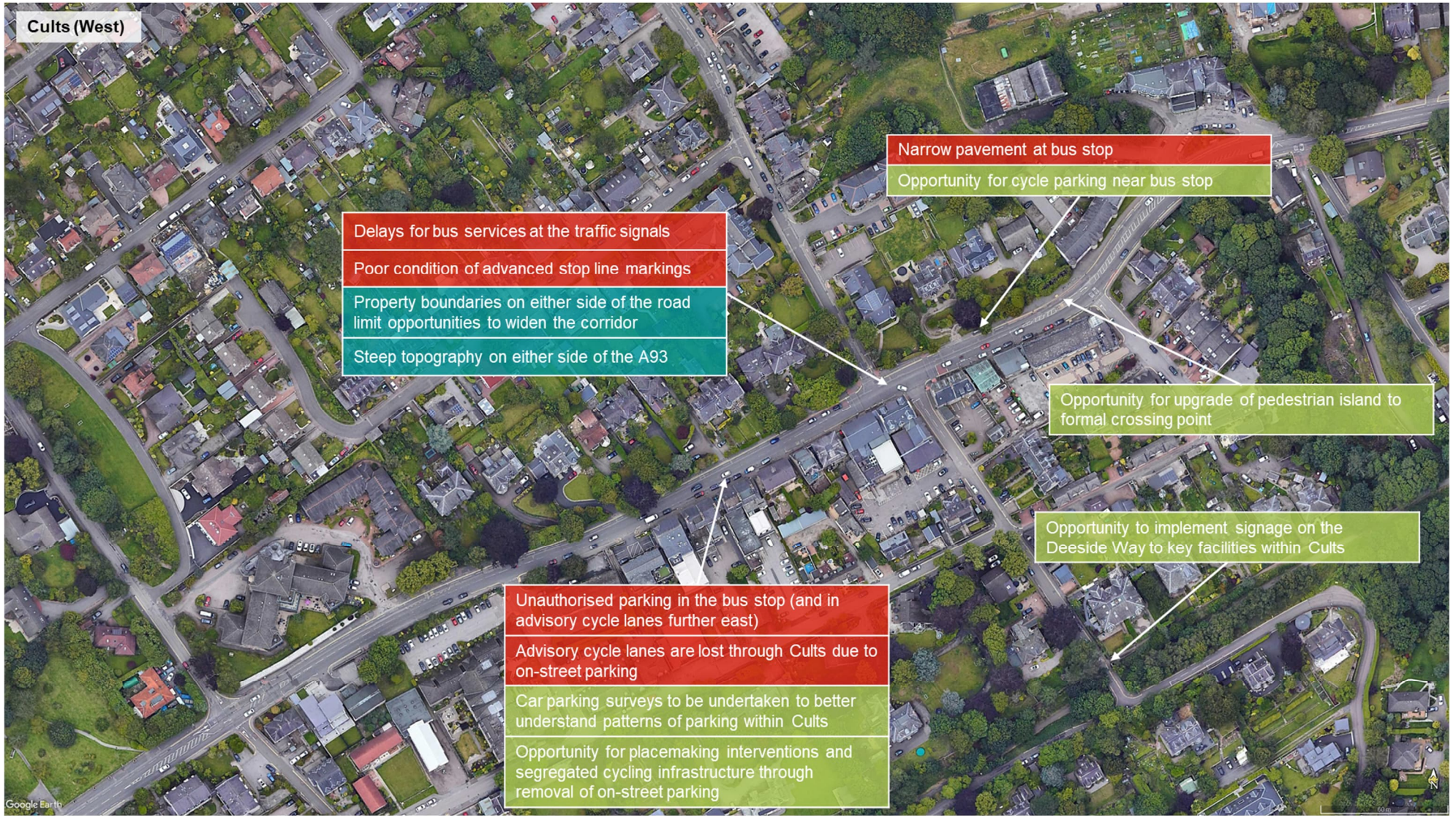


Figure 9.10: Cults (West) PICOs (Image Source: Google Earth)

9.2.11 Cults (East)

Figure 9.11: Cults (East) PICOs (Image Source: Google Earth)

9.2.12 A92 Anderson Drive to Pitfodels

Figure 9.12: A92 Anderson Drive to Pitfodels PICOs (Image Source: Google Earth)

9.2.13 A92 Anderson Drive / A93 Great Western Road Junction

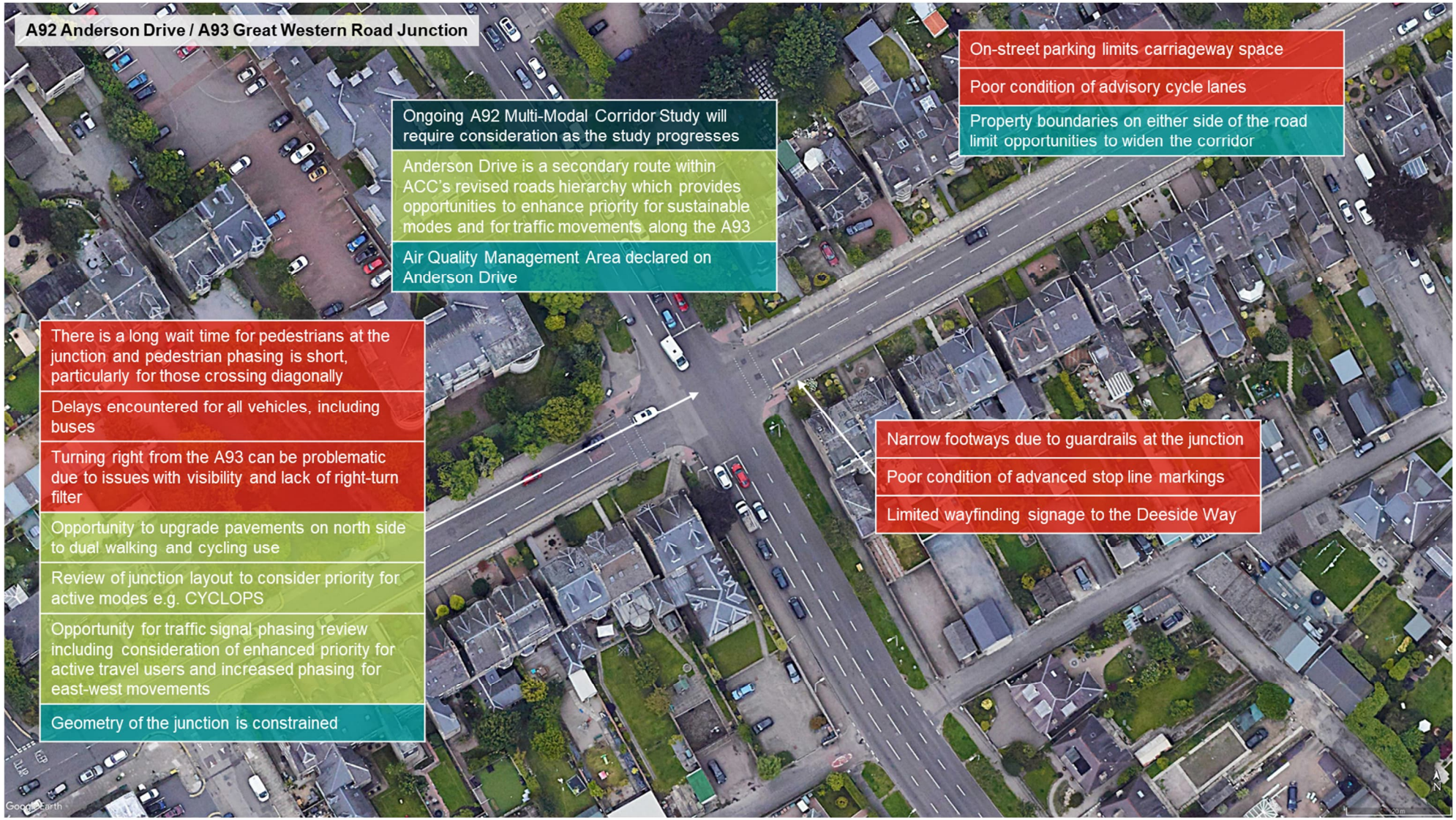


Figure 9.13: A92 Anderson Drive / A93 Great Western Road Junction PICOs (Image Source: Google Earth)

9.2.14 Holburn Street Junction / Great Western Road / Willowbank Road

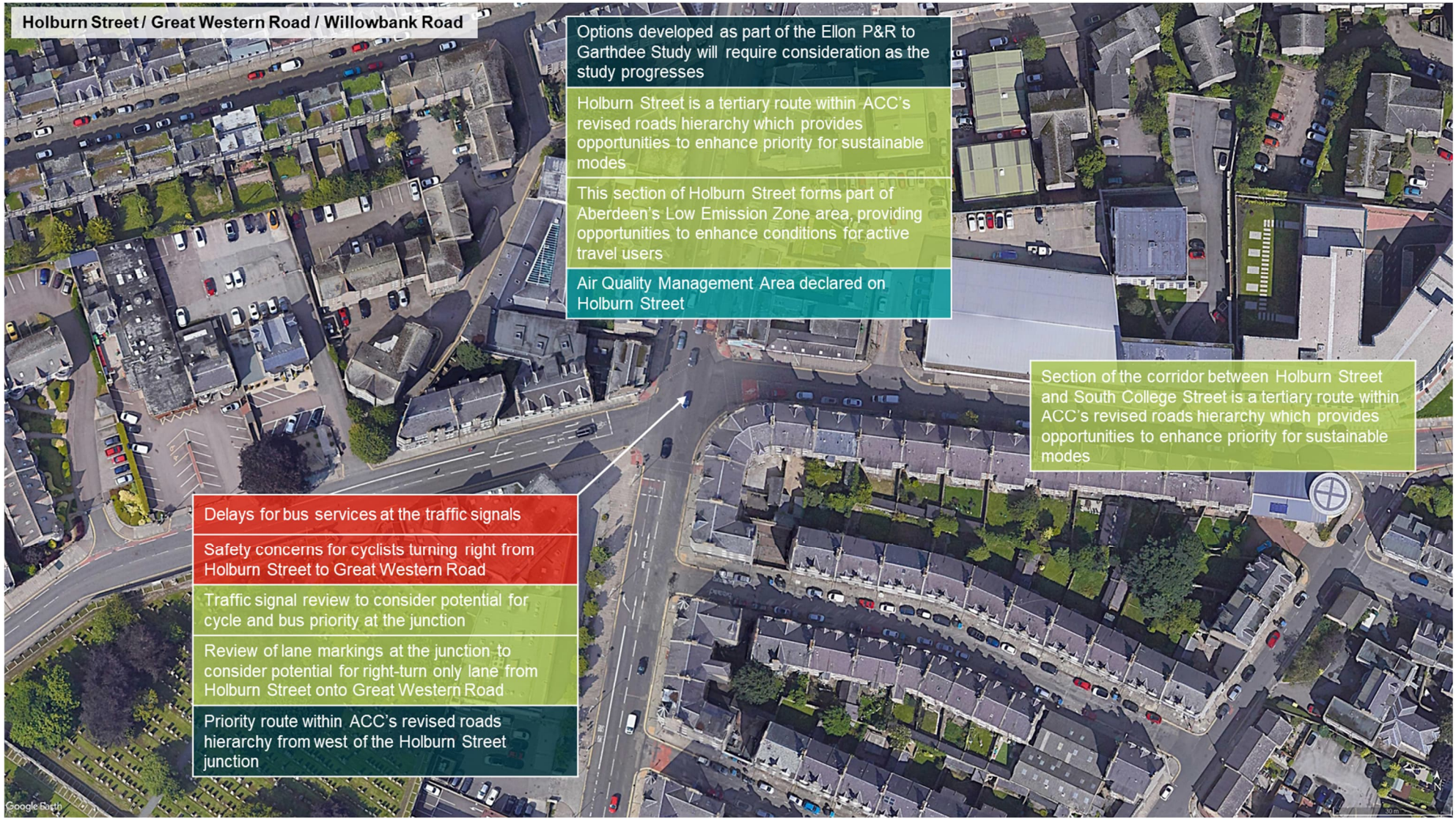


Figure 9.14: Holburn Street / Great Western Road / Willowbank Road PICOs (Image Source: Google Earth)

9.2.15 Willowbank Road / Springbank Terrace / Wellington Place

Figure 9.15: Willowbank Road / Springbank Terrace / Wellington Place PICOs (Image Source: Google Earth)

9.3 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.

9.3.1 Problems

The strategic problems identified along the study corridor include:

- **A93 Active Travel Infrastructure:** Whilst there is generally good provision of pedestrian infrastructure within the Aberdeen City section of the corridor, the advisory cycle lanes between Peterculter and the city centre are narrow, inconsistent and the surface is poor quality due to drains, gullies and potholes. Furthermore, the lack of visibility at some junctions along the corridor require vehicles to enter the cycle lane. Within Aberdeenshire, active travel provision alongside the A93 is lacking, with footways only provided within settlements which leads to a lack of active travel connectivity between settlements.
- **Deeside Way Infrastructure:** Whilst the Deeside Way is recognised as an asset to the study corridor, the PICOs work package has identified a number of problems with the route:
  - **Conflict between users** – the Deeside Way is a very popular active travel route and there can be conflicts between different user groups on the route including pedestrians, cyclists, horse riders and dog walkers amongst others.
  - **Lighting** – the lack of lighting presents safety concerns and limits use of the route during winter months.
  - **Routeing** – the routeing of the Deeside Way is convoluted in places within Aberdeenshire, which makes it unattractive for commuting.
  - **Surfacing** – the surfacing of the path is of poor quality in some sections within Aberdeenshire, which can limit accessibility of the route, particularly for those with mobility issues. Tarmac surfacing raises issues for equestrian users, whilst other users were generally in favour of this as noted during engagement.
  - **Maintenance** – there is a lack of maintenance, including of vegetation and gritting during winter.
  - **Connectivity** – there is a lack of connectivity between the Deeside Way and the A93 and other active travel networks.
  - **Accessibility** – many access points along the Deeside Way are not accessible, with steps, steep ramps, gates and barriers.
  - **Signage** – there is generally a lack of wayfinding signage associated with the route.
  - **Width** – the width of the path does not allow for clear and consistent segregation between different user groups.
- **Declining Bus Patronage:** As discussed in **Section 5.5.6**, 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:
  - **Connectivity** – the radial nature of bus services can mean that bus services often do not serve key employment destinations without requiring interchange in the city centre.
  - **Information** – there is a perceived lack of live bus information and there can be a reluctance to access this information via apps.
  - **Cost** – the cost of bus travel is a deterrent for some users of the corridor.
  - **Journey times** – journey times to key destinations are significantly longer by bus than car and are additionally longer by bus than cycling for journeys within Aberdeen City. Whilst journey times on Stagecoach services were reduced following opening of the AWPR, journey times on First services only reduced in 2020/21 associated with the COVID-19 pandemic. There is a lack of bus priority infrastructure to provide benefits for bus services along the study corridor.
  - **Reliability** – the study corridor within Aberdeenshire has suffered disproportionately from reliability problems in the past. This is due to the use of coaches on Stagecoach services providing challenges in terms of vehicle complexity and also the effect of remoteness in terms of responding to incidents. There are no engineering facilities in Ballater and therefore there can be a 60-90 minute wait for a response from Aberdeen for any issues occurring towards the west of the corridor.

- **Frequency** – the frequency of services on the corridor in the evening and on Sundays and the frequency of services to communities not directly on the A93, such as Torphins.
- **Accessibility** – the vehicles used on services throughout the corridor present accessibility issues for some users, including on the coaches used on Stagecoach services and the hydrogen buses used on First services. Whilst low-floor vehicles are better for those with mobility issues, the long-distance route provided by the Stagecoach 201 service lends itself to coaches as they provide more comfort and have more luggage capacity. It was noted that the hydrogen buses have a lack of seating on the lower deck and a steep step to the seating area at the back.
- **Bus stop infrastructure** – the quality of bus stop infrastructure is varied along the study corridor.
- **Multi-modal journeys** – lack of provision for taking bikes on buses or cycle parking at bus stops.

- **High Car Usage in Key Settlements:** As discussed in **Section 5.3**, the car mode share for travel to work along the corridor is high, with the majority of settlements along the corridor recording rates of driving to work significantly above the national average (with the exception of Garthdee). This has implications in terms of national, regional and local objectives to reduce carbon emissions, meeting air quality objectives and delivering reliable bus services.
- **Electric Vehicle Infrastructure:** There is limited provision of electric vehicle charging infrastructure along the corridor.
- **Signage:** There is a lack of road signage to tourist destinations along the corridor, notably from the AWPR.

9.3.2 Opportunities

The strategic opportunities identified along the study corridor include:

- **Policy Context:** The study aims strongly align with the local, regional and national 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 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. Through the BPF, Nestrans are progressing proposals for Aberdeen Rapid Transit (ART)), which reflects an ambition *"to deliver an integrated Mass Transit 'step-change' solution to support positive social, environmental and economic performance of the City and Region."*[52] While the A93 corridor is not currently being considered as part of the ART proposals, any future public transport interventions on the corridor will require to be considered in the context of this major public transport project for the region.
- **Distances to Work for Aberdeen City Settlements:** As discussed in **Section 5.2**, the vast majority of those living east of Milltimber travel less than 10km for work. This presents opportunities to encourage active travel use for journeys to work from these settlements.
- **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 along the corridor, locking in the benefits of reduced congestion and journey time savings.
- **Increased Active Travel Use during COVID-19 Pandemic:** As discussed in **Section 5.4.5**, there was a notable increase in daily active travel counts in 2020 relative to previous years. Active travel counts suggest that this demand has persisted (and increased) for pedestrians at two locations on the corridor throughout 2021, presenting an opportunity to maintain and build on this trend looking ahead to the future.

[52] https://www.nestrans.org.uk/projects/aberdeen-rapid-transit/

9.3.3 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, 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 (see also Resilience in **Section 9.3.4**).
- **Technology:** There is uncertainty about the impact that advances in electric vehicle technology and autonomous vehicle technology will have on travel behaviour and vehicle ownership. There is a risk that advances in electric vehicle technology and improved affordability/availability of electric vehicles 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 Aberdeen 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.

9.3.4 Constraints

The strategic constraints identified along the corridor include:

- **Political Will:** Due to the historic prevalence of private car travel in much of the study area, measures focussed on enhancing walking, cycling and public transport use may not be supported by the public, which could reduce political support for such measures. It should be noted that plans developed as part of the Spaces for People project in 2020 were refused, which proposed the removal of on-street parking in Cults and Peterculter.
- **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[53] 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:** As set out in **Chapter 7**, there are a number of environmental constraints that will require consideration as the study develops, particularly as options are assessed against environmental criteria at a later stage in the STAG process to ensure identified options avoid or seek to mitigate adverse environmental impacts. There are a number of constraints on the Deeside Way in particular, associated with lighting, path widths, maintenance and flooding. There are also Air Quality Management Areas (AQMAs) declared on Anderson Drive and a section of Holburn Street.

[53] https://www.audit-scotland.gov.uk/uploads/docs/report/2019/nr_190321_local_government_performance.pdf

- **Adopted Road Network Width:** The A93 study corridor is an important movement corridor for all modes of travel and therefore it will be a challenge to cater for all modes of travel, particularly within Aberdeen City where the road space is more constrained.
- **Resilience:** The corridor is vulnerable to the impact of weather events, with a lack of alternative routes that risks communities becoming isolated. For example, during Storm Frank in 2016 when a section of A93 carriageway was washed away between Ballater and Braemar (see image **Figure 9.16**[54]), a temporary road was required to be constructed.

Figure 9.16: Storm Frank Impacts on A93 in 2016

[54] https://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-35338376

10. Summary

This report has been prepared to outline the findings of the problems, issues, constraints and opportunities work package of the A93 Multi-Modal Corridor Study. It has:

- Set the policy context within which this study is being taken forward;
- Provided a summary of previous work that has been undertaken in the study area, drawing on key outcomes of relevance to the study;
- Set the baseline context of the study area, drawing on a review of socio-economic data, relevant transport datasets, development allocations and environmental constraints;
- Presented the findings from consultation with stakeholders, community groups and members of the public; and
- Presented evidence-based problems, issues, constraints and opportunities along the study corridor considered at both the local and strategic level.

The report lays the foundation for the development of Transport Planning Objectives (TPOs), option generation, sifting and development, and the appraisal of options.

Appendix A – Journey Time Analysis

A high level comparison of journey times by car, bus and cycle to key destinations has been undertaken using Google Maps. This analysis considered inbound journeys arriving by 09:00 on Thursday 21st October 2021 and return journeys leaving after 17:00 on Thursday 21st October 2021.

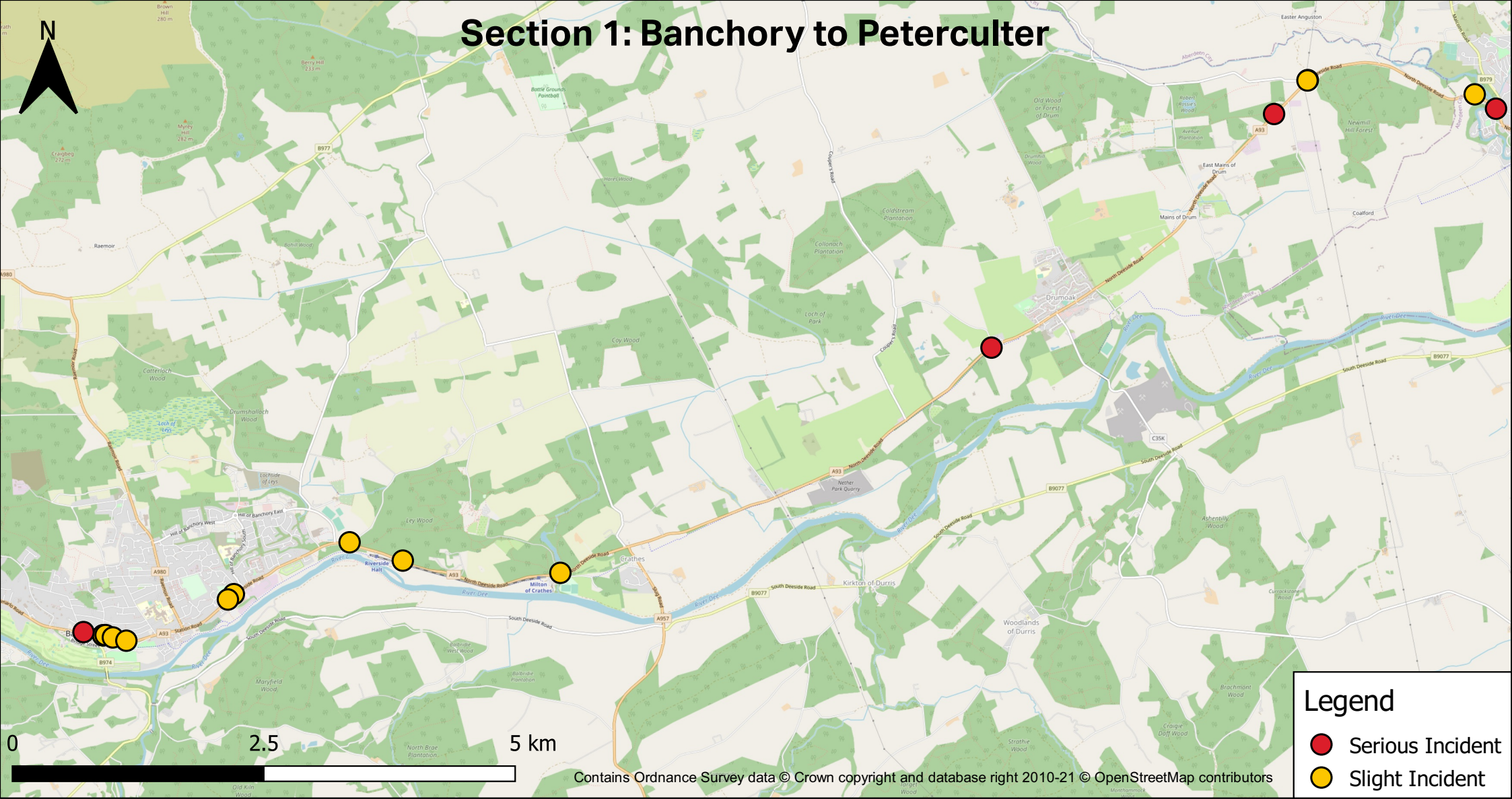
Table A.1: Car, Bus and Cycle Journey Time Analysis

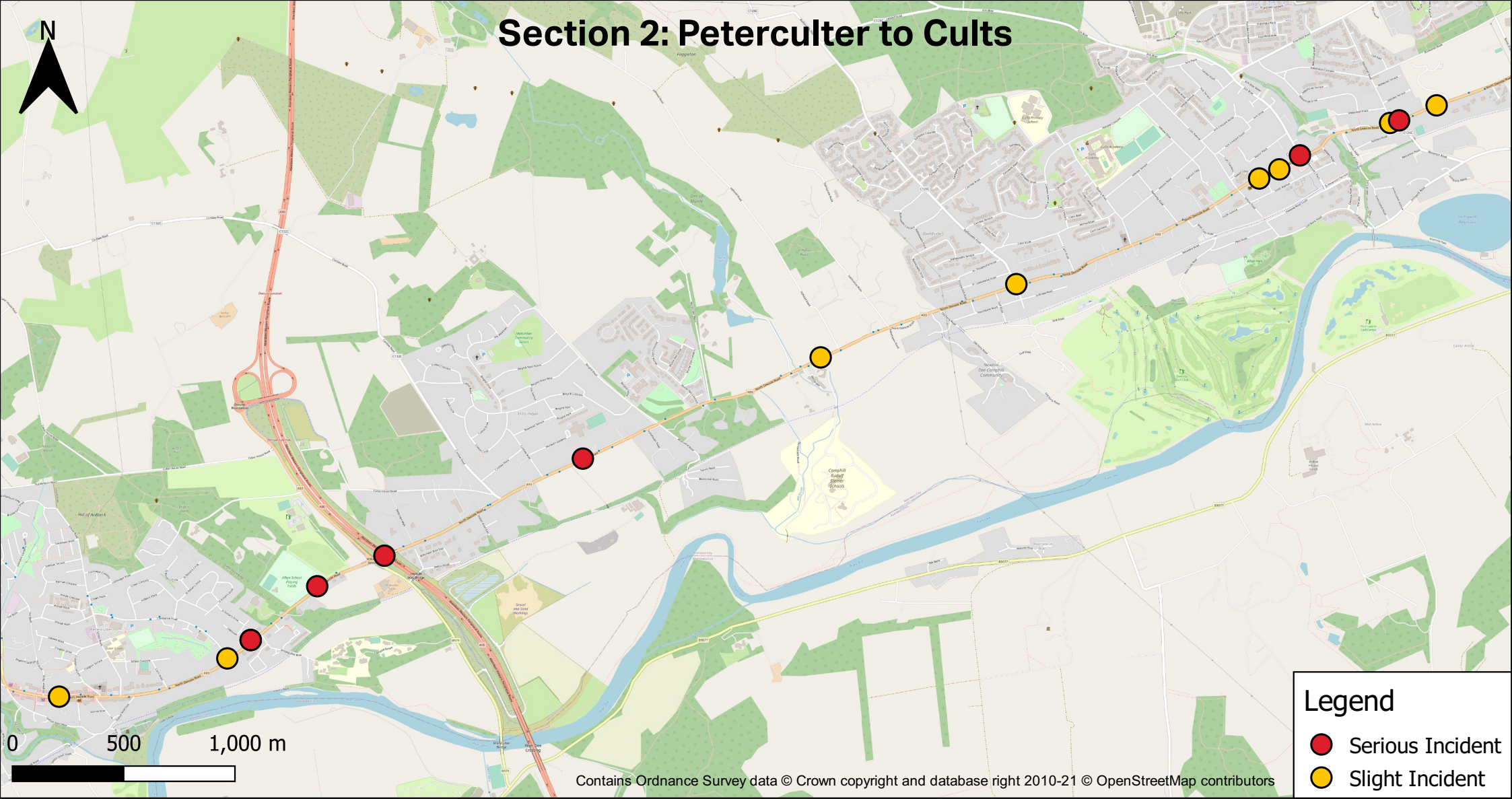
Journey Description	Car Journey Time (mins)	Bus Journey Time (mins)	Cycle Journey Time (mins)
Banchory to Aberdeen Bus Station	40	67	99
Crathes to Aberdeen Bus Station	35	53	78
Drumoak to Aberdeen Bus Station	35	47	60
Peterculter to Aberdeen Bus Station	26	39	38
Milltimber to Aberdeen Bus Station	24	34	31
Bieldside to Aberdeen Bus Station	24	31	24
Cults to Aberdeen Bus Station	20	26	20
Mannofield to Aberdeen Bus Station	8	11	7
Banchory to Aberdeen University	45	84	105
Crathes to Aberdeen University	40	70	83
Drumoak to Aberdeen University	45	64	65
Peterculter to Aberdeen University	35	57	43
Milltimber to Aberdeen University	30	52	36
Bieldside to Aberdeen University	30	49	29
Cults to Aberdeen University	28	44	25
Mannofield to Aberdeen University	18	25	12
Banchory to ARI	45	90	105
Crathes to ARI	40	76	83
Drumoak to ARI	40	70	66
Peterculter to ARI	28	55	44
Milltimber to ARI	35	50	36
Bieldside to ARI	26	47	30
Cults to ARI	22	42	26
Mannofield to ARI	18	18	16
Banchory to Aberdeen Airport	35	98	126
Crathes to Aberdeen Airport	28	84	104
Drumoak to Aberdeen Airport	26	78	87
Peterculter to Aberdeen Airport	18	70	65
Milltimber to Aberdeen Airport	16	75	57
Bieldside to Aberdeen Airport	20	72	50
Cults to Aberdeen Airport	24	67	46
Mannofield to Aberdeen Airport	30	41	43
Banchory to RGU	35	60	92
Crathes to RGU	26	46	71
Drumoak to RGU	28	40	53
Peterculter to RGU	18	32	27
Milltimber to RGU	14	30	19
Bieldside to RGU	10	27	13
Cults to RGU	7	22	9
Mannofield to RGU	10	14	13
Aberdeen Bus Station to Banchory	45	65	110
Aberdeen Bus Station to Crathes	40	53	89
Aberdeen Bus Station to Drumoak	40	47	74

Journey Description	Car Journey Time (mins)	Bus Journey Time (mins)	Cycle Journey Time (mins)
Aberdeen Bus Station to Peterculter	35	39	53
Aberdeen Bus Station to Milltimber	28	43	45
Aberdeen Bus Station to Bieldside	26	32	35
Aberdeen Bus Station to Cults	22	30	31
Aberdeen Bus Station to Mannofield	10	13	9
Aberdeen University to Banchory	55	88	113
Aberdeen University to Crathes	50	84	92
Aberdeen University to Drumoak	50	77	77
Aberdeen University to Peterculter	40	66	48
Aberdeen University to Milltimber	40	68	40
Aberdeen University to Bieldside	35	56	33
Aberdeen University to Cults	35	52	29
Aberdeen University to Mannofield	22	23	14
ARI to Banchory	50	80	100
ARI to Crathes	45	68	79
ARI to Drumoak	45	61	65
ARI to Peterculter	35	66	44
ARI to Milltimber	35	65	36
ARI to Bieldside	26	53	28
ARI to Cults	22	49	24
ARI to Mannofield	12	18	13
Aberdeen Airport to Banchory	40	106	124
Aberdeen Airport to Crathes	30	94	103
Aberdeen Airport to Drumoak	28	88	88
Aberdeen Airport to Peterculter	18	87	68
Aberdeen Airport to Milltimber	16	90	59
Aberdeen Airport to Bieldside	22	78	52
Aberdeen Airport to Cults	26	74	48
Aberdeen Airport to Mannofield	35	51	42
RGU to Banchory	35	58	91
RGU to Crathes	28	46	70
RGU to Drumoak	30	40	55
RGU to Peterculter	22	32	34
RGU to Milltimber	16	36	26
RGU to Bieldside	12	25	17
RGU to Cults	7	23	12
RGU to Mannofield	14	17	12
Across All Routes	**2304**	**4350**	**3820**

Appendix B – Road Safety Incident Plans

Section 1: Banchory to Peterculter




Section 2: Peterculter to Cults
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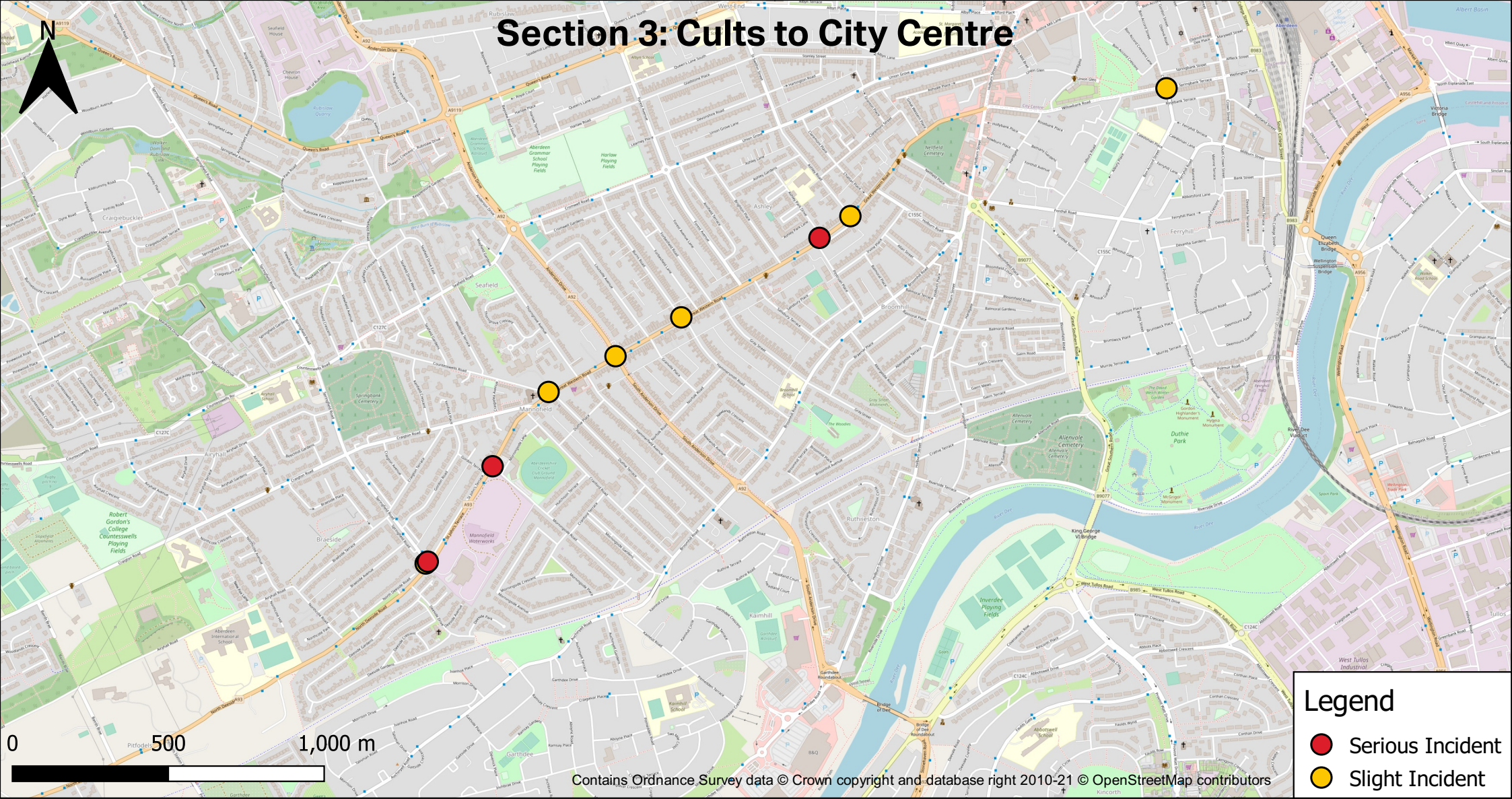
0
500
1,000 m
Legend
Serious Incident
Slight Incident
Contains Ordnance Survey data © Crown copyright and database right 2010-21 © OpenStreetMap contributors


Section 3: Cults to City Centre
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500
1,000 m
Legend
Serious Incident
Slight Incident
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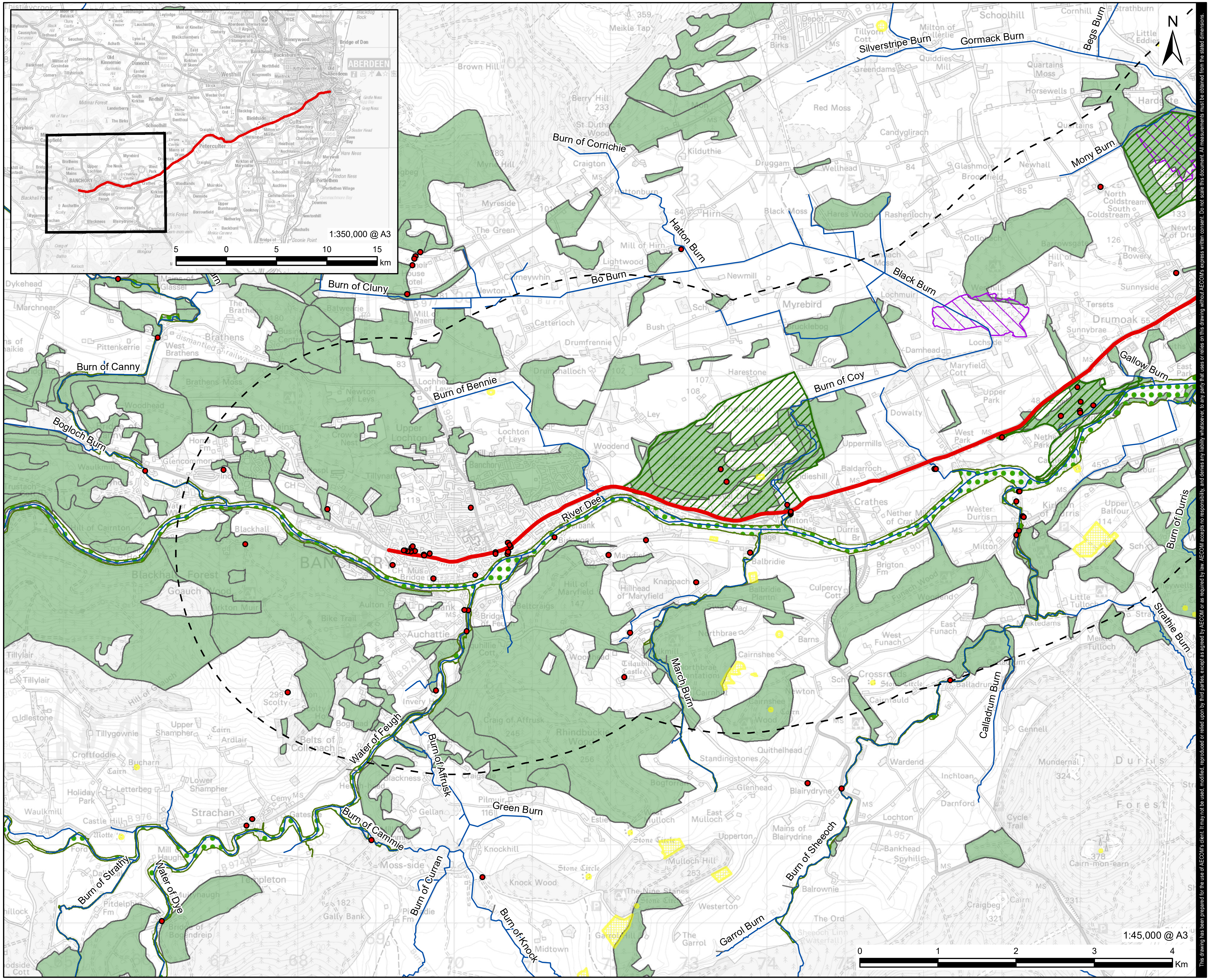
Appendix C – Environmental Constraints Mapping



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PROJECT

A93 Corridor Study

CLIENT

Aberdeen City Council

CONSULTANT

AECOM Limited
7th Floor, Aurora
120 Bothwell Street
Glasgow G2 7JS
United Kingdom

LEGEND

- Study Corridor
- Study Corridor 5km Buffer
- Listed Buildings
- Rivers
- Ramsar
- Site of Special Scientific Interest
- Special Protection
- Special Area of
- Country Parks
- National Nature Reserve
- Local Nature Reserve
- SNH Nature Reserves
- Wild Land
- Ancient Woodland
- Scheduled Monuments
- Gardens Designed Landscapes

NOTES

ISSUE PURPOSE

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PROJECT NUMBER

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FIGURE TITLE

Constraints

FIGURE NUMBER

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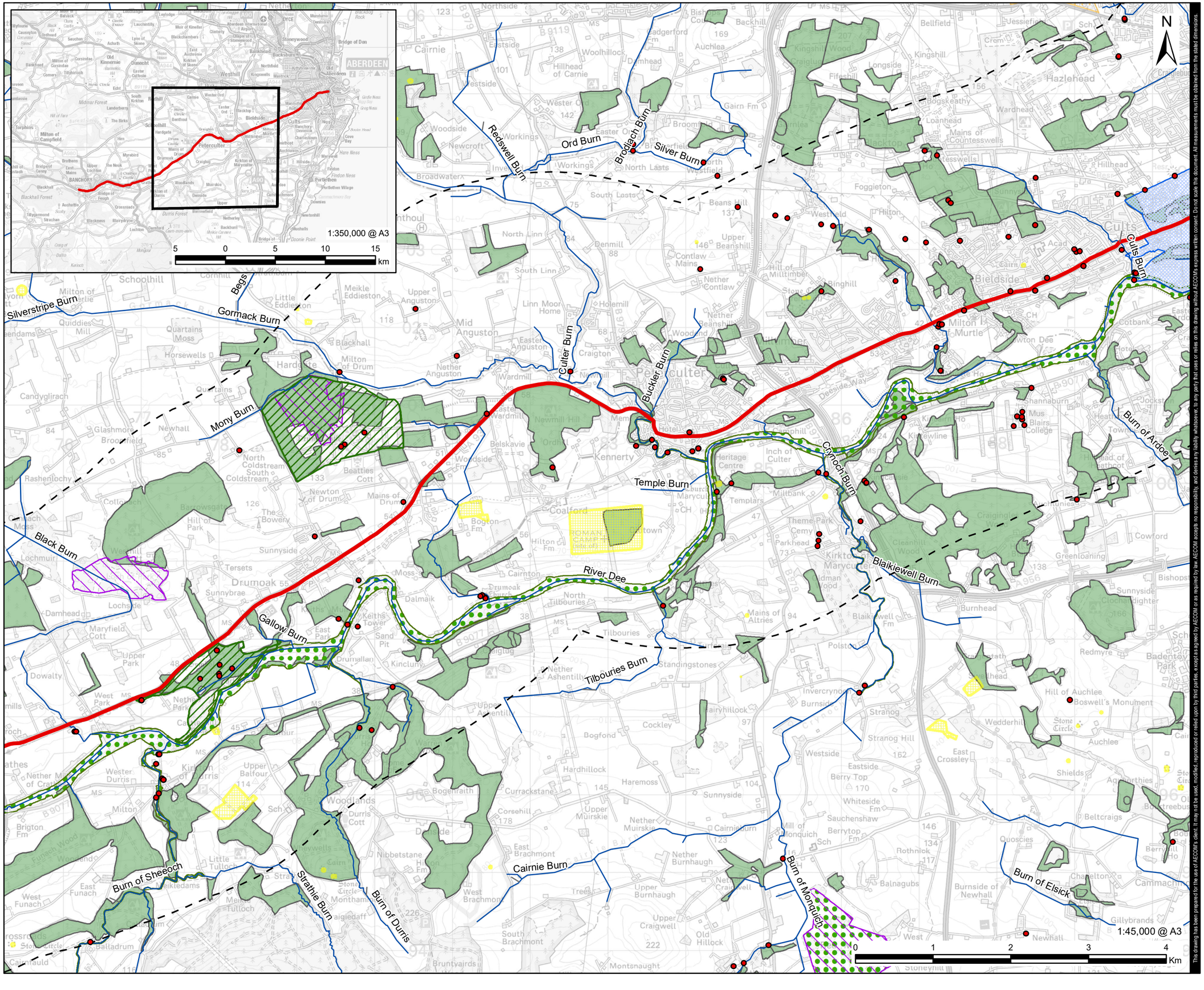

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LEGEND

- Study Corridor
- Study Corridor 5km Buffer
- Listed Buildings
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- Site of Special Scientific Interest
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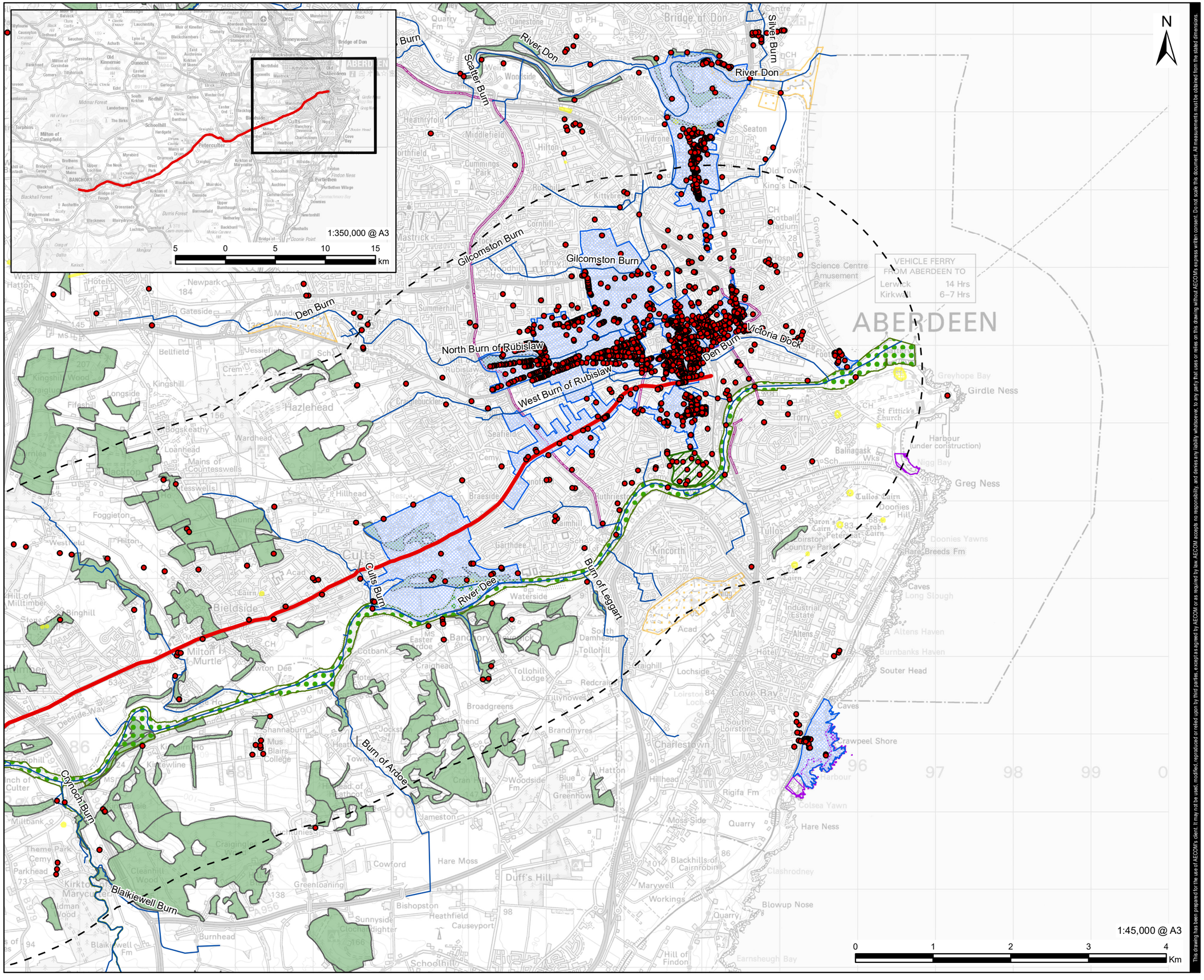

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A93 Corridor Study

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120 Bothwell Street
Glasgow G2 7JS
United Kingdom

LEGEND

- Study Corridor
- Study Corridor 5km Buffer
- Listed Buildings
- Rivers
- Ramsar
- Site of Special Scientific Interest
- Special Protection
- Special Area of
- Country Parks
- AQMA
- National Nature Reserve
- Local Nature Reserve
- SNH Nature Reserves
- Wild Land
- Ancient Woodland
- Conservation
- Scheduled Monuments
- Gardens Designed Landscapes

NOTES

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PROJECT NUMBER

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FIGURE TITLE

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FIGURE NUMBER

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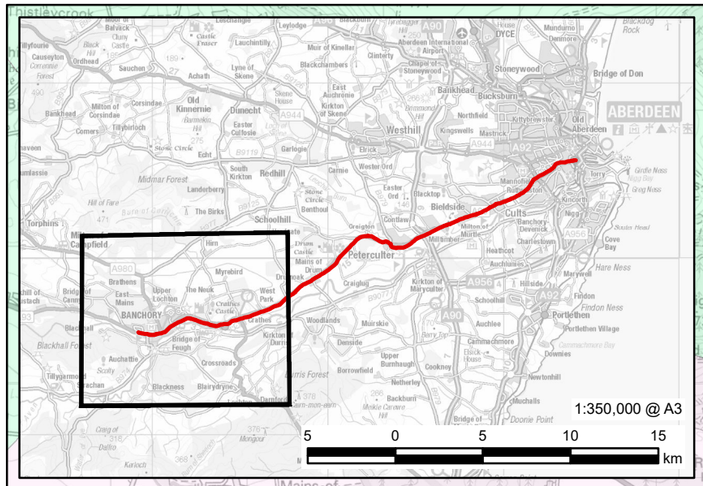

Undulating Open

Wooded Estates - Aberdeenshire

Broad Wooded Valley with Estates

Outlying Hills & Ridges

Broad Wooded and Farmed Valley

Farmed Moorland Edge - Aberdeenshire

Summits and Plateaux - Aberdeenshire

1:45,000 @ A3
0 1 2 3 4
Km

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CONSULTANT

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120 Bothwell Street
Glasgow G2 7JS
United Kingdom

LEGEND

- Study Corridor
- Study Corridor 5km Buffer
- Broad Wooded Valley with Estates
- Broad Wooded and Farmed Valley
- Farmed Moorland Edge -
- Outlying Hills & Ridges
- Summits and Plateaux -
- Undulating Open Farmland
- Wooded Estates -

NOTES

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FIGURE TITLE

Landscape Character Areas

FIGURE NUMBER

Figure 2

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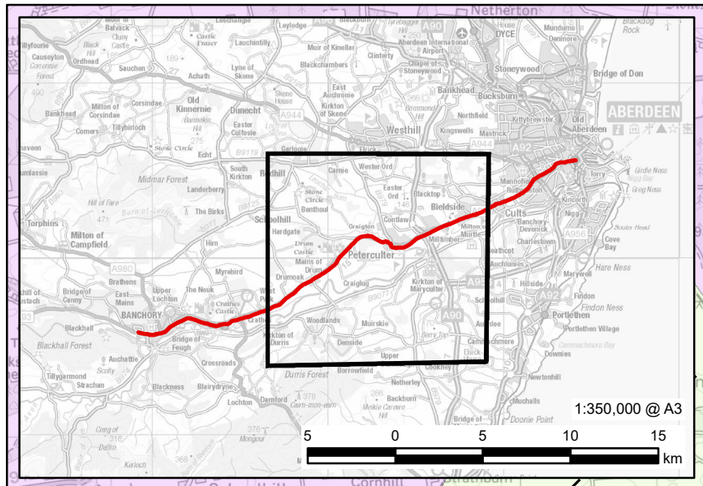

Low Hills - Aberdeen

Undulating Open Farmland

Wooded Estates - Aberdeen

Urban

Undulating Open Farmland

Urban

Urban

River Valley - Aberdeen

Broad Wooded and Farmed Valley

Farmed Moorland Edge - Aberdeenshire

Summits and Plateaux - Aberdeenshire

N

1:45,000 @ A3

0 1 2 3 4 Km

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LEGEND

- Study Corridor
- Study Corridor 5km Buffer
- Broad Wooded and Farmed Valley
- Farmed Moorland Edge -
- Low Hills -
- River Valley -
- Summits and Plateaux -
- Undulating Open Farmland
- Urban
- Wooded Estates -
- Wooded Estates -

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FIGURE TITLE

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FIGURE NUMBER

Figure 2

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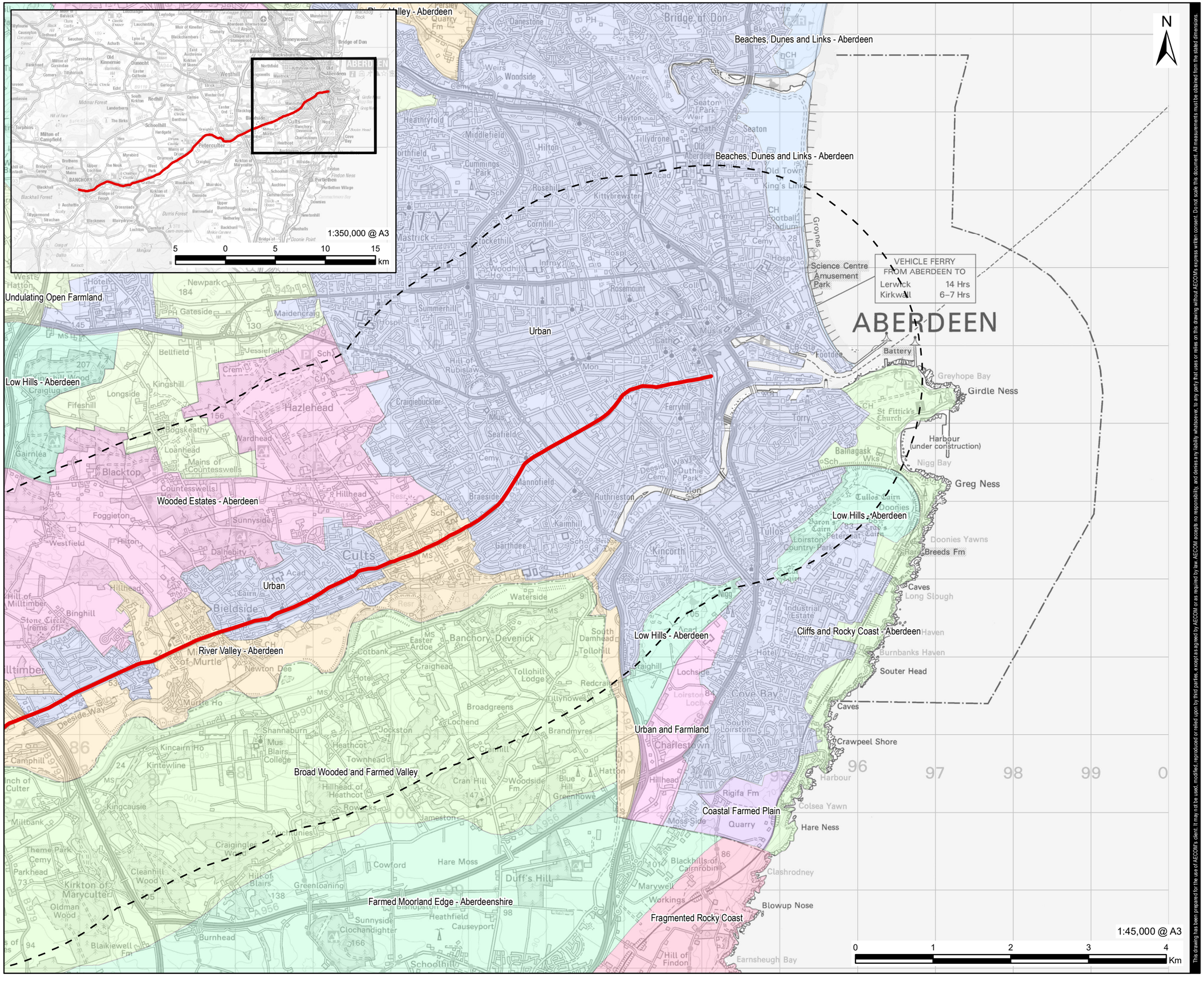

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LEGEND

- ▬ Study Corridor
- ┅ Study Corridor 5km Buffer
- ▭ Beaches, Dunes and Links -
- ▭ Broad Wooded and Farmed Valley
- ▭ Cliffs and Rocky Coast -
- ▭ Coastal Farmed Plain
- ▭ Farmed Moorland Edge -
- ▭ Fragmented Rocky Coast
- ▭ Low Hills -
- ▭ River Valley -
- ▭ Undulating Open Farmland
- ▭ Undulating Wooded Farmland -
- ▭ Urban
- ▭ Urban and Farmland
- ▭ Wooded Estates -

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Landscape Character Areas

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Figure 2

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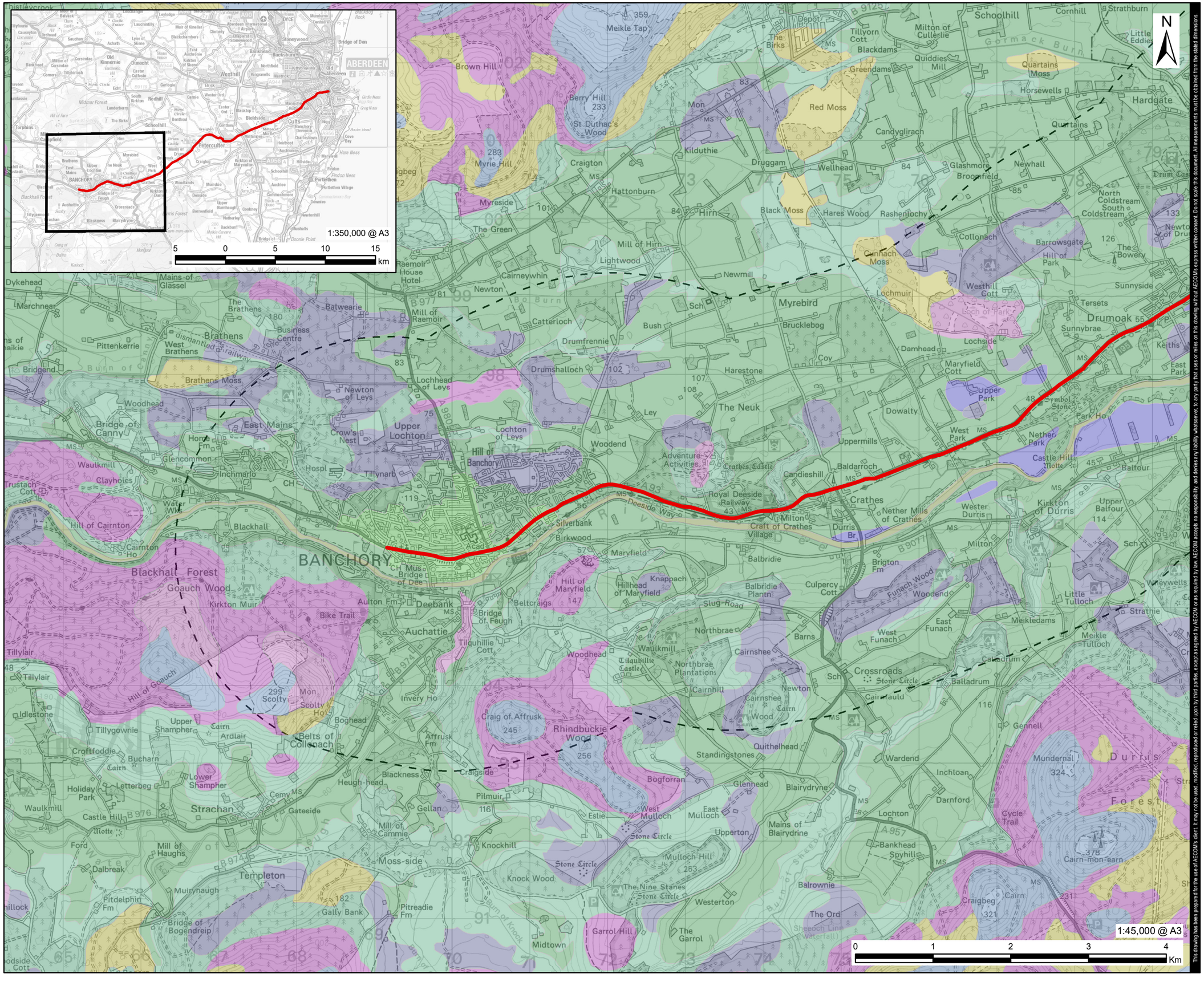

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LEGEND

- Study Corridor
- Study Corridor 5km Buffer

Agricultural Land Classification

- 3.1
- 3.2
- 4.1
- 4.2
- 5.2
- 5.3
- 6.2
- 6.3
- 888
- 999

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FIGURE TITLE

Agricultural Land Classification

FIGURE NUMBER

Figure 3

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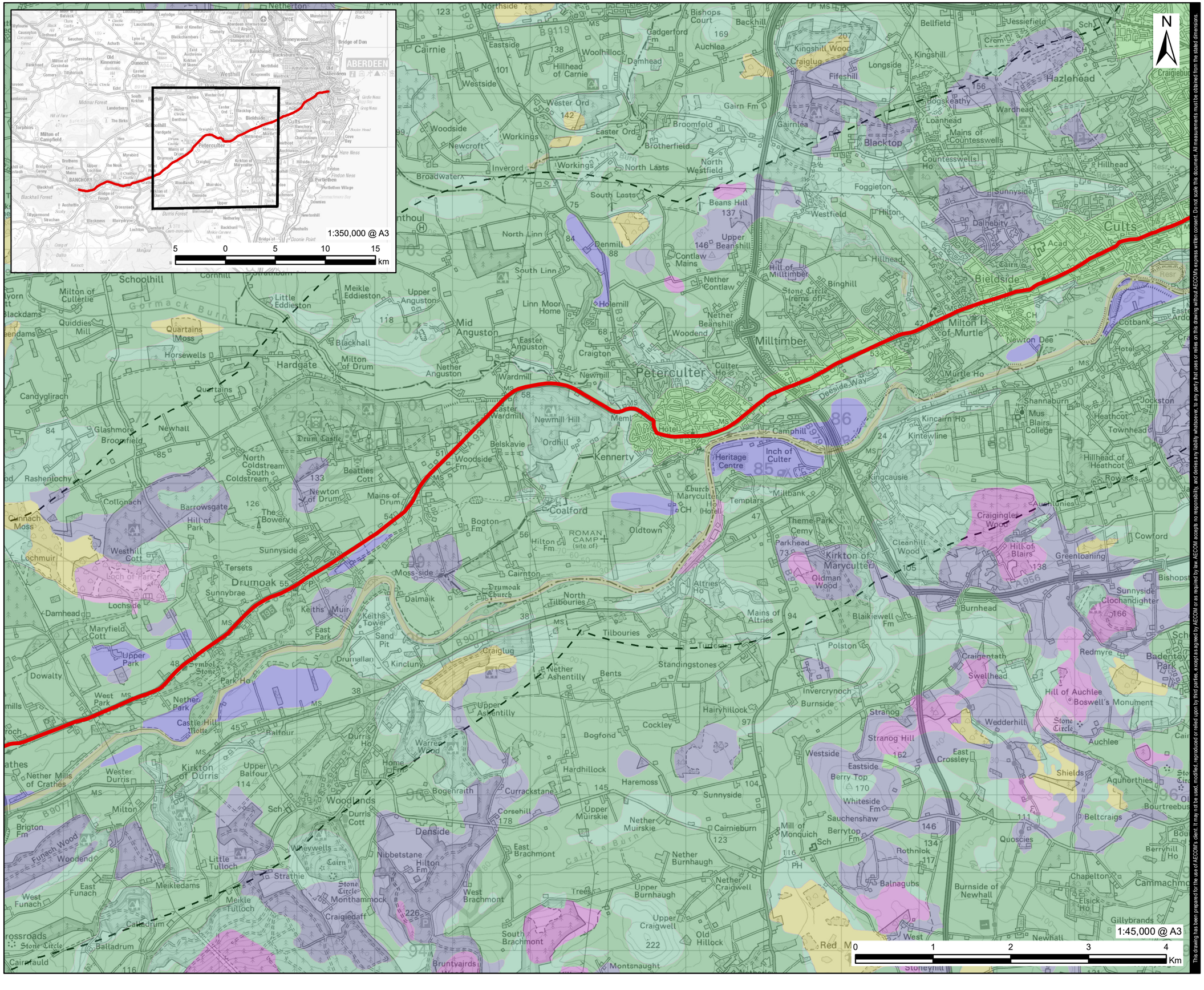

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United Kingdom

LEGEND

- Study Corridor
- Study Corridor 5km Buffer

Agricultural Land Classification

- 3.1
- 3.2
- 4.1
- 4.2
- 5.2
- 5.3
- 6.2
- 888
- 999

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FIGURE TITLE

Agricultural Land Classification

FIGURE NUMBER

Figure 3

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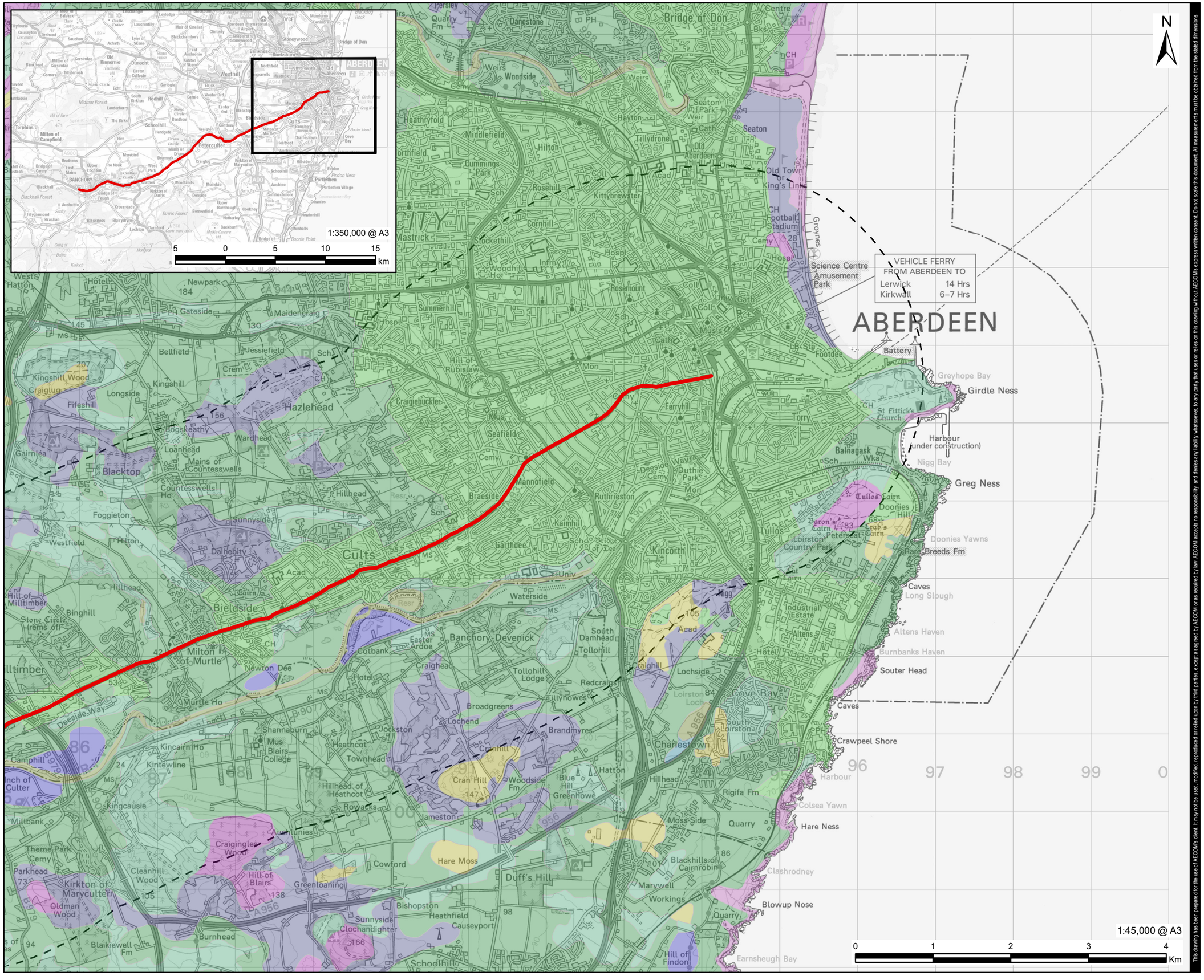

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Glasgow G2 7JS
United Kingdom

LEGEND

- Study Corridor
- Study Corridor 5km Buffer

Agricultural Land Classification

- 2
- 3.1
- 3.2
- 4.1
- 4.2
- 5.2
- 5.3
- 6.2
- 888
- 999

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FIGURE TITLE

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FIGURE NUMBER

Figure 3

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Appendix D – Study Tour Findings Note

A93 Study Tour Findings

Client name	Project name	Date	Project number
Aberdeen City Council	A93 Multi-Modal Corridor Study	21 January 2022	60666961

Prepared by	Approved by	Checked by	Verified by
Fiona Bebbington	Andrew Robb	Jo Duck	Peter Leslie

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) from Banchory in Aberdeenshire to Aberdeen City. This note has been prepared to provide a summary of a site visit 'Study Tour' that was undertaken with members of the AECOM Project Team, representatives from the Client Group and key stakeholders.

2. Study Tour

2.1 Overview

As part of the A93 Multi-Modal Corridor Study, AECOM led a Study Tour on Tuesday 16th November 2021, which representatives from ACC, Aberdeenshire Council, Nestrans and other key stakeholders attended. This event allowed transport-related issues along the corridor to be raised and identification of opportunities which may enhance the A93 corridor in terms of active travel and public transport interventions to be discussed. Feedback from the study tour will be used to inform the Problems, Issues, Constraints and Opportunities (PICOs) – a key task in the STAG-based appraisal.

2.2 Site Visit Locations

Five locations along the corridor were visited during the Study Tour. As shown below, this included the A92 (Anderson Drive) / A93 (Great Western Road) junction, Cults, AWPR Deeside Junction, Peterculter and Banchory.

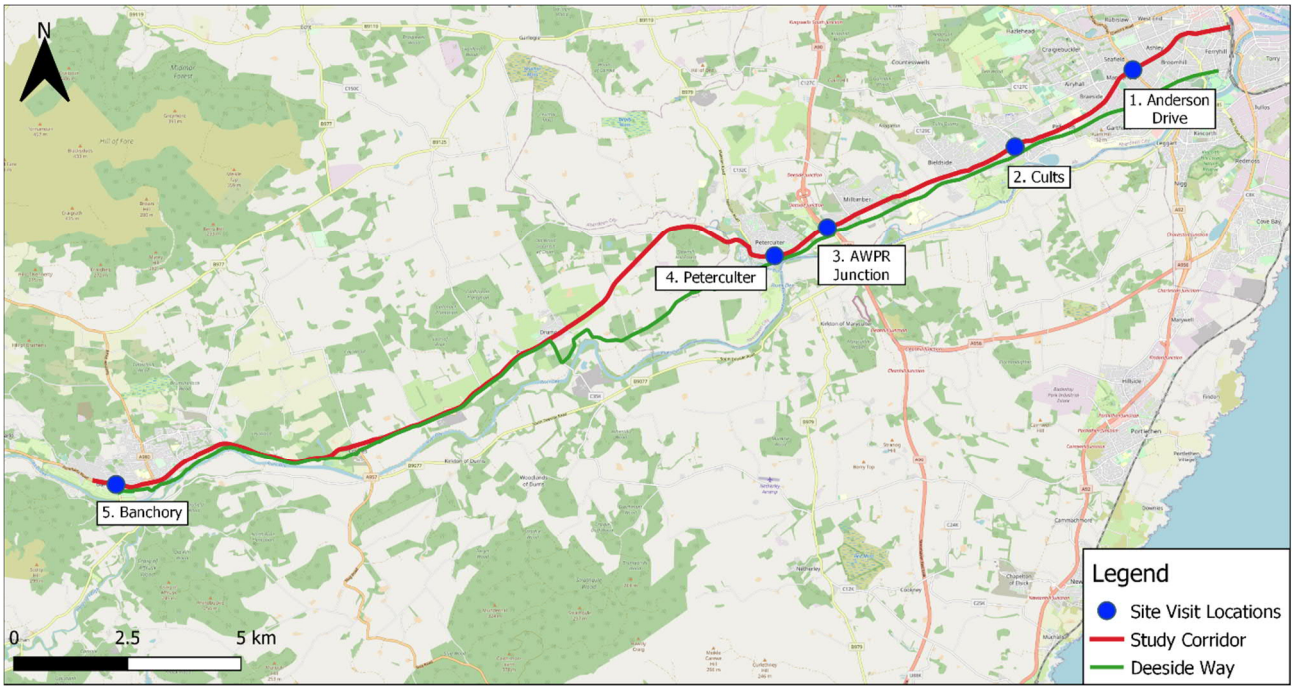

Figure D.1: Site Visit Locations

2.3 Attendees

The attendees to the Study Tour are detailed in the table below.[1]

Table D.1: Study Tour Attendees

Name	Organisation
Ruth Milne	Aberdeen City Council
Mark Yule	Aberdeen City Council
Gregor Whyte	Aberdeen City Council
Anthony Robertson	Aberdeenshire Council
Jon Barron	Nestrans / Grampian Cycle Partnership
Laurie Robertson	Sustrans
Neil Innes	Grampian Cycle Partnership
Iain Wilkie	Deeside Thistle Cycling Club
Mark Hagger	Deeside Thistle Cycling Club
Ruth Riddell	British Horse Society
Chris Thompson	Living Streets
Kirk Burton	Robert Gordon University
Nicolo Silvani	Robert Gordon University / Aberdeen Cycle Forum
Andrew Robb	AECOM
Jo Duck	AECOM
Peter Leslie	AECOM
Fiona Bebbington	AECOM
Charlie Fuller	AECOM

2.4 Format

Attendees met at the Anderson Drive / Great Western Road junction at 09:30. At each location, attendees were split into three groups to ensure a cross-section of interests were represented and to facilitate discussions in what was often a busy urban environment. At each location, attendees were asked to think about problems with the existing network and provide suggestions on how the corridor could be improved for public transport and active travel.

Attendees generally travelled between each location using either public transport or by bike, with each group being led by members of the AECOM Project Team. The two groups travelled simultaneously and met at the key locations shown above. The Study Tour concluded in Banchory at 15:30.

3. Key Findings

The following sections highlight the key problems and opportunities raised through discussions at each of the key locations, along the Deeside Way and any other general comments for the whole corridor. Furthermore, comments received following the Study Tour have been added to the key findings for completeness.

3.1 A92 (Anderson Drive) / A93 (Great Western Road) Junction

3.1.1 Problems

At the Anderson Drive / Great Western Road junction, the place function is significantly compromised by the movement function. The current layout prioritises motor vehicles and therefore, does not align with the sustainable transport hierarchy. The traffic volumes and speed as well as high levels of noise and air pollution create an unpleasant and unsafe environment for pedestrians and cyclists and there is an increased likelihood that people will encounter barriers when accessing care, educational facilities and essential services in close proximity to this junction.

The carriageway surfacing and lining on approach to the junction was identified as poor and not of suitable condition for on-road cycling. Existing road markings should outline a cycle advisory lane and advanced stop line (ASL) however these have worn away and are no longer clear to road users.

Traffic signal phasing at the junction appeared to be on a fixed set of timings, which results in a long wait time for pedestrians waiting to cross. In addition, the green phase for pedestrians is quite short and may not provide adequate time

[1] An additional event was held on Friday 3rd December 2021 with Aberdeenshire Councillors who were unable to attend the initial event.

for people with mobility issues to cross. This is the only signalised crossing of the A92 in the nearby area and, as such many pedestrians may prefer this route.

In terms of connections to the Deeside Way, it was noted that there is a lack of wayfinding signage to this alternative route.

3.1.2 Opportunities

To improve the junction for active travel users, it was noted that space allocated to walking, wheeling and cycling could be increased. Pedestrian and cycle movements at the junction could be prioritised by introducing road space reallocation, segregated infrastructure and minimum phase green times. Furthermore, active travel users can be protected at the junction by reducing vehicle speeds.

To improve the junction for public transport users, it was noted that measures to support multi-modal journeys would be beneficial. At nearby bus stops, public transport users would benefit from increased space, protection, visibility, safety, information and comfort as well as the provision of real-time information about bus services. The route is serviced by two bus companies and therefore there are opportunities to promote the use of Grasshopper ticketing to make mixed-service bus journeys more affordable and more appealing.

Future aspirations include:

- Traffic calming;
- Road space reallocation to reflect sustainable transport hierarchy;
- Designs to be informed by inclusive design;
- Cycling to be accommodated on Anderson Drive, Great Western Road and North Deeside Road to Cults;
- A review of traffic signal phasing to enable extension to the pedestrian green phase and introduction of adaptive signal timings which alter the phases based on the flow of traffic and also allowing for technology that can be used to prioritise late running bus services;
- Revisions to junction geometry, including introduction of a protected junction that would separate pedestrians, cyclists and road traffic, reducing traffic to a single lane on all approaches and widening footways; and
- Carriageway resurfacing and renewed road markings.

Figure D.1: Group Discussions at A92 Anderson Drive Junction

3.2 Cults

3.2.1 Problems

Within Cults, there is insufficient space allocated to pedestrians and cyclists, which results in a diminished place function and a prioritised movement function.

A high proportion of single occupancy cars were observed during the study tour. There is provision for on-street parking on the south side of the carriageway, which reinforces car priority and an uncontrolled crossing point to the east of Kirk Brae that prioritises motorists. On-street parking can be difficult for on-road cyclists to navigate and raises safety issues due to the opening of car doors and parking manoeuvres.

The advisory cycle lanes provide insufficient protection for cyclists and are not consistent throughout Cults, with no provision for westbound travel between Costa Coffee and Cults Avenue. Furthermore, there was evidence of cars parking within the westbound advisory cycle lane at Costa.

Footway provision is variable throughout Cults, with surfacing and width raised as particular issues. Some sections are not wide enough to accommodate a wheelchair or buggy, which may limit accessibility for certain users. This is evident at the bus stop on the north side of the carriageway to the east of Kirk Brae.

There are maintenance issues regarding carriageway surfacing and road markings, which influences the cyclability of the road and the clarity of cycle provision. It was noted that there are greater costs associated with maintaining red paint which ACC has previously used to highlight advanced stop lines for cyclists at junctions. However, it was noted that some cyclists prefer the statement that is associated with the red colour over white lining.

3.2.2 Opportunities

Within Cults, active travel opportunities include inclusive signage and wayfinding; benches and seating located in areas so as to enhance the pedestrian experience; segregated cycling infrastructure; increased number of cycle repair stations and cycle parking within the village centre; more types of cycle storage facilities to accommodate longer stays and adapted cycles; upgrade of uncontrolled crossing to controlled crossing; reallocation of space currently used for parking cars for active travel; and traffic calming and reduced speed limits. It was noted that the progression of placemaking measures could be supported by a car parking survey to determine the purpose and average length of stay for on-street parking.

Public transport opportunities are the same as those outlined for the Anderson Drive / Great Western Road junction. There would be benefit in undertaking a review of bus stop provision including consideration of shelter provision, clarity of markings and provision of bus stop flags.

Future aspirations include:

- Greater numbers of walking, wheeling and cycling along North Deeside Road;
- Reduction in single occupancy car journeys;
- Place function prioritised over movement function; and
- Traffic calming and speed reduction.

Figure D.2: Advisory Cycle Lane - Poor Surfacing

Figure D.3: Faded Cycle Priority Markings

3.3 AWPR Junction

3.3.1 Problems

At the AWPR junction, there are advisory cycle lanes that provide insufficient protection for cyclists. There are staggered crossings for pedestrians, which are difficult to navigate. The junction is generally not welcoming for active travel users and there is the potential for severance between the neighbouring communities of Peterculter and Milltimber.

3.3.2 Opportunities

To improve the junction for active travel users, segregated cycling infrastructure could be provided alongside priority for cyclists at the traffic signals. Links to the Deeside Way could also be improved at this location, particularly given the insufficient crossing for the Deeside Way on Milltimber Brae (see **Section 3.6**).

To improve the junction for public transport users, adaptive signals could be considered to improve overall flow and prioritise public transport movements through the junction.

3.4 Peterculter

3.4.1 Problems

Within Peterculter, there is insufficient space allocated to pedestrians and cyclists, which results in a diminished place function and a prioritised movement function.

There is provision for on-street parking on alternating sides of the carriageway throughout the village, which reinforces car priority. On-street parking can be difficult for on-road cyclists to navigate and raises safety issues due to the opening of car doors and parking manoeuvres.

The advisory cycle lanes provide insufficient protection for cyclists and are only provided to the junction with Station Road East (from the east). Furthermore, the road surface was noted as being poor due to gullies and drains, which presents safety concerns for cyclists. Gradients on the southern footway of the A93 at Station Road West may be prohibitive for those with mobility issues.

Safety issues were noted for all users at the junction with Malcolm Road (B979) due to a lack of visibility and the requirement for vehicles turning left onto Malcolm Road from the A93 to cross onto the opposite side of the carriageway to complete the manoeuvre.

Figure D.4: Safety Concerns at the A93 / Malcolm Road (B979) Junction

3.4.2 Opportunities

Within Peterculter, active travel opportunities include placemaking interventions; improved formal crossing facilities; a gateway zebra crossing in the west to highlight the change from the rural road network to a village centre; and traffic calming interventions. In line with the approach suggested for Cults, the progression of placemaking measures could be supported by a car parking survey to determine the purpose and average length of stay for on-street parking. It was noted that more of the on-street parking in Peterculter is likely to be occupied by residents.

Public transport opportunities are the same as those outlined for the Anderson Drive / Great Western Road junction. In addition, there is an opportunity to consider options for a more fit for purpose terminus location in the Johnston Gardens area of the village. Furthermore, the former rail station site could be promoted as a Park & Ride / Park & Pedal facility for commuters.

To the west of Peterculter, there is an opportunity to upgrade the existing path on the north side of the carriageway to provide a shared use path from Rob Roy Bridge to the junction for Anguston. There is a further opportunity to provide a cycle path on the north side of the carriageway to link Drumoak to the existing path that stops at Rosehall Cottage (between Mains of Drum and Drumoak), enabling less confident cyclists access to the area.

3.5 Banchory

3.5.1 Problems

Within Banchory, there is no dedicated cycling infrastructure on or alongside the A93. On the High Street, there is on-street parking on the south side of the carriageway, which can be difficult for on-road cyclists to navigate and raises safety issues due to the opening of car doors and parking manoeuvres. Furthermore, the road surface was noted as being poor, which also presents safety concerns for cyclists. The lack of crossing facilities within the town centre constrains the permeability of the area.

The bus route between the east of Banchory (Hill of Banchory) and the town centre is convoluted, taking approximately 15 minutes between the first stop in Banchory and the main stop on the High Street[2]. The Hill of Banchory loop requires buses to undertake manoeuvres to and from the local road network onto the A93. The A93 junctions with Bredero Drive and Arbeadie Road were noted for requiring sharp turns and for a lack of visibility. It should be noted, however, that Stagecoach has previously assessed the roads as being safe for bus movements. Buses were noted to experience problems at the A93 junction with Raemoir Road due to the gradient difference between the two roads, which can cause issues with buses ‘grounding’ on the road surface due to the steep angles.

It was noted that a high proportion of traffic within Banchory is through traffic, with a destination outwith the town.

Figure D.5: High Street On-Street Parking

Figure D.6: Free Car Parking West of Town Centre

[2] It should be noted, however, that within Banchory, 58% of passengers board on the Hill of Banchory loop compared to 42% along the High Street (information provided by Stagecoach).

3.5.2 Opportunities

Within Banchory, active travel opportunities include reducing vehicle speeds; carriageway resurfacing; cycle lane provision; widening of footways; improved provision of cycle parking; build outs to prevent unauthorised parking; implementation of a controlled crossing point in the west of the High Street and improved north to south connectivity. Whilst there is a 20mph speed limit through the town centre, there is an opportunity to provide additional speed limit signage to reinforce the message to motorists.

Public transport opportunities include the potential for a direct route through Banchory for some services and the potential for identification of a dedicated terminus location in the west of Banchory.

In addition, there is an opportunity to implement gateway features at Corsee Road to highlight the change from the rural road network to a town centre with a higher place function.

3.6 Deeside Way

3.6.1 Problems

Problems identified on the Deeside Way are a mixture of location-specific problems and general problems that are applicable to the route as a whole.

Location-specific problems include:

- B979 at Milltimber Brae – there are no crossing facilities in this location, which is a safety concern for all users of the Deeside Way due to the volume and speed of vehicle traffic.
- Pittengullies Brae – cars are given priority and there are steep ramps with barriers that active travel users are required to navigate, presenting a particular challenge for cyclists.
- Drumoak – the Deeside Way is routed onto the south footway of the A93 where users are required to travel directly alongside vehicle traffic on the carriageway and navigate narrow sections of the footway (e.g. where there is a bus stop).
- Crathes – the Deeside Way is routed onto the south footway of the A93 where users are required to travel directly alongside vehicle traffic travelling at 40mph on the carriageway.

General problems identified include:

- Conflict between users on the route – lack of understanding about the needs of different user groups and particularly regarding the needs of equestrian users.
- Connections to and from the route – access to the Deeside Way was raised as an issue in various locations including Peterculter, Drumoak and Crathes.
- Lighting – the lack of lighting presents safety concerns and limits use of the route during winter months.
- Surfacing – sections of the Deeside Way are not suitable for road bikes due to the lack of tarmac surfacing within the Aberdeenshire boundary. It was noted that tarmac paths can be difficult for horses to travel on, especially in icy conditions.
- Routeing – the routeing of the Deeside Way is convoluted in places within Aberdeenshire, which makes it unattractive for commuting. A concern was raised that the Deeside Way may not be able to withstand an increase in commuter cycle traffic.
- Path widths – the width of the path does not allow for clear and consistent segregation between different user groups.
- Access controls – access controls can limit accessibility of the route (e.g. chicanes, ramps, gates).
- Signage – there is generally a lack of wayfinding signage associated with the route.

3.6.2 Opportunities

Location-specific opportunities include:

- B979 at Milltimber Brae – undertake a review of the crossing to ensure risks are as low as reasonably practical. Installing a sufficient crossing across the B979, including cycling infrastructure from Milltimber Brae to the AWPR junction and reducing traffic speeds on the B979 would result in considerable improvements at the site.

- Pittengullies Brae – previous considerations have included a bridge over the junction. In the absence of this, a series of basic improvements including road markings and realignment of the path would promote the safety of users.
- Drumoak/Crathes – it is suggested that an alternative route is identified for the Deeside Way through Drumoak and Crathes. At Crathes, it was suggested that a direct path could be provided between the existing route and Slug Road to the south of the existing four houses east of Slug Road rather than diverting users onto the A93 to use the footway.

General opportunities identified include:

- Conflict between users on the route – it was suggested that a route for equestrian users could be created through maintaining a verge next to the main path. In addition, education of users is important to ensure an understanding of the needs of all users of the route and promote mutual respect between users.
- Lighting – lighting provision on the Deeside Way would improve safety perceptions and increase use of the route during winter months. However, it was also noted that the provision of lighting may negatively impact bats and other similar species.
- Surfacing – upgrading the surface of the Deeside Way (e.g. with tarmac) could transform the suitability of the route for commuting and leisure cyclists.
- Signage – there is an opportunity to improve wayfinding signage throughout the route.
- Safety – it was proposed that a safety review be undertaken across the length of the Deeside Way within the study area.

Figure D.7: Surfacing on the Deeside Way east of Banchory

Figure D.8: Access point to the Deeside Way in Cults

3.7 General

A number of other general problems and opportunities were discussed throughout the study tour.

3.7.1 Problems

There is limited wayfinding signage facilitating active travel access to local destinations and to the Deeside Way. Signage is important to ensure that people do not need to rely on digital navigation tools and to allow people to adjust their journey when required accordingly.

There is a lack of cycle parking at bus stops along the study corridor. The provision of secure cycle parking would support the undertaking of multi-modal journeys and may encourage a greater proportion of people to cycle for part of their journey. In addition, there is a lack of information about the ability to carry bikes on board buses, which may limit transport options.

3.7.2 Opportunities

Cycle priority at traffic signals (e.g. through early release for cyclists) would benefit cyclists travelling on-road to help maintain distance from motorised users. This would be particularly beneficial on sections of the corridor where there is an upward gradient.

An on-street parking review would aid understanding of why people are choosing to park in certain locations and a pedestrian desire line review would improve awareness of how people are choosing to travel and if the existing infrastructure could be enhanced to support these movements. Furthermore, through identification of pedestrian desire lines, locations of potential crossing facilities can be identified. In addition, junction radii could be reduced in some locations and continuous footways could be introduced at side roads to prioritise the movements of non-motorised users.

4. Next Steps

The key findings from this note will help to inform the Problems, Issues, Constraints and Opportunities mapping as part of the STAG-based appraisal, thereafter supporting the setting of study objectives.

Appendix E – Aberdeenshire Councillors Study Tour Findings Note

A93 Aberdeenshire Councillors Study Tour Findings

Client name	Project name	Date
Aberdeen City Council	A93 Multi-Modal Corridor Study	21 January 2022
Prepared by	**Checked by**	**Approved by**
Fiona Bebbington	Jo Duck	Andrew Robb

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) from Banchory in Aberdeenshire to Aberdeen City. This note has been prepared to provide a summary of a site visit 'Study Tour' that was undertaken with members of the AECOM Project Team and Aberdeenshire Councillors.

2. Overview

Following the Study Tour conducted on 16th November 2021 with the client group and key stakeholders, a similar event was undertaken on Friday 3rd December 2021 with elected members from Aberdeenshire Council to provide them with the same opportunity to feed into the Problems, Issues, Constraints and Opportunities mapping as part of the STAG process. This note summarises the key findings from the day.

2.1 Attendees

The attendees to the Study Tour are detailed in Table E.1 below.

Table E.1: Study Tour Attendees

Name	Organisation
Cllr. Eileen Durno	Banchory and Mid-Deeside Councillor
Cllr. Ann Ross	Banchory and Mid-Deeside Councillor
Cllr. Sarah Dickinson	Stonehaven and Lower Deeside Councillor
Jo Duck	AECOM
Fiona Bebbington	AECOM

2.2 Format

Attendees met in Drumoak at 13:15 and undertook a walking review of the area to discuss specific problems and opportunities related to the A93 and access to the Deeside Way. Following a review of Drumoak, the group walked towards Crathes before travelling towards Banchory by car. In Banchory, the group reviewed problem areas of the Deeside Way highlighted by the local councillors. The Study Tour concluded at 15:00.

3. Key Findings

3.1 A93

3.1.1 Problems

The volume and speed of traffic using the A93 deters the majority of active travel users from travelling on it. Overall, the footway widths and conditions were raised as a concern, due to uneven surfacing and lack of accessibility for buggy and wheelchair users within communities.

In terms of bus travel, it was noted that people can be deterred by the length of journey times and reliability of the service. In addition, the emphasis on online tickets and information is not suitable for all users and particularly not for elderly users.

3.2 Deeside Way (Drumoak to Banchory)

3.2.1 Problems

Parking on and near the access to the Deeside Way at Drumoak was raised as an issue by the group, particularly during summer months. This can result in issues for active travel users when navigating parked vehicles as well as affecting the overall accessibility of the path. It was noted that those parking in this location likely do not know that it is on the Deeside Way and therefore, signage may discourage instances of parking. The stretch of the path adjacent to the carriageway linking the off-road path to the A93 is un-kerbed and the quality of the surface means that most users tend to use the carriageway instead. It was noted that traffic volumes on this section are now very low following the closure of Park Bridge.

Figure E.1: Deeside Way at Drumoak

Figure E.2: Surfacing west of Glebe Park

Conflict between users was raised as a problem on the Deeside Way because of the variety of users who make use of the route (pedestrians, cyclists, dog walkers, horse riders, those with disabilities etc.). It was emphasised that the Deeside Way is a leisure route and a proportion of cyclists do not treat it as such – cycling at speeds that make other users feel uncomfortable. It was also emphasised that the Deeside Way is a valuable route for local residents and a popular route for tourists.

Surfacing along this section of the Deeside Way is poor due to tree roots and a lack of maintenance leading to a deterioration of the surfacing. This can increase the risk of slips, trips and falls occurring and makes the path unsuitable for those with mobility issues. Surfacing was raised generally as an issue throughout many Aberdeenshire sections of the route and the impact that this can have on accessibility for certain groups.

There was a discussion about the routeing of the Deeside Way between Peterculter and Crathes and the lack of wayfinding signage that is present to aid users. Between Drumoak and Crathes, users are required to use the footway on the south side of the A93, which raises safety concerns for some users due to the volume of traffic passing in close proximity.

Near Crathes, the Deeside Way passes through working quarry access roads and it was noted that a path would be beneficial in this location.

3.2.2 Opportunities

Improving wayfinding signage was highlighted as a key opportunity to enhance the Deeside Way for users, particularly along sections of the route that do not follow close to the A93.

Improved surfacing along the route was discussed as an opportunity. It was agreed that surfacing requires improvement at key sections along the route, with a variety of surfacing options identified. In particular, tarmac was noted as being a potentially beneficial surface for the Deeside Way, though it was also stressed that this could conflict with the desire to retain the route as a natural, green corridor and in addition, this surfacing can also cause issues for equestrian users.

There was a discussion about the opportunity to consider options for the Deeside Way to remain off carriageway between Drumoak and Banchory, noting that this may require conversations with third party landowners. It is felt that this would make the route more attractive to active travel users by avoiding risk of conflicts with motorised traffic.

It was noted that some members of Crathes, Drumoak and Durris Community Council are working on a project to develop a path network on the south side of the River Dee. Whilst not directly within the study area for the A93 Multi-Modal Corridor Study, it was noted that there may be an opportunity to create links between the two projects.

In terms of bus travel, there was a discussion about the potential for a mini Park and Ride site at Crathes Hall Car Park. Unless people had nowhere to park at their destination, it was generally felt that this wouldn't encourage bus travel on its own. To encourage greater bus travel, an express Stagecoach service was suggested within Aberdeen City with a dedicated bus lane from Peterculter to enable competitive journey times with the private car.

Figure E.3: Wayfinding Signage in Banchory

Figure E.4: Surfacing east of Glebe Park

3.3 General

Banchory Paths group is an active voluntary association that develop and maintain footpath networks in and around Banchory. The group recently partnered with Morrison's in Banchory to rebuild a path link to the Deeside Way from the store on the North Deeside Road.

Any proposals to improve the Deeside Way should consider any private land ownership which the Deeside Way utilises and / or is adjacent to that may be impacted by the change.

4. Next Steps

The key findings from this note will help to inform the Problems, Issues, Constraints and Opportunities mapping as part of the STAG-based appraisal, thereafter supporting the setting of study objectives.

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Appendix B – Transport Planning Objectives Technical Note

A93 Banchory to Aberdeen City Multi-Modal Study - STAG-Based Appraisal

Transport Planning Objectives Technical Note

Aberdeen City Council

Project number: 60666961

September 2022

Delivering a better world

Quality information

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Revision History

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Table of Contents

Figures

Tables

1. Introduction

1.1 Overview

This note presents the Transport Planning Objectives (TPOs) that have been developed for the A93 Multi-Modal Corridor Study. Central to the appraisal of options using Scottish Transport Appraisal Guidance (STAG) is that the process should be objective-led rather than solution-led. In line with the guidance, a number of TPOs have been developed to reflect the identified problems, issues, constraints and opportunities within the study area, including those identified through stakeholder consultation, and to reflect synergy with established policy directives. 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 as the appraisal progresses.

1.2 Approach

As outlined in the STAG Managers Guide[1], 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 A93 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.

1.2.1 Problems and Opportunities

As part of the previous work package, location-specific problems and opportunities were identified along the A93 corridor. These are presented in full as part of the *Problems, Issues, Constraints and Opportunities Technical Note*. For the purposes of TPO mapping, these have been grouped into themes according to the table below.

Table 1.1: Problem and Opportunity Themes

Problem Themes
Problem Theme 1: Active Travel Infrastructure
Problem Theme 2: Deeside Way[2]
Problem Theme 3: Declining Bus Patronage
Problem Theme 4: High Car Usage in Key Settlements
Problem Theme 5: Electric Vehicle Infrastructure
Problem Theme 6: Signage
Opportunity Themes
Opportunity Theme 1: Policy Context
Opportunity Theme 2: Bus Service Partnerships
Opportunity Theme 3: Funding
Opportunity Theme 4: Distances to Work for Aberdeen City Settlements
Opportunity Theme 5: Locking in the Benefits of the AWPR
Opportunity Theme 6: Increased Active Travel Use during COVID-19 Pandemic

In **Section 3**, the themes outlined in the table above are described in more detail and TPOs are mapped against each theme.

1.2.2 Policy Alignment

Objectives included within relevant policy and strategy documents were collated and those of direct relevance to the A93 Multi-Modal Corridor Study were themed. The policy and strategy documents that were reviewed include:

- National Transport Strategy 2 (2020);
- Nestrans Regional Transport Strategy 2040 (2020);

[1] https://www.transport.gov.scot/media/50895/scottish-transport-appraisal-guidance-managers-guide.pdf
[2] While included in this note to reflect the full suite of problem themes, it has been agreed with ACC that no options will be generated for the Deeside Way route specifically in the A93 Multi-Modal Corridor Study as this is being considered by other workstreams. On this basis, no TPO has been developed specific to the Deeside Way. However, the study will require to consider connections **to** and **from** the route.

- Aberdeen City Local Transport Strategy 2016-2021 (2016);
- Aberdeenshire Local Transport Strategy (2012);
- North East Bus Alliance Bus Action Plan (2020);
- Nestrans Active Travel Action Plan 2014-2035 (2014);
- Aberdeen Active Travel Action Plan 2021-2026 (2021);
- Aberdeenshire Council Walking and Cycling Action Plan (2009);
- Sustainable Urban Mobility Plan (2019);
- Aberdeen Low Emission Zone Proposals (2020); and
- North East Scotland Roads Hierarchy (2019).

The results of this review are presented in **Section 4**.

1.3 SMART Objectives

The STAG guidance notes that it is imperative that TPOs are developed with 'SMART' principles in mind, which will enable the TPOs to be sharpened and refined as the STAG study progresses and more information becomes available. A SMART objective will be:

- **Specific** – it will say in precise terms what is sought;
- **Measurable** – there will exist 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 will be associated with an agreed future point by which it will have been met.

A SMART Objective Table is presented in **Section 5**.

2. Transport Planning Objectives

The TPOs developed for the A93 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 2.1: Study Objectives

Ref	Transport Planning Objective	Design-Focused Objective
TPO1	Increase the modal share of active travel on the A93 road corridor for all journey types	Improve the level of service for walking, wheeling and cycling on the A93 road corridor linear route between Banchory and Aberdeen to provide additional capacity and complement the existing popular strategic active travel network.
TPO2	Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	Improve active travel network connectivity and level of service for communities on or close to the A93 road and Deeside Way core path corridors to complement the strategic active travel network, and remove accessibility barriers to public transport on the A93 corridor between Banchory and Aberdeen.
TPO3	Increase the modal share of public transport on the A93 road corridor for all journey types	Improve the attractiveness of bus services including the ability to interchange by a range of mode options between Banchory and Aberdeen.
TPO4	Support sustainable communities along the A93 corridor	Provide opportunities for placemaking interventions along the A93 corridor, particularly in Banchory, Peterculter and Cults, supporting a safer and more pleasant environment where there is through traffic in communities.
TPO5	Support the role of the A93 corridor as the gateway to Royal Deeside	Enable visitor trips to be undertaken by sustainable modes of transport, by providing infrastructure and wayfinding mechanisms to support accessibility by active travel, public transport and Ultra Low Emission Vehicles (ULEVs) between Banchory and Aberdeen.

3. Problems and Opportunities Alignment

The table below presents the results of the review against the identified problems and opportunities.

Table 3.1: Problems and Opportunities Alignment with TPOs

Problems	TPO(s)
Problem Theme 1: Active Travel Infrastructure	
Cycle lanes narrow, inconsistent and surface is of poor quality	TPO1
Lack of visibility at some junctions require vehicles to enter the cycle lane	TPO1
Within Aberdeenshire, footways are only provided within settlements	TPO1, TPO2
Lack of safe crossing facilities	TPO1, TPO2
Problem Theme 2: Deeside Way	
Lack of connectivity between the Deeside Way and the A93 and other active travel networks	TPO1, TPO2
There is generally a lack of wayfinding signage associated with the Deeside Way	TPO2
Problem Theme 3: Declining Bus Patronage	
Radial nature of bus services can mean that bus services often do not serve key employment destinations without requiring interchange in the city centre	TPO3
Perceived lack of live bus information and there can be a reluctance to access this information via apps	TPO3
The cost of bus travel is a deterrent for some users of the corridor	TPO3
Journey times to key destinations are significantly longer by bus than car, and within Aberdeen City journeys by bus are longer than cycling	TPO3
Lack of bus priority infrastructure to provide benefits for bus services along the study corridor	TPO3
The study corridor within Aberdeenshire has suffered disproportionately from reliability problems due to vehicle complexity and the effect of remoteness	TPO3
Lack of frequency of bus services on the corridor in the evening and on Sundays and the frequency of services to communities not directly on the A93	TPO2, TPO3
Vehicles used on services throughout the corridor present accessibility issues for some users, including on the coaches used on Stagecoach services and the hydrogen buses used on First services	TPO3
The quality of bus stop infrastructure is varied along the study corridor	TPO2, TPO3
Lack of provision for taking bikes on buses or cycle parking at bus stops	TPO2, TPO3
Problem Theme 4: High Car Usage in Key Settlements	
The car mode share for travel to work along the corridor is high, with the majority of settlements along the corridor recording rates of driving to work significantly above the national average (with the exception of Garthdee)	TPO1, TPO2, TPO3, TPO4
On-street parking limits carriageway space	TPO1, TPO4
Unauthorised parking in settlements	TPO1, TPO4
Problem Theme 5: Electric Vehicle Infrastructure	
There is limited provision of electric vehicle charging infrastructure along the corridor	TPO4, TPO5
Problem Theme 6: Signage	
There is a lack of road signage to tourist destinations along the corridor, notably from the AWPR	TPO5
Opportunities	**TPO(s)**
Opportunity Theme 1: Policy Context	
Study aims strongly align with the local, regional and national policy context, including support for more trips to be undertaken using sustainable modes of travel	TPO1, TPO2, TPO3, TPO4, TPO5
Low Emission Zone areas provide opportunities to enhance conditions for active travel users	TPO1
Opportunities to enhance priority for sustainable modes based on ACC's revised roads hierarchy	TPO1, TPO3, TPO4, TPO5
Opportunity Theme 2: 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)	TPO3
Opportunity Theme 3: Funding	

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 Bus Partnership Fund 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	TPO1, TPO2, TPO3, TPO4, TPO5
Opportunity Theme 4: Distances to Work for Aberdeen City Settlements	
The vast majority of those living east of Milltimber travel less than 10km for work. This presents opportunities to encourage active travel use for journeys to work from these settlements	TPO1
Opportunity Theme 5: 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	TPO3
Opportunity Theme 6: Increased Active Travel Use during COVID-19 Pandemic	
Active travel counts suggest that demand has persisted (and increased) for pedestrians at two locations on the corridor throughout 2021, presenting an opportunity to maintain and build on this trend looking ahead to the future	TPO1, TPO2, TPO4, TPO5

As shown, each of the identified problems and opportunities identified on the corridor are considered to link to at least one of the developed TPOs.

4. Policy Alignment

The bottom-up approach of developing the TPOs has been verified with a top-down check for alignment with key policies as shown in **Figure 4.1**.

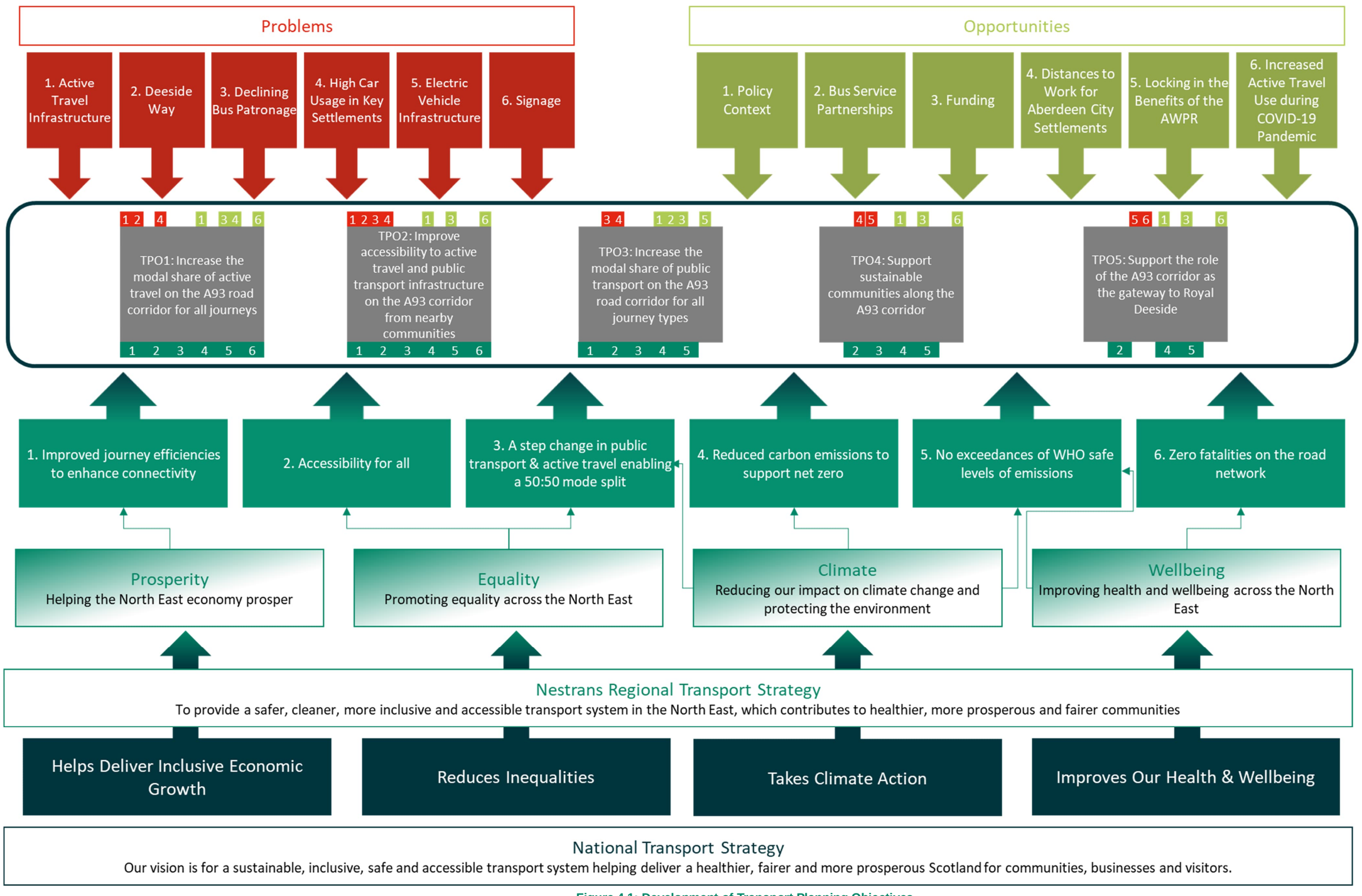

Figure 4.1: Development of Transport Planning Objectives

5. SMART Objective Table

The table below highlights how the developed TPOs relate to the SMART principles.

Table 5.1: A93 Multi-Modal Corridor Study SMART Objectives

TPO	Specific	Measurable	Attainable	Relevant	Timed
TPO1: Increase the modal share of active travel on the A93 road corridor for all journey types	TPO identifies the need to facilitate active travel improvements along the study corridor.	Surveys (such as Census or Scottish Household Survey) to measure proportion of active travel trips for journeys to work and education and for leisure journeys. Citizens Panel surveys to assess changing perceptions. Pedestrian and cycle counts along the corridor can monitor changes in those travelling actively.	Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.	TPO is consistent with the overall aim of the A93 Multi-Modal Corridor Study. Consultation highlighted lack of consistent and safe active travel infrastructure along the A93 corridor. Study Tour identified poor quality of existing cycling infrastructure along the A93 road corridor. With the exception of Garthdee, all settlements along the corridor have a higher rate of travel to work and study by car than the national average for Scotland (62%).	Within next 5-10 years.
TPO2: Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	TPO identifies the need to facilitate improved connections to sustainable transport infrastructure on the A93 from nearby communities.	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. Citizens Panel surveys to assess changing perceptions. Accessibility improvements can be gauged by user feedback e.g. via Aberdeenshire Area Bus Forums, Grampian Cycle Partnership and Aberdeen Cycle Forum. Scottish Access to Bus Index (SABI) can be monitored to assess changes in accessibility to bus services.	Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure. Will require multi-partner engagement including community collaboration to realise improved connections to nearby communities.	TPO is consistent with the overall aim of the A93 Multi-Modal Corridor Study. Consultation highlighted lack of consistent, direct and safe connections to active travel and public transport infrastructure along the A93 corridor.	Within next 5-10 years.
TPO3: Increase the modal share of public transport on the A93 road corridor for all journey types	TPO identifies the need to make public transport more attractive through service and infrastructure improvements.	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. Citizens Panel surveys to assess changing perceptions. Satisfaction of bus passengers. Scottish Access to Bus Index (SABI) can be monitored to assess changes in accessibility to bus services. TRACC accessibility tool can be used to measure changes in connectivity. 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.	Delivery of TPO may require collaboration between ACC, partners and bus operators.	TPO is consistent with the overall aim of the A93 Multi-Modal Corridor Study. Consultation highlighted perceived issues with bus services including connectivity, information, cost, journey times, reliability, frequency, accessibility, bus stop infrastructure and lack of integration with other modes, which reduces the attractiveness of public transport as mode choice along the corridor. With the exception of Garthdee, all settlements along the corridor have a higher rate of travel to work and study by car than the national average for Scotland (62%).	Within next 5-10 years.
TPO4: Support sustainable communities along the A93 corridor	TPO identifies the need to provide placemaking interventions for communities along the study corridor.	Surveys (such as Census or Scottish Household Survey) to measure proportion of active travel trips for short journeys. Citizens Panel surveys and targeted community engagement (e.g. community councils) to assess changing perceptions.	Delivery of TPO will require further feasibility work to assess locations and implementability of potential options for improving infrastructure.	TPO is consistent with the overall aim of the A93 Multi-Modal Corridor Study. Problems and opportunities analysis highlighted issues associated with on-street parking in communities and identified the potential for placemaking interventions as an opportunity.	Within next 5-10 years.
TPO5: Support the role of the A93 corridor as the gateway to Royal Deeside	TPO identifies the need to enable visitor trips to be undertaken by sustainable modes.	Potential to utilise Scottish tourism statistics and research to support measuring of TPO	Delivery of TPO may require collaboration between ACC, partners, bus operators and other stakeholders e.g. Visit Scotland.	TPO is consistent with the overall aim of the A93 Multi-Modal Corridor Study. Consultation highlighted a lack of sustainable transport options for visitors.	Within next 5-10 years.

The table below provides a number of additional indicators that can be used to measure the potential impact of infrastructure interventions on each TPO, prior to outcomes being established. These are initial indicators to assist in the option development, sifting, packaging and appraisal stages of the project.

Table 5.2: Indicators to Measure Potential Impact of Interventions on TPOs

Transport Planning Objective	Indicators
TPO1: Increase the modal share of active travel on the A93 road corridor for all journey types	• The increase in dedicated, high quality active travel facilities (km). • The reduction in the number of gaps in active travel provision.
TPO2: Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	• The reduction in the number of gaps in active travel provision. • Number of bus stops upgraded to facilitate multi-modal journeys. • Number of wayfinding signs to the Deeside Way.
TPO3: Increase the modal share of public transport on the A93 road corridor for all journey types	• The number of improved bus priority junction treatments. • Number of bus stops upgraded and maintained. • The reduction in bus journey times between key settlements on the A93 road corridor and Aberdeen city centre. • Increase in ticket purchases for journeys with an origin and destination on the study corridor.
TPO4: Support sustainable communities along the A93 corridor	• Increase in footway width on key pedestrian routes. • Number of cycle parking spaces. • Number of electric vehicle charging points on the corridor.
TPO5: Support the role of the A93 corridor as the gateway to Royal Deeside	• Modal share for journeys to key destinations. • Number of wayfinding signs to tourist destinations. • Number of electric vehicle charging points on the corridor.

6. Summary

This note has been prepared to outline the TPOs that have been developed for the A93 Multi-Modal Study. The TPOs have been developed based on a robust bottom-up approach (focussing on how the objectives realise the identified problems, issues, constraints and opportunities in the study area) and verified by a top-down assessment against key policy documents.

The identified TPOs and design-focused objectives for the study are as follows:

Table 6.1: Study TPOs

Ref	Transport Planning Objective	Design-Focused Objective
TPO1	Increase the modal share of active travel on the A93 road corridor for all journey types	Improve the level of service for walking, wheeling and cycling on the A93 road corridor linear route between Banchory and Aberdeen to provide additional capacity and complement the existing popular strategic active travel network.
TPO2	Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	Improve active travel network connectivity and level of service for communities on or close to the A93 road and Deeside Way core path corridors to complement the strategic active travel network, and remove accessibility barriers to public transport on the A93 corridor between Banchory and Aberdeen.
TPO3	Increase the modal share of public transport on the A93 road corridor for all journey types	Improve the attractiveness of bus services including the ability to interchange by a range of mode options between Banchory and Aberdeen.
TPO4	Support sustainable communities along the A93 corridor	Provide opportunities for placemaking interventions along the A93 corridor, particularly in Banchory, Peterculter and Cults, supporting a safer and more pleasant environment where there is through traffic in communities.
TPO5	Support the role of the A93 corridor as the gateway to Royal Deeside	Enable visitor trips to be undertaken by sustainable modes of transport, by providing infrastructure and wayfinding mechanisms to support accessibility by active travel, public transport and Ultra Low Emission Vehicles (ULEVs) between Banchory and Aberdeen.

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Appendix C –
Option Generation, Sifting and Development Technical Note

AECOM

A93 Banchory to Aberdeen City Multi-Modal Study: STAG-Based Appraisal

Option Generation, Sifting and Development Technical Note

Aberdeen City Council

Project number: 60666961

November 2022

Delivering a better world

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
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Table of Contents

Figures

Tables

1. Introduction

1.1 Overview

This note 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 A93 Multi-Modal Corridor Study. The aim is to identify a set of options that could potentially deliver the Transport Planning Objectives (TPOs) and, in turn, help to address the problems, issues and constraints identified on the study corridor while helping to realise the opportunities.

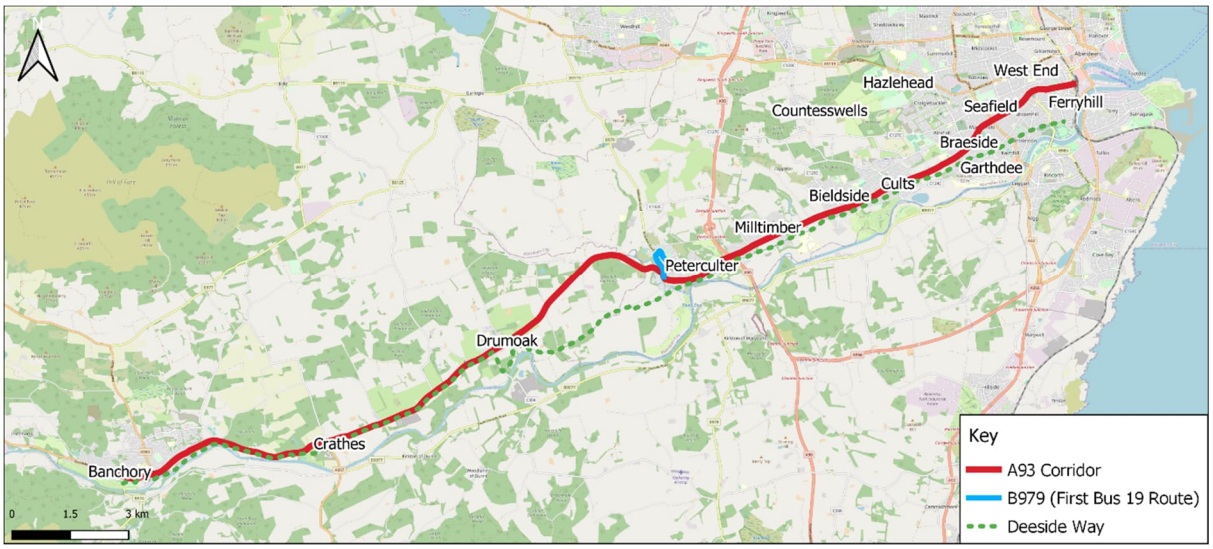


Figure 1.1: Study Area

1.2 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.

1.3 Do-Minimum Scenario

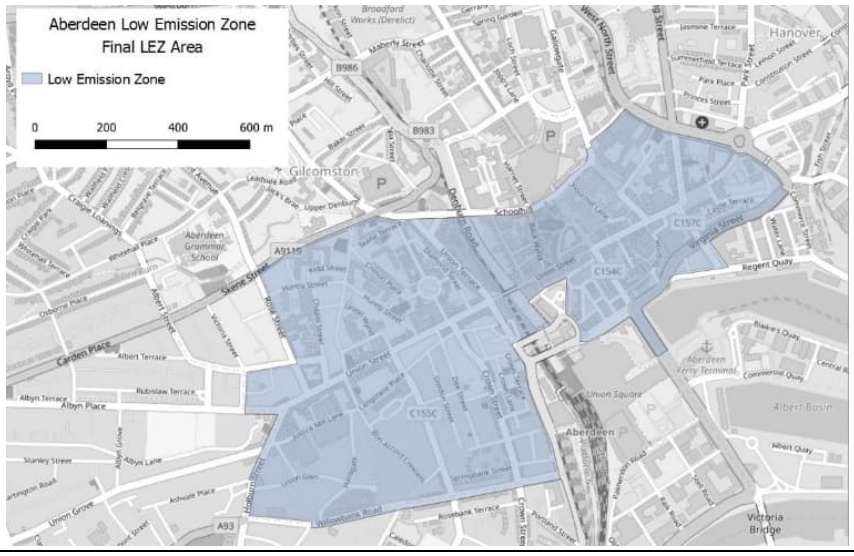
In line with Scottish Transport Appraisal Guidance (STAG), all generated options must be appraised against a Do-Minimum scenario. Transport Scotland define the Do-Minimum in STAG as:

'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.'[1]

The Do-Minimum for the A93 Multi-Modal Corridor Study assumes the interventions presented in the table below are in place.

[1] https://www.transport.gov.scot/publication/stag-technical-database/section-2/#s23

Table 1.1: Committed Transport Projects included within the A93 Multi-Modal Corridor Study

Scheme	Description
Crathes mini transport hub	• Aberdeenshire Council is currently exploring the potential to deliver a 'Mobility Hub' facility in Crathes[2]. • In advance of completion of the mini hub project, Aberdeenshire Council is progressing other work associated with the uncontrolled pedestrian crossing/refuge connecting the north side of the A93 to the south side, including street lighting.
South College Street Junction Improvements Project	• This project supports the City Centre Masterplan's aims to improve the public realm in the city centre by providing additional road capacity to accommodate the rerouting of vehicular traffic arising from the implementation of public realm enhancements along Guild Street and Union Street. • A preferred option was adopted by ACC in 2017. As the design has progressed, further work, including traffic modelling, has been carried out to ensure the project will perform effectively. In May 2020, ACC resolved to progress a Compulsory Purchase Order to acquire the land necessary to build the project. ACC took ownership of the land and rights in land required for the project in April 2021. • The project consists of the following main elements[3]: o An additional traffic lane along South College Street between Bank Street and Wellington Place; o An additional lane on Palmerston Place; o A new traffic signal-controlled junction at the intersection of Palmerston Place/A956 North Esplanade West; o The alteration of the existing traffic signal-controlled junctions at the South College Street/Wellington Place junction and the South College Street/Millburn Street/Palmerston Place junction adding additional approach lanes and improving operational coordination; o New and altered walking and cycling infrastructure along South College Street and Palmerston Place; and o Reconfigured parking and loading areas on South College Street between Millburn Street and Riverside Drive. • Indicative programming anticipates full opening of the project in Spring 2023.
Low Emission Zone (LEZ)	• 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 includes the eastern extent of the study corridor via Willowbank Road, Springbank Terrace and Wellington Place[4] (see below). 
City Centre Masterplan	• As part of the City Centre Masterplan, general traffic will be restricted on Market Street, Guild Street and Bridge Street. This is scheduled to be delivered in early 2023 and may have impacts on the eastern section of the study corridor along Willowbank Road.

[2] https://como.org.uk/shared-mobility/mobility-hubs/what/
[3] https://www.aberdeencity.gov.uk/services/roads-transport-and-parking/south-college-street-junction-improvements-project-phase-1
[4] https://www.aberdeencity.gov.uk/services/roads-transport-and-parking/low-emission-zone

1.4 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 linkages through to the city centre.

1.5 Deeside Way

It has been agreed with the Client Group that the A93 Multi-Modal Study will not generate options for the Deeside Way due to other studies currently being progressed on the route – the Deeside 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 Deeside Way and access onto the route will be included.

The Deeside Way Health Check was undertaken to survey the sections of the Deeside 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 January 2022. The recommendations emerging from the study focus on addressing health and safety issues, barrier removal, drainage, vegetation control, signage and waymarking, interpretation and information, realignment of the route between Drumoak and Peterculter and development of e-bike charging points and bike storage.

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.

In addition to these ongoing studies, it should be noted that following the Bridge of Dee West Active Travel Study that was undertaken in 2020, Committee approval was granted to progress new connections from RGU to the Deeside Way. It is understood that this has not yet progressed, however, it remains a key project for delivery by ACC.

1.6 Cross City Connections

ACC recently completed a review of the STAG Part 2 appraisal for Cross City Connections. The study identified 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 five routes developed as part of the Cross City Connections Study that are of relevance for the A93 corridor as follows:

- Route 19: Upgrade CP87 from western end of Craigton Road to Cults Barn;
- Route 20: Deeside Way to Friarsfield Development;
- Route 23: Provide a new connection to Ladyhill Road;

- Route 24: Provide on-road cycle facility between entrance to Oldfold Farm and start of CP72; and
- Route 27: Deeside Way to Robert Gordon University and Garthdee Road.

The review recommended that Route 20 is progressed to the concept design stage, including:

- A connection between Craigbank Drive and Friarsfield Road;
- Connection on Kirk Brae;
- Connection on North Deeside Road, between Kirk Brae and St Devenick's Place; and
- Connection on St Devenick's Place and St Devenick's Terrace to meet with the Deeside Way.

2. Option Generation

2.1 Active Travel

The active travel options that have been generated are presented in the table below.

Table 2.1: Active Travel Options

Ref	Title	Source
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	Study Tour; Consultation
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	Previous Studies
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	Study Tour
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	Study Tour
AT5	Review priority at the A93/Anderson Drive Junction for people walking, cycling and wheeling	Study Tour
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	Study Tour
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	Consultation
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	Study Team
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	Consultation
AT10	Implement an additional access point to the Deeside Way from the west of Duthie Park	Consultation
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	Consultation
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	Consultation
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	Consultation
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	Consultation
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	Consultation
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	Consultation
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	Consultation
AT18	Improve priority for Deeside Way users across Pittengullies Brae	Consultation
AT19	Implement an active travel link from Deeside Way to Drum Castle	Consultation
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	Consultation
AT21	Improve access to the Deeside Way in the west of Drumoak	Consultation
AT22	Implement crossing facilities on South Anderson Drive at Ruthrieston Road	Consultation
AT23	Implement crossing facilities near Abbotshall Road	Consultation
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	Study Tour

Ref	Title	Source
AT25	Implement additional formalised crossing facilities in Cults	Study Tour; Consultation
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	Consultation
AT27	Implement improved crossing facilities for Deeside Way users across the B979	Study Tour; Consultation
AT28	Implement an active travel bridge over the B979	Consultation
AT29	Implement additional zebra crossing points in Peterculter	Study Tour; Consultation
AT30	Implement a separate bridge parallel to Rob Roy Bridge for active travel use only	Consultation
AT31	Consider locations for additional crossing facilities within Drumoak	Consultation
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	Consultation
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	Consultation
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	Consultation
AT35	Implement crossing facilities on the western section of Banchory High Street	Study Tour; Consultation
AT36	Implement additional cycle parking within Cults, particularly near bus stops	Study Tour
AT37	Implement a Park and Pedal facility near the AWPR Junction	Consultation
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	Consultation
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	Study Tour
AT40	Implement additional cycle parking within Banchory Town Centre	Consultation
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	Study Team
AT42	Implement with-flow segregated cycling infrastructure along the A93 corridor in Aberdeen City	Study Team
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	Study Tour
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	Study Team
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	Study Team
AT46	Implement a continuous cycle lane between Peterculter and Drumoak	Consultation
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	Consultation
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	Consultation
AT49	Implement cycling infrastructure along the High Street in Banchory	Consultation
AT50	Implement a continuous path along the banks of the River Dee from Duthie Park to Peterculter	Consultation
AT51	Re-instate Shakkin' Briggie in Cults for active travel use	Consultation
AT52	Implement aspiration core path AP10 between Binghill Road and Bieldside	Consultation
AT53	Implement aspirational core path AP4 between Contlaw Road and Bucklerburn Road	Consultation

Ref	Title	Source
AT54	Implement a direct cycle route from Peterculter to Westhill and Kingswells via Blacktop Hill	Consultation
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	Consultation
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	Consultation
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	Consultation
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	Consultation
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	Consultation

2.2 Public Transport

The public transport options that have been generated are presented in the table below.

Table 2.2: Public Transport Options

Ref	Title	Source
PT1	Implement an eastbound bus lane along the A93 corridor	Previous Studies
PT2	Implement a westbound bus lane along the A93 corridor	Consultation
PT3	Implement bus lanes in both directions along the A93 corridor	Consultation
PT4	Conduct a route wide review of bus stop provision and infrastructure	Consultation
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	Consultation
PT6	Consider options for an alternative terminus arrangement in Peterculter	Consultation
PT7	Consider options for an alternative terminus arrangement in Banchory	Consultation
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	Study Tour; Consultation
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	Study Tour; Consultation
PT10	Implement ticketing options for multi-modal journeys	Study Tour
PT11	Implement a Park and Ride site in the east of Banchory	Consultation
PT12	Introduce a bus service between Cults and the supermarkets in Garthdee	Consultation
PT13	Introduce a bus service between the A93 corridor and Aberdeen Royal Infirmary	Consultation
PT14	Introduce a bus service on the South Deeside Road	Consultation
PT15	Introduce a bus service between Peterculter and Westhill/Kingswells	Consultation
PT16	Introduce a bus service between Crathes and Stonehaven	Consultation
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	Consultation

Ref	Title	Source
PT18	Implement orbital bus services using the AWPR to enhance connections north and south	Consultation
PT19	Reinstate the railway line along the A93 corridor	Consultation
PT20	Implement tram services along the A93 corridor	Consultation
PT21	Increase the frequency of bus services on the A93	Consultation
PT22	Trial alternative routing of the First 19 service via Union Terrace and Schoolhill	Consultation
PT23	Trial express running of the Stagecoach 201 service within the Aberdeen City boundary	Consultation
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	Study Tour; Consultation
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	Study Tour; Consultation
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	Study Tour

2.3 Other

The other options that have been generated are presented in the table below.

Table 2.3: Other Options

Ref	Title	Source
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	Consultation
O2	Review the layout of the A93/Anderson Drive Junction	Study Tour
O3	Review the layout of the A93/Pitfodels Station Road Junction	Consultation
O4	Review the layout of the A93/Abbotshall Road Junction	Consultation
O5	Review the layout of the A93/Malcolm Road Junction	Study Tour
O6	Review the layout of the A93/Hill of Banchory East Junction	Consultation
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	Study Tour; Consultation
O8	Review pedestrian safety at island crossings along the corridor	Consultation
O9	Develop an education campaign for the A93 corridor to promote understanding and respect between different users	Consultation
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	Consultation
O11	Conduct a review of road surface maintenance along the corridor, including on-road cycle lining	Study Tour; Consultation
O12	Implement a link road between A93 and Inchgarth Road	Planning and Policy
O13	Reopen Park Bridge to vehicles	Consultation
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	Study Tour; Consultation
O15	Prioritise the A93 corridor for enforcement of pavement parking in line with the Transport Scotland Act 2019	Consultation

Ref	Title	Source
O16	Conduct a review of parking in Cults	Study Tour
O17	Conduct a review of parking in Peterculter	Study Tour
O18	Conduct a review of parking in Banchory	Study Tour
O19	Introduce placemaking and gateway features in Cults	Study Tour
O20	Introduce placemaking and gateway features in Peterculter	Study Tour
O21	Implement gateway signage on approach to Drumoak in both directions	Consultation
O22	Implement gateway signage on approach to Crathes in both directions	Consultation
O23	Introduce placemaking and gateway features in Banchory Town Centre	Study Tour
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	Study Team
O25	Implement package of measures to support 20-minute neighbourhood in Cults	Study Team
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	Study Team
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	Study Team
O28	Implement additional flashing speed limit signs along the A93 corridor	Consultation
O29	Reduce the speed limit on Anderson Drive	Study Tour
O30	Reduce the speed limit on the A93 between Peterculter and Drumoak	Consultation
O31	Reduce the speed limit on Kennerty Road	Consultation
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	Consultation
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	Consultation
O34	Reduce speed limit on Sunnyside Drive to 20mph	Consultation
O35	Extend 30mph speed limit from Drumoak to Park	Consultation
O36	Reduce the speed limit on the A93 in Crathes to 30mph and extend this speed limit 50m to the east	Consultation
O37	Extend 20mph speed limit throughout Banchory	Consultation
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	Study Tour; Consultation
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	Consultation
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	Consultation
O41	Implement traffic calming measures on School Road in proximity to Culter School	Consultation
O42	Implement traffic calming measures on Banchory High Street	Consultation
O43	Introduce adaptive timings at traffic signals along the corridor	Study Tour

3. Option Sifting

3.1 Approach

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 transport 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 sifting approach has been adopted in agreement with the Client Group which sifts options based on their high-level performance against:

- The agreed A93 Multi-Modal Study Transport Planning Objectives (TPOs);
- Deliverability Criteria (Feasibility, Affordability and Public Acceptability);
- Position in the Sustainable Investment Hierarchy (SIH)[5]; and
- Identified Problems and Opportunities in the A93 study area.

Dependencies between options were also identified, highlighting options considered to be mutually exclusive, and options which could lead to additional benefits if combined. The option sifting process is summarised in the diagram below.

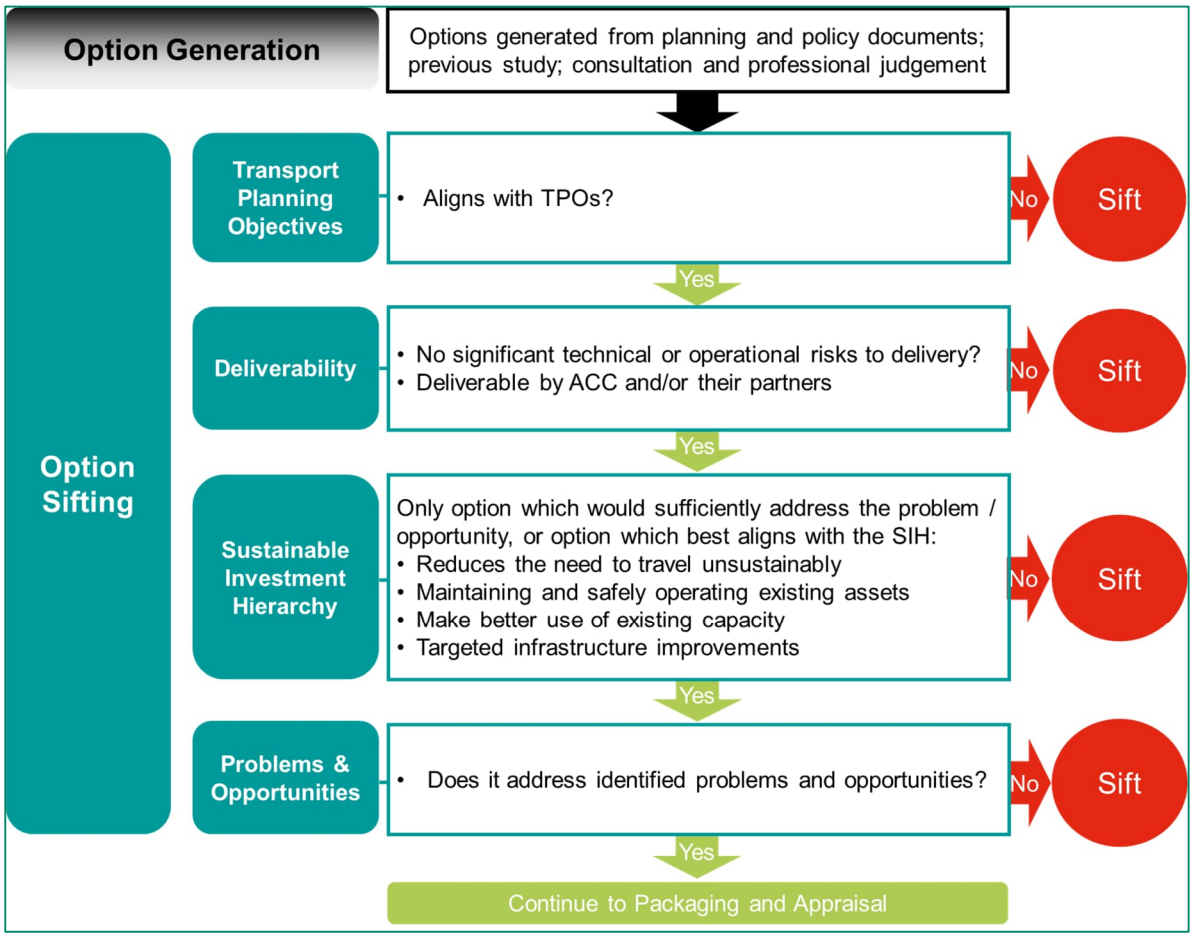


Figure 3.1: Option Sifting Process

[5] The Sustainable Investment Hierarchy (SIH) is promoted within the National Transport Strategy (NTS2) as an approach to informing budgetary decisions, considering in order of priority: Investment aimed at reducing the need to travel unsustainably; Investment aimed at maintaining and safely operating existing assets taking due consideration of the need to adapt to the impacts of climate change; Investment promoting a range of measures, including innovative solutions, to make better use of existing capacity, ensuring that existing transport networks and systems are fully optimised (these may include technology based, regulatory, fiscal or value engineering solutions to asset renewals); and Investment involving targeted infrastructure improvements.

3.2 Policy Review

In addition to the sifting criteria outlined above, selected options were also assessed against Aberdeenshire Council policy to facilitate understanding of the deliverability of options. Options were assessed against the following policies of Aberdeenshire Council:

- Draft Road Markings Manual (June 2017);
- Variable & Vehicle-Activated Signs Manual (April 2018);
- Pedestrian Crossings Manual (November 2020); and
- Speed Limits Manual (November 2020).

The table below presents the options that were reviewed against these documents.

Table 3.1: Options Assessed against Aberdeenshire Council Policy

Ref	Description
AT31	Consider locations for additional crossing facilities within Drumoak
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy
AT35	Implement crossing facilities on the western section of Banchory High Street
O21	Implement gateway signage on approach to Drumoak in both directions
O22	Implement gateway signage on approach to Crathes in both directions
O23	Introduce placemaking and gateway features in Banchory Town Centre
O28	Implement additional flashing speed limit signs along the A93 corridor
O30	Reduce the speed limit on the A93 between Peterculter and Drumoak
O32	Increase the number of speed limit signs on approach to Drumoak in both directions
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak
O34	Reduce speed limit on Sunnyside Drive to 20mph
O35	Extend 30mph speed limit from Drumoak to Park
O36	Reduce the speed limit on the A93 in Crathes to 30mph and extend this speed limit 50m to the east
O37	Extend 20mph speed limit throughout Banchory
O38	Implement additional 20mph speed limit signage on the High Street in Banchory
O42	Implement traffic calming measures on Banchory High Street

The policy review resulted in the sifting of four options – O13, O30, O36 and O37 – as outlined in **Table 3.2**. Findings of the review are additionally captured within the commentary for the individual options set out in **Section 5**.

3.3 Summary of Sifted Out Options

Based on the sifting exercise, it is recommended that the options presented in the table below are sifted from further consideration at this stage.

Table 3.2: Options to be Sifted from Further Consideration

Ref	Title	Rationale
AT5	Review priority at the A93/Anderson Drive Junction for people walking, cycling and wheeling	Option is covered by AT3 and AT4.
AT10	Implement an additional access point to the Deeside Way from the west of Duthie Park	Option has limited impacts on the TPOs developed for this study and there are high deliverability risks in terms of feasibility and affordability. Furthermore, the access from Gairn Terrace ultimately delivers a western access point currently.
AT22	Implement crossing facilities on South Anderson Drive at Ruthrieston Road	Option is considered to be outwith the scope of the A93 Multi-Modal Study and has been reassigned for consideration as part of the A92 Multi-Modal Corridor Study.
AT28	Implement an active travel bridge over the B979	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of an active travel bridge over the B979, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks.
AT30	Implement a separate bridge parallel to Rob Roy Bridge for active travel use only	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of an active travel bridge parallel to the Rob Roy Bridge, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks.
AT42	Implement with-flow segregated cycling infrastructure along the A93 corridor in Aberdeen City	Whilst option has the potential to support delivery of TPOs developed for this study, it is unlikely to be feasible due to the constrained width of the corridor. Significant third party land would be required to deliver coherent minimum widths for all users along the corridor.
AT46	Implement a continuous cycle lane between Peterculter and Drumoak	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of a continuous cycle lane between Peterculter and Drumoak, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks.
AT50	Implement a continuous path along the banks of the River Dee from Duthie Park to Peterculter	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of a continuous path along the banks of the River Dee, including the potential for significant physical, environmental and land constraints. Development of the path network adjacent to the river would require erosion and flooding to be designed out by the project. A multi-disciplinary study would be required to understand the full extent of deliverability risks.
AT51	Re-instate Shakkin' Briggie in Cults for active travel use	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with the reinstatement of Shakkin' Briggie, including the need for extensive new path infrastructure to the south of the river. A multi-disciplinary study would be required to understand the full extent of deliverability risks.
AT52	Implement aspirational core path AP10 between Binghill Road and Bieldside	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of aspirational core path AP10, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks, including consideration of the gradient and river crossing.
AT53	Implement aspirational core path AP4 between Contlaw Road and Bucklerburn Road	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of aspirational core path AP10, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks.

Ref	Title	Rationale
AT54	Implement a direct cycle route from Peterculter to Westhill and Kingswells via Blacktop Hill	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of a direct cycle route between Peterculter and Westhill/Kingswells, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks, including consideration of the gradient and AWPR crossing.
PT3	Implement bus lanes in both directions along the A93 corridor	Whilst option has the potential to support delivery of TPOs developed for this study, it is unlikely to be feasible due to the constrained width of the corridor. Significant third party land would be required to deliver coherent desirable minimum widths for the bus lanes whilst not impacting on pedestrian and cycle facilities.
PT6	Consider options for an alternative terminus arrangement in Peterculter	Option has limited impacts on the TPOs developed for this study.
PT7	Consider options for an alternative terminus arrangement in Banchory	Option has limited impacts on the TPOs developed for this study. This option should be considered further by Aberdeenshire Council.
PT12	Introduce a bus service between Cults and the supermarkets in Garthdee	Option has limited impacts on the TPOs developed for this study. Option could be further considered through the exploration of Demand Responsive Services.
PT13	Introduce a bus service between the A93 corridor and Aberdeen Royal Infirmary	Option has limited impacts on the TPOs developed for this study. Option could be further considered through the exploration of Demand Responsive Services.
PT14	Introduce a bus service on the South Deeside Road	Option has limited impacts on the TPOs developed for this study. Supported service previously withdrawn in 2019 due to a lack of funding and limited demand. Option could be further considered through the exploration of Demand Responsive Services.
PT15	Introduce a bus service between Peterculter and Westhill/Kingswells	Option has limited impacts on the TPOs developed for this study. Commercial service trialled in the past but was withdrawn due to limited demand. Option could be further considered through the exploration of Demand Responsive Services.
PT16	Introduce a bus service between Crathes and Stonehaven	Option has limited impacts on the TPOs developed for this study. Supported service previously withdrawn in 2017 due to a lack of funding and limited demand. Option could be further considered through the exploration of Demand Responsive Services.
PT18	Implement orbital bus services using the AWPR to enhance connections north and south	Option has limited impacts on the TPOs developed for this study. Commercial service was withdrawn in early 2020 pre-COVID due to limited demand. Option could be further considered through the exploration of Demand Responsive Services.
PT19	Reinstate the railway line along the A93 corridor	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with reinstatement of the railway line, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks. Furthermore, the Nestrans Regional Transport Strategy 2040 states that whilst alignments for railway line re-openings should be protected and kept under review in future, it is unlikely that they can be justified under existing Treasury Criteria and Transport Appraisal Guidance.
PT20	Implement tram services along the A93 corridor	Whilst option has the potential to support delivery of TPOs developed for this study, there are significant deliverability risks associated with implementation of tram services along the A93 corridor, including the potential for significant physical, environmental and land constraints. A multi-disciplinary study would be required to understand the full extent of deliverability risks. Furthermore, the Nestrans Regional Transport Strategy 2040 outlines the regional ambition to deliver a Bus Rapid Transit system (now being progressed as Aberdeen Rapid Transit (ART)), noting that this provides benefits over trams in terms of flexibility and costs. While the A93 corridor is not currently being considered as part of the ART proposals, any future public transport interventions on the corridor will require to be considered in the context of this major public transport project for the region.

Ref	Title	Rationale
PT22	Trial alternative routing of the First 19 service via Union Terrace and Schoolhill	This option would be anticipated to have limited impact on the TPOs and is unlikely to be feasible due to the ongoing work of ACC to deliver the CCMP.
PT23	Trial express running of the Stagecoach 201 service within the Aberdeen City boundary	Whilst option has the potential to support delivery of a number of the TPOs, it is unlikely to be feasible as it has previously been ruled out on commercial grounds due to loss of City passenger revenue.
O9	Develop an education campaign for the A93 corridor to promote understanding and respect between different users	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.
O11	Conduct a review of road surface maintenance along the corridor, including on-road cycle lining	Option has limited impacts on the TPOs developed for this study, and is considered business as usual for ACC.
O13	Reopen Park Bridge to vehicles	Option would be anticipated to have a negative impact against TPO1 and TPO2 and is contrary to the overall aims of this study. Furthermore, reopening of the bridge is contrary to the position of Aberdeenshire Council.
O15	Prioritise the A93 corridor for enforcement of pavement parking in line with the Transport Scotland Act 2019	This option is outwith the scope of the A93 Multi-Modal Study. Therefore, it is recommended that ACC include the A93 corridor in a city-wide review of opportunities to address pavement parking issues, in line with the Transport (Scotland) Act 2019.
O29	Reduce the speed limit on Anderson Drive	Option is considered to be outwith the scope of the A93 Multi-Modal Study and has been reassigned for consideration as part of the A92 Multi-Modal Corridor Study.
O30	Reduce the speed limit on the A93 between Peterculter and Drumoak	Option does not comply with Aberdeenshire Council policy and therefore is not considered to be deliverable. Table 3.4 in Aberdeenshire Council's Speed Limits Manual states that countryside speed limits are 60mph. Therefore, unless there are specific road safety issues, speed limit reductions do not comply with policy.
O36	Reduce the speed limit on the A93 in Crathes to 30mph and extend this speed limit 50m to the east	Option does not comply with Aberdeenshire Council policy and therefore is not considered to be deliverable. Crathes does not meet the criteria for village speed limits set out in Aberdeenshire Council's Speed Limits Manual Section 3.1.3.1. and therefore should not be 30mph as set out in Table 3.4 of the Manual.
O37	Extend 20mph speed limit throughout Banchory	Option does not comply with Aberdeenshire Council policy and therefore is not considered to be deliverable. Table 3.4 of the Speed Limits Manual outlines standard speed limits for single carriageways, with 30mph noted for other urban/village areas.

4. Dependencies

An exercise on dependencies has been undertaken to determine which of the remaining options cannot be implemented in combination with each other. The table below presents the results of this exercise.

Table 4.1: Option Dependencies

Ref	Option Title	Dependencies
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	Could not be implemented in combination with PT1 or PT2 due to corridor width constraints.
PT1	Implement an eastbound bus lane along the A93 corridor	Could not be implemented in combination with AT41 or PT2 due to corridor width constraints.
PT2	Implement a westbound bus lane along the A93 corridor	Could not be implemented in combination with AT41 or PT1 due to corridor width constraints.
PT21	Increase the frequency of bus services on the A93	Could not be implemented without the delivery of PT1 or PT2 as it is unlikely that bus operators could increase the frequency of services without significant improvements to journey times along the corridor.

5. Option Development

5.1 Overview

For the purposes of Option Development, the remaining options have been grouped into categories as outlined in the table below.

Table 5.1: Grouping of Remaining Options

Active Travel Groupings
Active Travel Provision at Junctions
Connections to the Deeside Way
Crossing Facilities (outwith junctions)
Multi-Modal Journeys
On-line Active Travel Improvements
Other Connections
Public Transport Groupings
Bus Priority Infrastructure
Bus Stop Review
Multi-Modal Journeys
Demand Responsive Services
Service Variations
Traffic Signals
Other Groupings
Junction Reviews
Other
Parking Reviews
Placemaking
Reduced Speeds
Traffic Calming
Traffic Signals

5.2 Active Travel Options

5.2.1 Overview

The analysis of active travel options has been undertaken in line with Transport Scotland's 'Cycling by Design' Guidance in association with SCOTS National Roads Development Guide, Designing Streets, Roads for All and Inclusive Mobility.

Cycling by Design provides guidance for permanent active travel infrastructure design on all roads, streets and paths in Scotland. This is in line with the Scottish Government's NTS2, which aims to encourage people to utilise active travel facilities which will contribute to equality, health and carbon reduction targets. The guidance also references the Sustainable Travel Hierarchy, which defines the modes of travel that designers should be prioritising when designing new or upgraded roads, streets and paths. As outlined in **Figure 5.1**, walking and wheeling should be prioritised first followed by cycling. Recent changes to the highway code further support this by giving pedestrians priority when crossing side roads at junctions.

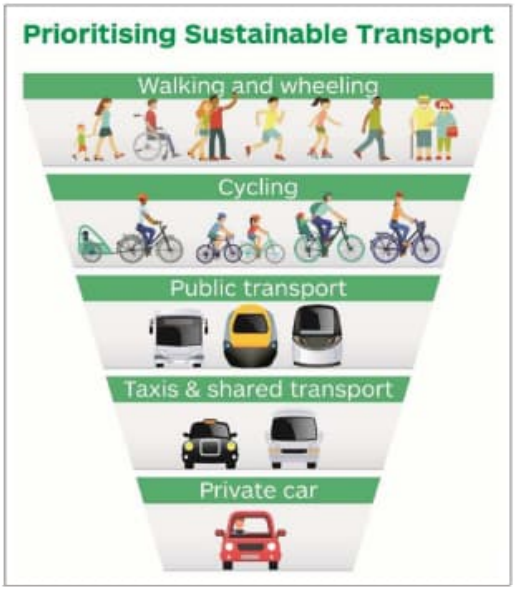


Figure 5.1: Sustainable Transport Hierarchy (NTS2)

Cycling by Design Guidance defines the 'desirable minimum' and 'absolute minimum' widths for various cycling facilities. 'Desirable minimum' widths should be considered as the minimum requirement to provide a high-quality facility. Reductions below this level should only be applied where specific constraints are identified, such that the desirable minimum cannot be reasonably achieved. In such cases, limited reductions are permissible, but the highest achievable standard should be maintained. 'Absolute minimum' widths represent the scope of permissible reduction to the requirement. Where elements of the design are subject to statutory obligations, these must be adhered to. The Cycling by Design footway and cycle track width requirements for different cycle track types are outlined in the table below.

Table 5.2: Cycling by Design Cycle Track Width Requirements (Source: Cycling by Design)

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.

Concept designs have been considered to assess feasibility of the following options. During any future design process, the final design parameters can be tailored to individual situations in consultation with ACC. For junction design options in particular, there may be an opportunity for additional tightening of corner radii, supported by recent changes to the Highway Code to further increase the benefits for walking and wheeling.

5.2.2 Active Travel Provision at Junctions

This grouping contains the following options:

Table 5.3: Active Travel Provision at Junctions Options

AT1	**Implement early release signals for cyclists at all signalised junctions along the A93 corridor**
AT2	**Create a protected junction at Great Western Road/Holburn Street Junction for cyclists**
AT3	**Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction**
AT4	**Implement segregated cycle provision through the A93/Anderson Drive Junction**
AT6	**Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling**

AT1 – Implement early release signals for cyclists at all signalised junctions along the A93 corridor

Early release for people cycling is installed to allow people cycling to travel through junctions in front of vehicular traffic to enhance safety. Edinburgh has recently completed a series of such improvements to encourage cycling within the city and improve safety.

AT2 – Create a protected junction at Great Western Road/Holburn Street Junction for cyclists

The preliminary optioneering exercise considered the potential for cycle and bus priority through the junction and the potential for revised lane markings to enable a right-turn only lane from Holburn Street onto Great Western Road.

The available carriageway space is significantly constrained. The existing kerb-to-kerb widths generally allow for 3.0m to 3.25m wide lanes, with the exception of Willowbank Road, A93 westbound and Holburn Street southbound where lanes are 4.5m wide. This limits opportunities for improvement if bus priority and footway widths are to be retained (footways are 2.0m-3.0m wide). There is potential space for carriageway widening on the south-west junction quadrant, however this has not been explored in detail due to the constraints in the north and east of the junction. More detailed analysis is required.

Figure 5.2 outlines a proposed layout for the junction, including greater definition of the bus lane on Holburn Street via red hatching and a new bus lane introduced on the southbound lane. In addition, advance stop lines with lead-in cycle lane markings are proposed on each approach to further highlight the presence of cyclists to motor traffic. A right-turn only lane onto Great Western Road is physically achievable but a traffic flow modelling assessment would be required to determine its feasibility.

Figure 5.2: Great Western Road / Holburn Street Junction - Proposed Layout

Option AT2 to be considered in line with O1.

AT3 – Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction

The pedestrian phasing at the A93/Anderson Drive junction currently only allows adequate time for pedestrians to cross one arm of the junction at a time. An increase in pedestrian green time and removal of the guardrail at the junction would enable pedestrians to cross the junction diagonally, improving permeability for pedestrians that currently have to cross two arms of the junction for their journeys. It is recommended that a review of signal phasing be undertaken to understand what improvements can be made to pedestrian green time along with a review of pedestrian movements at the junction to establish demand for diagonal movements at the junction.

It should be noted that there are some concerns over the provision of diagonal crossings for some groups such as the visually impaired. It is also possible that increasing the pedestrian phasing at the signals could exacerbate the existing levels of congestion and delay at this junction.

Option AT3 to be considered in line with PT26 and O2.

AT4 – Implement segregated cycle provision through the A93/Anderson Drive Junction

The preliminary optioneering exercise identified the need for the provision of active travel priority at the A93/Anderson Drive Junction.

A fully protected junction has been explored, as shown in **Figure 5.3**. This layout would allow for fully segregated one-way cycle lanes on all four junction arms as well as full width pedestrian crossings. The provision of separate traffic signal phases for cyclists and pedestrians would provide a high level of service and safety for all users. The corner radii and stop line locations have been established through a vehicle tracking exercise using an FTA Rigid Vehicle. This vehicle was used as it has the highest turning radius of vehicles expected to be travelling through the junction. This option would result in narrow traffic lanes and footway widths – 3.0m and 1.5m respectively.

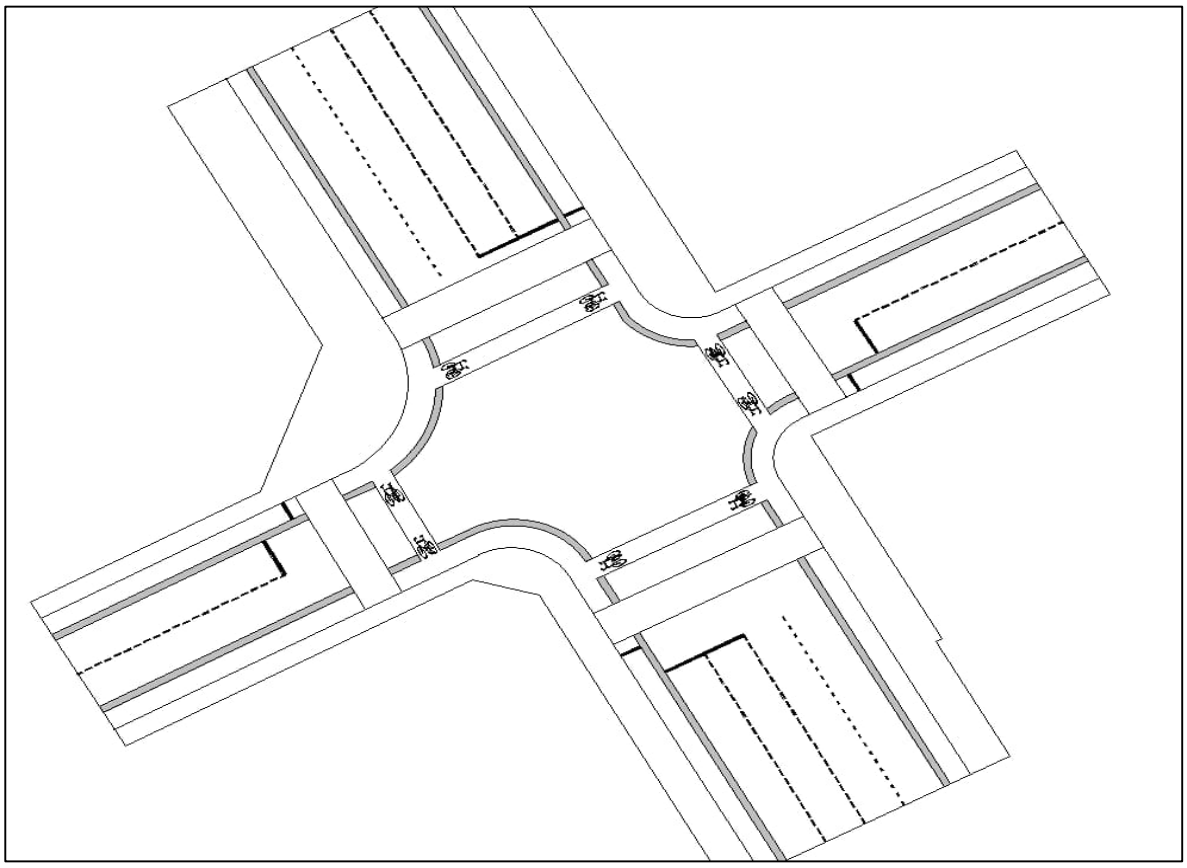


Figure 5.3: Great Western Road/Anderson Drive Junction - Fully Protected Junction Layout

An alternative layout was explored where the westbound segregated cycle lane is removed, and the eastbound lane retained. Advisory on-carriageway cycle lane markings could be introduced on the westbound lane on the A93. The separate cycle crossings could be retained. As a result, the footways on the A93 could be increased to 2.0m and the carriageway lanes to 3.5m in each direction.

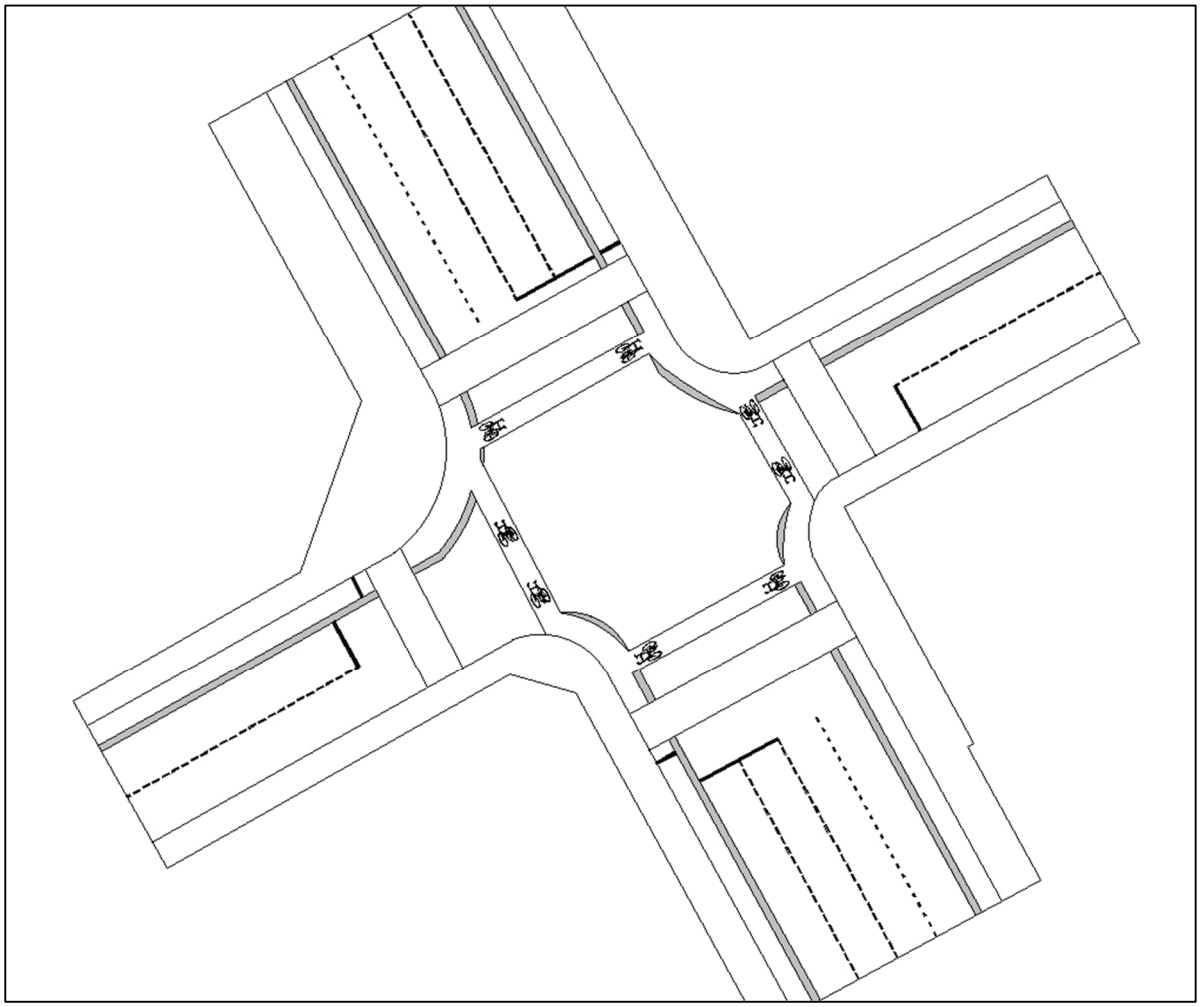


Figure 5.4: Great Western Road/Anderson Drive Junction - Partial Protected Junction Layout

Option AT4 to be considered in line with AT43 and O2.

AT6 – Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling

The existing facilities for active travel users at the AWPR junction consist of a series of staggered, signalised pedestrian crossings alongside Advance Stop Lines on carriageway for cyclists. Considerations could be made to improve the junction for active travel users by introducing a protected junction layout for pedestrians and cyclists or shared footways with upgraded signalised crossings to toucan crossings.

Junction narrowing could also be considered to enable active travel users to cross in one phase. However, this would require the removal of the left-turn filter lanes. It is recommended that a review of traffic movements at this junction is undertaken to understand the effect removal of left-turn lanes would have on the junction.

5.2.3 Connections to the Deeside Way

This grouping contains the following options:

Table 5.4: Connections to the Deeside Way Options

AT7	**Conduct a route wide review of wayfinding signage to the Deeside Way**
AT8	**Redesign access controls onto and on the Deeside Way to improve accessibility**
AT9	**Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street**
AT11	**Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way**
AT12	**Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre**
AT13	**Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre**

AT14	**Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre**
AT15	**Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre**
AT16	**Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre**
AT17	**Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way**
AT18	**Improve priority for Deeside Way users across Pittengullies Brae**
AT19	**Implement an active travel link from Deeside Way to Drum Castle**
AT20	**Implement enhanced path connections between Newmill Hill Forest and the Deeside Way**
AT21	**Improve access to the Deeside Way in the west of Drumoak**

AT7 – Conduct a route wide review of wayfinding signage to the Deeside Way

Wayfinding signage helps users to navigate to their desired destination easily. There is some existing wayfinding signage from the A93 to the Deeside Way (see **Figure 5.5**), however it is limited and not at regular intervals to facilitate navigation. As noted by Sustrans, signage should be consistent and legible throughout a route or network and must present correct information to users[6].

Figure 5.5: Existing Wayfinding Signage

It is recommended that a route-wide wayfinding review is undertaken to ensure ease of access to and from the Deeside Way. It is also proposed that a branding and wayfinding strategy is established to permit the Deeside Way to be promoted and wayfinding signage easily identified.

Transport for London produced Cycleways Signing Guidance in 2019 to provide a coherent wayfinding system that encourages people to cycle.

AT8 – Redesign access controls onto and on the Deeside Way to improve accessibility

At present, the Deeside Way has traditional access controls with gated accesses and narrow bypasses for path users. Vegetation growth means that many of these accesses are not welcoming and can limit the accessibility of the route. This option proposes to improve the accessibility of the Deeside Way by removing all gated accesses and installing bollards as required. Cycling by Design 2021 indicates that 1.5m spacing should be provided on either side of the bollard to enable all types of cycles to pass unrestricted.

Figure 5.6: Bollard Access Control Example

Option AT8 to be considered in line with AT18.

[6] https://www.sustrans.org.uk/for-professionals/infrastructure/sustrans-traffic-free-routes-and-greenways-design-guide/sustrans-traffic-free-routes-and-greenways-design-guide-contents/2019-design-guidance/part-1-general-principles/5-signing-and-wayfinding

AT9 – Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street

There is currently no dedicated cycling infrastructure to support the connection between the Deeside Way and Union Street and therefore users are required to cycle on carriageway. To provide a direct link, the route would likely require utilisation of residential streets, which may limit the feasibility of providing continuous segregated cycle lanes. Width constraints and requirements for on-street parking on Polmuir Road would make the introduction of a continuous cycle route unfeasible. Consideration could be given to implementation of a 'quiet route' via on-road cycling on less trafficked streets.

Figure 5.7: Existing Provision on Polmuir Road (Source: Google Street View)

It is recommended that an optioneering exercise is undertaken to assess potential route options and infrastructure provision. Wayfinding options should also be considered to ensure any route is easily navigable.

AT11 – Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way

Duthie Terrace connects the A93 at Great Western Road to the Deeside Way via Ruthrieston Road. The typical cross-section consists of a 2.5m and a 2.7m footway (above desirable minimum widths), two informal lanes of parking and a 3.6m two-way carriageway. The carriageway changes to a one-way street at the northern end where it connects with the A93.

There are mature trees planted along the footway and therefore it is not proposed that footway widths are reduced. To incorporate a contraflow cycle lane, a potential option would be to implement one-way restrictions on the full length of Duthie Terrace and provide formal parking bays in one direction. This would allow for a 2.1m cycle lane, which is above the desirable minimum width for a one-way cycle lane and above the absolute minimum width for a two-way cycle lane.

The existing and proposed cross-sections are shown in the figures below.

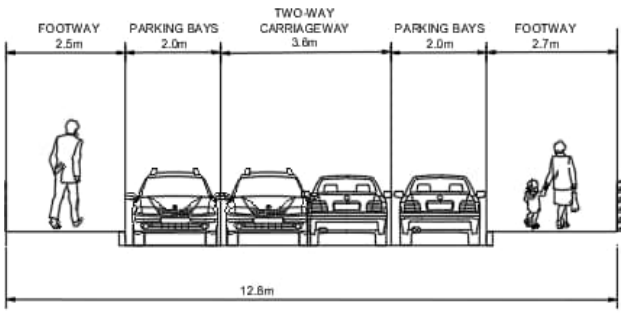


Figure 5.8: Duthie Terrace - Existing Layout

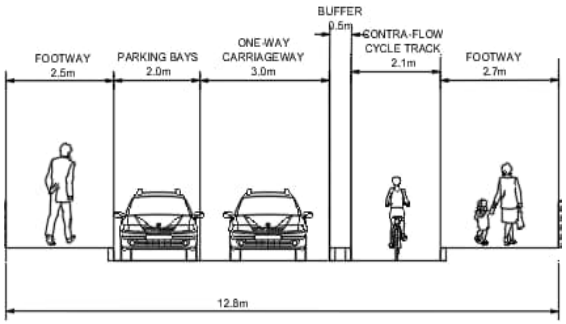


Figure 5.9: Duthie Terrace - Potential Layout

AT12 – Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre

Dee Street is a one-way street travelling southbound from Union Street onto Dee Place, which then connects onto the A93 via Crown Street. The typical cross-section of the street shows that both footways are above the Cycle by Design desirable minimum width. There are two rows of parking bays and a 3.8m carriageway that permits vehicles to travel south onto Dee Place.

Removing one lane of parking bays would allow a fully segregated two-way cycle lane to be provided with a width of 2.7m. Whilst this is below the desirable minimum width of 3.0m, it is significantly wider than the absolute minimum width of 2.0m. The width of the parking bays and carriageway would also have to be reduced to achieve this. Alternatively, a stepped construction could be utilised to provide a two-way cycle track of 3.2m in width.

The existing and proposed cross-sections are shown in the figures below.

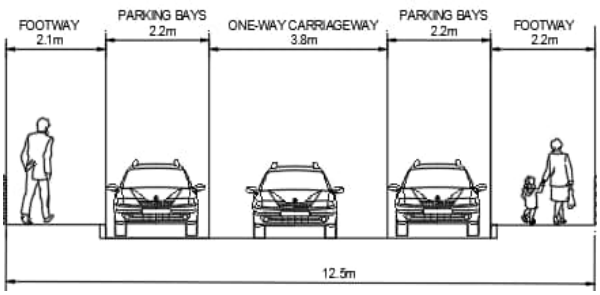


Figure 5.10: Dee Street - Existing Layout

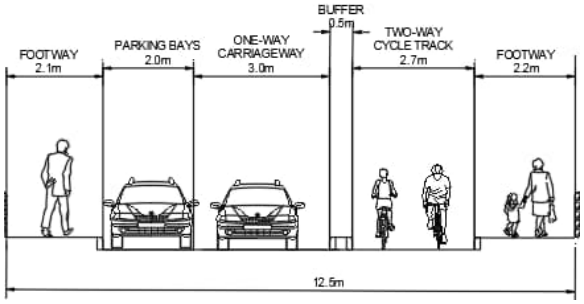


Figure 5.11: Dee Street - Potential Layout

AT13 – Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre

Ferryhill Place is a one-way street connecting Ferryhill Road and Devanha Crescent. The typical width is large at 15.7m, mainly due to two large 3.6m wide footways. It also consists of two 2.0m parking bays and a 4.4m carriageway that vehicles travel east on towards Devanha Crescent.

Whilst footways could be reduced to provide additional space for cycle infrastructure, there are environmental constraints associated with mature trees being planted along the footway. Removal of these would also have a negative visual impact for residents and pedestrians. It is therefore proposed that one lane of parking bays is removed, and the carriageway is reduced to 3.0m. This would allow a fully segregated cycle lane of 2.9m to be provided, which is slightly below the desirable minimum of 3.0m for a two-way track but significantly above the desirable minimum of 2.0m for a one-way track.

The existing and proposed cross-sections are shown in the figures below.

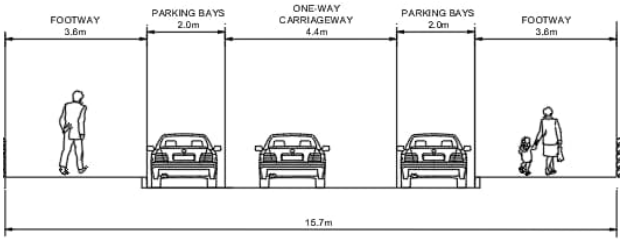


Figure 5.12: Ferryhill Place - Existing Layout

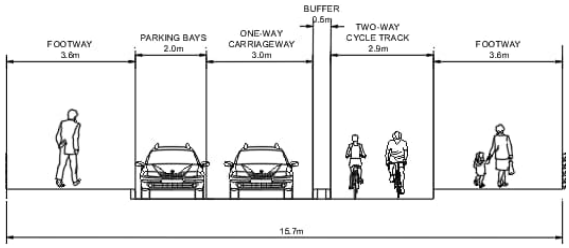


Figure 5.13: Ferryhill Place - Potential Layout

AT14 – Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre

Ferryhill Terrace is a one-way street that connects Ferryhill Road to the A93 via Bon Accord Street. The typical existing cross-section consists of a 1.7m and a 1.8m footway, two 2.0m parking bays and a 3.5m carriageway that vehicles travel north-west on towards Bon Accord Street.

A fully segregated contraflow cycle lane of 2.0m would require the removal of one lane of parking bays and reduction of the carriageway to 3.0m. This is in line with the desirable minimum width for contraflow cycle lanes. A fully segregated two-way cycle track could also be provided using the same dimensions, which would be in line with the absolute minimum width as defined in Cycle by Design. Removal of the second lane of parking bays would result in an additional 2.0m that could be distributed between the footways and cycle lane.

The existing and proposed cross-sections are shown in the figures below.

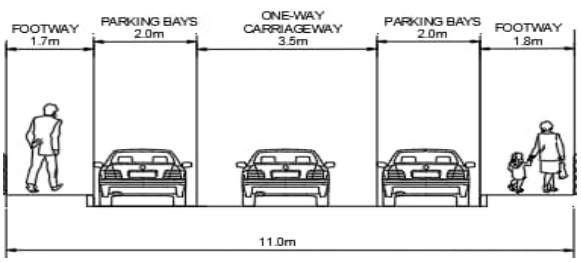


Figure 5.14: Ferryhill Terrace - Existing Layout

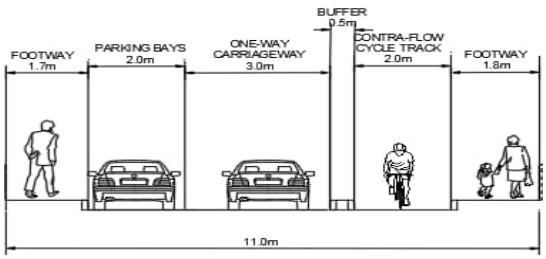


Figure 5.15: Ferryhill Terrace - Potential Layout

AT15 – Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre

Fonthill Terrace is situated to the west of Ferryhill Place and connects Fonthill Road to Whinhill Road. The typical cross-section consists of a 2.3m footway, a 2.0m lane of parking bays and a 3.7m one-way carriageway that vehicles travel south-east on towards Whinhill Road.

A 2.2m contraflow cycle lane could be provided by maintaining the existing width of footways, removing parking bays and reducing the carriageway width to 3.0m. This would be above the desirable minimum width for a one-way cycle lane and above the absolute minimum width for a two-way cycle lane.

The existing and proposed cross-sections are shown in the figures below.

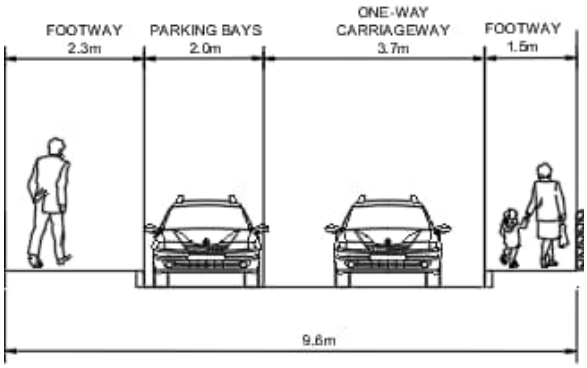


Figure 5.16: Fonthill Terrace - Existing Layout

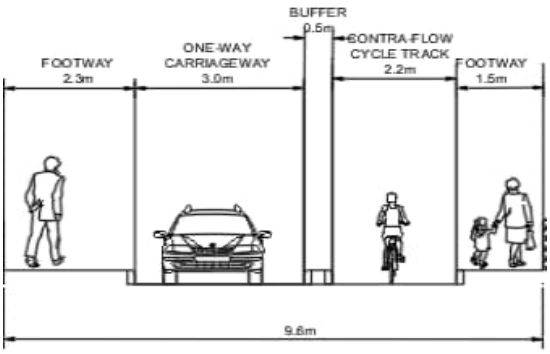


Figure 5.17: Fonthill Terrace - Potential Layout

AT16 – Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre

Prospect Terrace connects Bank Street and Devanha Terrace in the east of the city centre. It is a narrow street with sub-standard footway widths (1.0m and 1.3m), carriageway width (2.2m) and a 2.0m lane of parking bays. Due to its constrained width, segregated cycling infrastructure cannot be provided in this location.

The existing cross-section is shown in the figure below.

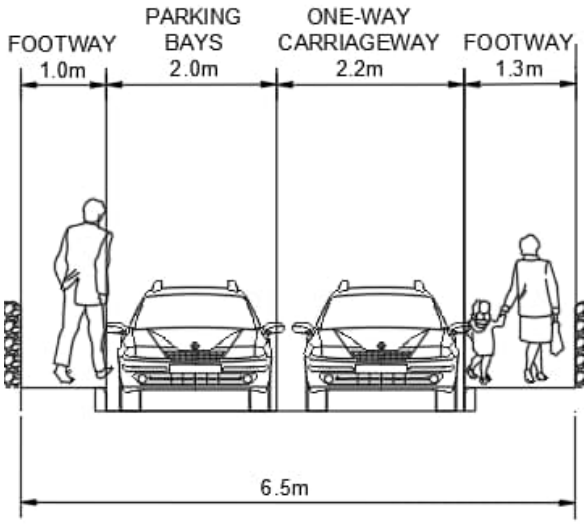


Figure 5.18: Fonthill Terrace - Existing Layout

For **Options AT11-AT16,** an alternative option would be to introduce cycle contraflows without full segregation on the streets. This would be achieved by providing entry point segregation and then either providing white lining as a cycle lane or allowing contraflow cycles to mix with traffic, with suitable signage provided for all road users. It is recommended that further review is undertaken at the next stage of the design process to identify the most appropriate design solution for each street.

AT17 – Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way

A path network that connects to the settlements south of the River Dee would help to support active travel journeys both for commuting and leisure purposes. It is recommended that a study is undertaken to assess potential route options to connect to the A93 and the Deeside Way.

AT18 – Improve priority for Deeside Way users across Pittengullies Brae

Accessibility to the Deeside Way is compromised at the Pittengullies Brae access due to the gradient of the access onto the existing carriageway.

Figure 5.19: Existing Provision at Pittengullies Brae (Source: Google Street View)

There may be opportunities to reduce the gradient in this location. This would require redesign of the access ramps on either side of Pittengullies Brae and potential engagement with the landowner to design reduced gradients. An alternative option is to reduce the carriageway width and install a 'Give way to oncoming vehicles' system. This would allow Deeside Way users additional space to cross the carriageway.

Figure 5.20: Priority Chicanes Example[7]

Option AT18 to be considered in line with AT8.

[7] Priority Chicanes | Traffic Choices - aiding traffic scheme decisions

AT19 – Implement an active travel link from Deeside Way to Drum Castle

There is an existing quiet road link from the Deeside Way to Drum Castle, as indicated in purple on the diagram below. The road link is a single track road with passing places and, as such, it is not expected to experience high volumes of vehicular traffic and therefore is likely to be suitable as a quiet route link. The provision of wayfinding signage from the Deeside Way would support the use of this link as well as potential patronage to Drum Castle.

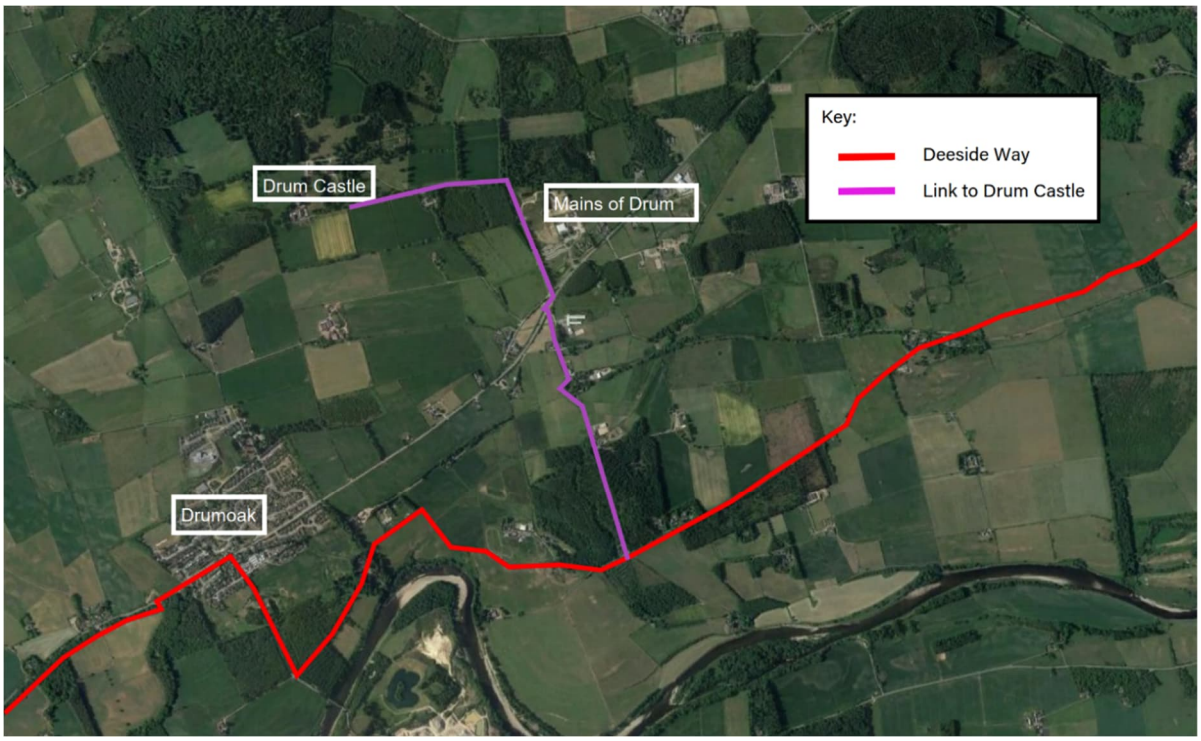


Figure 5.21: Active Travel Link between Deeside Way and Drum Castle

On approach to the A93, there is an existing desire line to the bus stop that could be formalised and widened to support movements to Drum Castle and bus services on the A93. Increasing footway provision at the bus stop itself should also be considered to improve access.

To help support ease of access, a crossing point over the A93 should also be introduced. See **Option AT32** commentary in **Section 5.2.4**.

Figure 5.22: Desire Line to A93 (Source: Google Street View)

Option AT19 to be considered in line with AT32, AT44 and AT47.

AT20 – Implement enhanced path connections between Newmill Hill Forest and the Deeside Way

Existing footway links to Newmill Hill Forest from the east and west are of poor quality, consisting of a narrow footway on the north side of the carriageway and a lack of crossing facilities (see **Figure 5.23**).

Figure 5.23: Footway between Peterculter and Newmill Hill Forest (Source: Google Street View)

Available corridor width varies between Peterculter and the main access to Newmill Hill Forest from 9.5m to 11m, which provides the opportunity to widen the existing footway. For example, where the carriageway measures 9.5m, a 7.0m carriageway could be maintained with a 2.5m footway. It is recommended that a footway is provided from Peterculter to the junction leading to Hardgate as indicated by the purple line in **Figure 5.24**. It should be noted that there are gradient changes within and adjacent to the verge which will require consideration.

Introduction of crossing facilities at the 'East Mains of Drum, Easter Anguston' bus stop and at the main access point to Newmill Hill Forest could also be considered to facilitate access for non-motorised users. To support this, the southern footway could be extended to provide additional space for waiting passengers at the bus stop. Both access points are located on bends in the road, which will affect visibility.

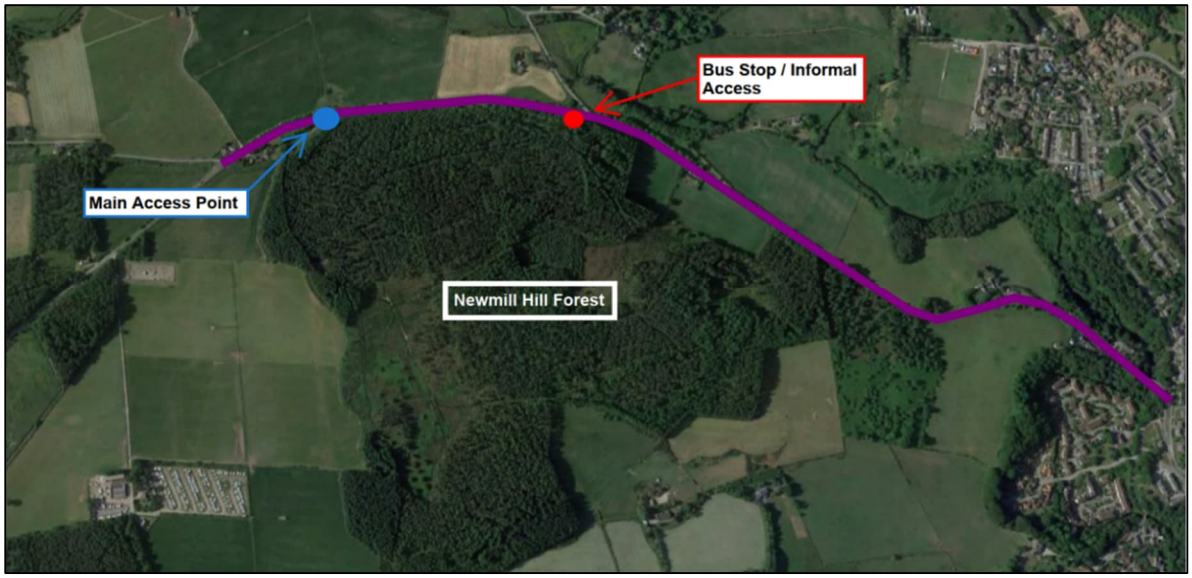


Figure 5.24: Newmill Hill Forest Access Points

Option AT20 to be considered in line with AT44 and AT45.

AT21 – Improve access to the Deeside Way in the west of Drumoak

It is recommended that a review of access points and facilities be undertaken to support ease of access to the Deeside Way in the west of Drumoak. It is proposed that a crossing point is implemented where the Deeside Way changes from being adjacent to the carriageway to being remote from the A93 corridor for the section between Drumoak and Banchory.

The existing facilities do not include a dedicated crossing point. There are dropped kerbs on either side of the carriageway, however they are not aligned as the dropped kerbs on the north side are for another access point.

The appropriate type of crossing facility would require further consideration dependent on the anticipated numbers of users, speed limit and alignment of the road. An uncontrolled, controlled zebra or signal-controlled crossing could be introduced to facilitate access to the Deeside Way.

Figure 5.25: Deeside Way in the West of Drumoak (Source: Google Street View)

5.2.4 Crossing Facilities (outwith junctions)

This grouping contains the following options:

Table 5.5: Crossing Facilities (outwith junctions) Options

AT23	**Implement crossing facilities near Abbotshall Road**
AT24	**Upgrade informal crossing point east of Kirk Brae to formal crossing facilities**
AT25	**Implement additional formalised crossing facilities in Cults**
AT26	**Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae**
AT27	**Implement improved crossing facilities for Deeside Way users across the B979**
AT29	**Implement additional zebra crossing points in Peterculter**
AT31	**Consider locations for additional crossing facilities within Drumoak**
AT32	**Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle**
AT33	**Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods**
AT34	**Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy**
AT35	**Implement crossing facilities on the western section of Banchory High Street**

Each proposed crossing opportunity will reference the Selection Matrix for Road Crossings from Cycling by Design 2021, as shown in **Figure 5.26**.

Motor Traffic Speed (85th percentile)	Uncontrolled	Controlled Zebra or Parallel	Signal-Controlled	Grade Separated
0 to 30 kph	●●	●●●	●●●	●●●
30 kph to 55 kph	●	●●	●●●	●●●
55 kph to 80 kph	●	X	●●●	●●●
More than 80 kph	●	X	X	●●●

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

●● **Medium Level of Service:** May not be suitable for some users, particularly novice users. Designer shall 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. Shall 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.

X **Should not be used.**

Figure 5.26: Selection Matrix for Road Crossings

AT23 – Implement crossing facilities near Abbotshall Road

There is currently an uncontrolled crossing on Abbotshall Road itself providing an east-west link on the north side of the A93, however, there are no crossing points in proximity to the junction providing a north-south connection across the A93. The speed limit on the A93 is 30mph (48kph), which provides options for uncontrolled, controlled zebra or parallel or signal-controlled crossings to be introduced. Visibility from the junction itself is poor due to alignment of the A93 and steep downward approach from Abbotshall Road, which, along with the anticipated number of users, will need to be considered when selecting the crossing type.

Figure 5.27: Abbotshall Road/A93 - Existing Provision (Source: Google Street View)

Option AT23 to be considered in line with O4, O19 and O25.

AT24 – Upgrade informal crossing point east of Kirk Brae to formal crossing facilities

The existing crossing point to the east of Kirk Brae in Cults is a staggered, uncontrolled crossing providing a link between residential areas to the north and local amenities to the south of the A93, as shown in **Figure 5.28**.

There is potential to upgrade the crossing to either a controlled zebra or parallel or signal-controlled crossing.

Figure 5.28: Existing Uncontrolled Crossing East of Kirk Brae

Option AT24 to be considered in line with O19 and O25.

AT25 – Implement additional formalised crossing facilities in Cults

Signal-controlled crossing facilities currently exist at the Kirk Brae and Cults Avenue junctions and there are uncontrolled island crossing facilities east of Quarry Road, east of Kirk Brae and east of Station Road providing north-south links. East-west connections are generally provided via dropped kerbs.

It is recommended that a desire line review is undertaken within Cults to understand where additional formal crossing points would provide the greatest benefit to the local community. Placemaking opportunities could also be utilised within Cults to support the movement of non-motorised users throughout the area.

Option AT25 to be considered in line with O19 and O25.

AT26 – Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae

Available carriageway width where Bellenden Walk meets the A93 is insufficient to introduce an island crossing in this location. Further consideration could be given to providing an uncontrolled or signal-controlled crossing point as an alternative.

Figure 5.29: Bellenden Walk/A93 Junction - Existing Provision (Source: Google Street View)

AT27 – Implement improved crossing facilities for Deeside Way users across the B979

There is potential to improve the Milltimber Brae junction over the B979. The existing crossing facilities consist of dropped kerbs and tactile paving as shown in **Figure 5.30**. The active travel crossing could be aligned with the Deeside Way route and formalised with white lines and zig-zag markings. A jug handle crossing could be provided for cyclists on approach to the crossing from the north. Further consideration of the appropriate crossing type would be established based on anticipated numbers of users and Cycling by Design Guidance. There is also potential to extend the 30mph speed limit further to the south to enhance safety at the crossing.

Figure 5.30: Existing Crossing on B979 connecting Deeside Way (Source: Google Street View)

The diagram below outlines proposed improvements at this location.

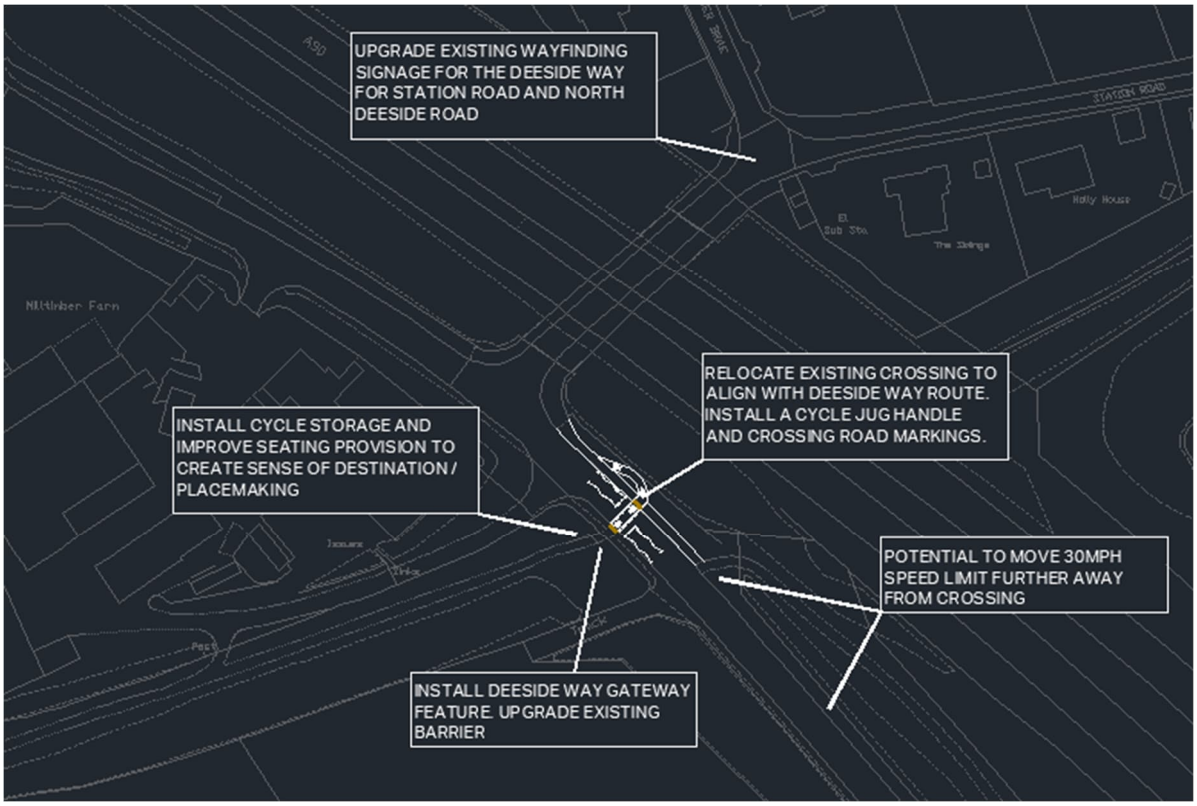


Figure 5.31: Deeside Way at Milltimber Brae - Proposed Improvements

AT29 – Implement additional zebra crossing points in Peterculter

In Peterculter, formal crossing facilities exist as signal-controlled crossings west of Brighton Place, west of Station Brae and east of Coronation Road. The current speed limit through Peterculter is 30mph (48kph), which would enable a medium level of service to be provided through the introduction of zebra or parallel crossings.

It is recommended that a desire line review is undertaken to understand where the introduction of new crossings would be most beneficial to the local community. In addition, the introduction of formal crossing facilities can act as gateway features, helping to create a sense of place in local centres.

Option AT29 to be considered in line with O20 and O26.

AT31 – Consider locations for additional crossing facilities within Drumoak

Drumoak currently has no formal crossing facilities and an island crossing facility, located where the southern footway ends west of Sunnyside Drive. It is recommended that a desire line review is undertaken to understand where the introduction of new crossings would be most beneficial to the local community. Taking account of vehicle speeds through Drumoak, uncontrolled, controlled zebra or parallel or signal-controlled crossings could be introduced dependent on the anticipated number of users.

In terms of the assessment against Aberdeenshire Council policy, Section 5.1 of the Pedestrian Crossings Manual lists the following as considerations for the identification of crossing sites:

- Busy roads dividing communities or separating neighbourhoods from services;
- Strategic pedestrian routes in towns;
- Walking routes to schools; and
- Pedestrian desire lines in and around town centres.

All of the above are considered to be relevant in the case of Drumoak and therefore it is considered to comply with Aberdeenshire Council policy. However, all crossings would require to go through the Aberdeenshire Council design process to establish compliance with policy and design guidance.

AT32 – Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle

On the A93 at the Drum Castle junction, there are currently no crossing facilities for non-motorised users to access Drum Castle or the existing bus stop on the south side of the carriageway. To facilitate north-south access, an uncontrolled island crossing could be provided within the existing hatching that permits right-turn movements towards Drum Castle (see **Figure 5.32** below).

Figure 5.32: A93 at Drum Castle Junction - Existing Provision (Source: Google Street View)

It is recommended that a shared footway is also provided on the north side of the carriageway and the existing footway at the bus stop on the south side of the carriageway is widened to provide adequate waiting space for users. See **Option AT19** commentary in **Section 5.2.3**.

In terms of the assessment against Aberdeenshire Council policy, Section 2.7 of the Pedestrian Crossings Manual states that ‘advance warning signing may be required in areas where the visibility of the crossing is impaired or when high speed limits are high for the type of crossing e.g. where a signal-controlled crossing is sited on roads where the speed limit is greater than 50mph’. The Draft Road Markings Manual states that on strategic routes, pedestrian crossings are either segregated or controlled. Given that east of Drumoak is a 60mph Category 2 road, advanced warning signs may need to be provided and the crossing point would need to be controlled, which could be provided with an island crossing. All crossings would require to go through the Aberdeenshire Council design process to establish compliance with policy and design guidance.

Option AT32 to be considered in line with AT19 and AT47.

AT33 – Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods

There are currently no crossing facilities in Crathes to facilitate north-south movement between the bus stops. There is an opportunity to provide an uncontrolled island crossing within the western hatching for the right-turn filter lane to support access to bus services and crossing of the A93 (see **Figure 5.33**).

Figure 5.33: Crathes - Existing Provision (Source: Google Street View)

It is understood that crossing points in this location are being considered as part of the Crathes mini-hub project. It has previously been assessed by Aberdeenshire Council's road safety auditors and a number of issues were highlighted that would require resolution, including issues with lighting. The links with the mini-hub project will be kept under review as the study progresses.

In terms of the assessment against Aberdeenshire Council policy, Section 5.1 of the Pedestrian Crossings Manual lists considerations for the identification of crossing sites, the following of which are relevant at Crathes:

- Busy roads dividing communities or separating neighbourhoods from services;
- Strategic pedestrian routes in towns; and
- Pedestrian desire lines in and around town centres.

Assessment of sight lines would be required to ensure compliance with 79m minimum visibility for a 40mph road (as outlined in Table 2.1 of the Pedestrian Crossings Manual). All crossings would require to go through the Aberdeenshire Council design process to establish compliance with policy and design guidance.

AT34 – Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy

The Station Road (A93)/Arbeadie Road junction currently has no crossing facilities for pedestrians. This is the main link from the A93 to Banchory Primary School and Banchory Academy. To facilitate active travel movements to school, a controlled crossing facility could be introduced on the A93. Whilst it could be located on either side of the junction, the location should be determined by pedestrian desire lines and visibility from the junction, noting that a 'Stop' line is already in place. It is considered that a signalised crossing may be the most appropriate solution given there is a 30mph speed limit and it would provide a link to school.

Figure 5.34: Station Road/Arbeadie Road Junction - Existing Provision (Source: Google Street View)

In terms of the assessment against Aberdeenshire Council policy, Section 5.1 of the Pedestrian Crossings Manual lists considerations for the identification of crossing sites, all of which are relevant at Station Road:

- Busy roads dividing communities or separating neighbourhoods from services;
- Strategic pedestrian routes in towns;
- Walking routes to schools; and
- Pedestrian desire lines in and around town centres.

However, all crossings would require to go through the Aberdeenshire Council design process to establish compliance with policy and design guidance.

AT35 – Implement crossing facilities on the western section of Banchory High Street

Banchory High Street has a lack of crossing facilities along its length and the presence of on-street parking on either side of the carriageway limits the ability for non-motorised users to cross the High Street safely. A zebra, parallel or signal-controlled crossing could be introduced to facilitate north-south movements across the A93. Placemaking opportunities could also be adopted in the area which would help to provide greater priority to pedestrians and cyclists allowing easier access.

In terms of the assessment against Aberdeenshire Council policy, Section 5.1 of the Pedestrian Crossings Manual lists considerations for the identification of crossing sites, all of which are relevant for Banchory High Street:

- Busy roads dividing communities or separating neighbourhoods from services;
- Strategic pedestrian routes in towns;
- Walking routes to schools; and
- Pedestrian desire lines in and around town centres.

However, all crossings would require to go through the Aberdeenshire Council design process to establish compliance with policy and design guidance.

Option AT35 to be considered in line with AT49, O18, O23, O27 and O42.

5.2.5 Multi-Modal Journeys

This grouping contains the following options:

Table 5.6: Multi-Modal Journeys Options

AT36	**Implement additional cycle parking within Cults, particularly near bus stops**
AT37	**Implement a Park and Pedal facility near the AWPR Junction**
AT38	**Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location**
AT39	**Implement additional cycle parking near bus stops and at the bus terminus in Peterculter**
AT40	**Implement additional cycle parking within Banchory Town Centre**

AT36 – Implement additional cycle parking within Cults, particularly near bus stops
AT39 – Implement additional cycle parking near bus stops and at the bus terminus in Peterculter
AT40 – Implement additional cycle parking within Banchory Town Centre

Installing secure cycle parking near existing bus stops or creating hubs along the corridor where Park and Pedal facilities can be established could encourage people to make the change to active travel. The key design consideration for cycle parking is for it to be safe and visible whilst being accessible to users. On-street cycle storage is being rolled out across Scotland and could be used at key locations along the A93 corridor to help support those wishing to cycle. Cycle parking near bus stops does exist along the corridor but it is recommended that a review is undertaken, considering distances to bus stops.

Figure 5.35: Example of On-Street Cycle Storage Facilities

AT37 – Implement a Park and Pedal facility near the AWPR Junction

Park and Pedal facilities can help to encourage the uptake of cycling for part of people's journeys by reducing the need to travel fully by bike. At the AWPR junction, there are currently no existing car parks that could be utilised to introduce a Park and Pedal facility at this location, therefore land acquisition would be required to deliver this option. Existing farmland between the A93 and the Deeside Way could be a potentially suitable location to provide easy access to the Deeside Way. Secure cycle parking provision would be required, and bike hire from this location could be considered to help its promotion to new cyclists. In addition, the provision of electric vehicle charging point car parking spaces could be provided to support the uptake of electric and plug-in hybrid vehicle use in combination with active travel.

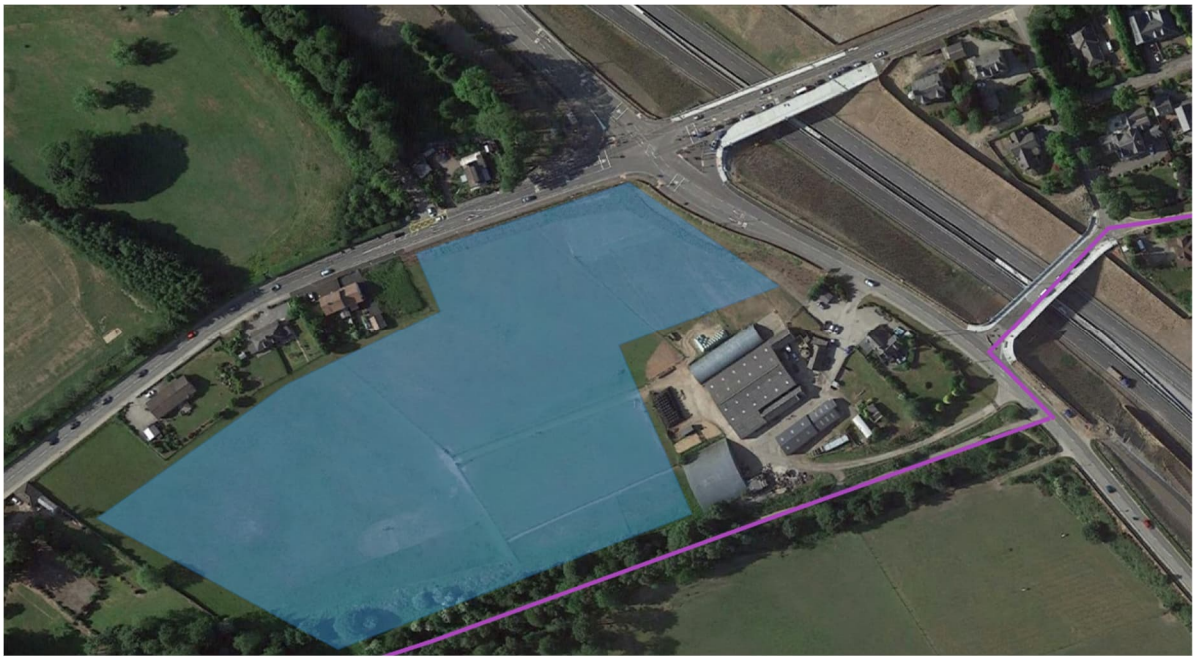


Figure 5.36: Potential area to be considered for Park and Pedal Facility near AWPR Junction

AT38 – Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location

Park and Pedal facilities can help to encourage the uptake of cycling for part of people's journeys by reducing the need to travel fully by bike. The former rail station car park in Peterculter has easy access to the Deeside Way and would be suitable to introduce such a facility to support onward journeys. Secure cycle parking provision within the existing car park would be required and bike hire from this location could be considered to help its

promotion to new cyclists. Electric vehicle charge points could also be introduced within the car park to support use from electric and plug-in hybrid car owners.

5.2.6 On-line Active Travel Improvements

This grouping contains the following options:

Table 5.7: On-line Active Travel Improvements Options

AT41	**Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City**
AT43	**Increase pavement width on the south side of the A93 in proximity to Anderson Drive**
AT44	**Implement a shared footway on the A93 corridor between Peterculter and Banchory**
AT45	**Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north**
AT47	**Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle**
AT48	**Implement cycle lanes on either side of the carriageway through Drumoak and Park**
AT49	**Implement cycling infrastructure along the High Street in Banchory**

AT41 – Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City

Cross-sectional analysis was carried out along the route to determine typical widths to compare against Transport Scotland's 'Cycling by Design' standards. For the purposes of the cross-sectional analysis, the A93 corridor was split into six sections from Springbank Terrace in the city centre to Peterculter. The analysis undertaken was based on segregated cycle tracks adjacent to the carriageway. The table below shows the minimum widths for the four options that fit in this category for the 30mph sections. A carriageway width of 6.5m was chosen as this is the permissible width for buses to pass each other.

Table 5.8: Cycling by Design Width Options

Type	Footway One (m)	Cycle Track One (m)	Buffer One (m)	Carriageway (m)	Buffer Two (m)	Cycle Track Two (m)	Footway Two (m)	Total Minimum Width (m)
One-way Desirable	2.0	2.0	0.5	6.5	0.5	2.0	2.0	**15.5**
One-way Absolute	1.5	1.5	0.5	6.5	0.5	1.5	1.5	**13.5**
Two-way Desirable	2.0	N/A	N/A	6.5	0.5	3.0	2.0	**14.0**
Two-way Absolute	1.5	N/A	N/A	6.5	0.5	2.0	1.5	**12.0**

Comparing the typical widths along the corridor to the minimum widths set out in Cycling by Design determined that a two-way cycle track would be the most appropriate due to the constrained widths available. The table below outlines the cross-sections that were wide enough to meet the defined widths (highlighted in green) and those which do not meet the required widths (highlighted in red).

Table 5.9: Cross-Section Widths along the A93

Section	Location	Width	One-way 30mph Desirable Min	One-way 30mph Absolute Min	Two-way 30mph Desirable Min	Two-way 30mph Absolute Min
1	Springbank Terrace	11.4	15.5	13.5	14	12
	Willowbank Road	15.2	15.5	13.5	14	12
2	Great Western Road	14.7	15.5	13.5	14	12
	Great Western Road	14.2	15.5	13.5	14	12
	Great Western Road	13.7	15.5	13.5	14	12
3	Great Western Road	15.6	15.5	13.5	14	12
	North Deeside Road	12.8	15.5	13.5	14	12
	North Deeside Road	12.9	15.5	13.5	14	12

Section	Location	Width	One-way 30mph Desirable Min	One-way 30mph Absolute Min	Two-way 30mph Desirable Min	Two-way 30mph Absolute Min
4	Cults	13.3	15.5	13.5	14	12
	Cults	12.5	15.5	13.5	14	12
	Bieldside	12.6	15.5	13.5	14	12
5	Milltimber	12.5	15.5	13.5	14	12
	Milltimber	13.4	15.5	13.5	14	12
6	Peterculter	11.5	15.5	13.5	14	12
	Peterculter	12.6	15.5	13.5	14	12
	Peterculter	14.6	15.5	13.5	14	12

As shown, none of the sections fully accommodate a one-way 30mph desirable minimum cycle track, whilst only one section could accommodate a one-way 30mph absolute minimum cycle track. In terms of the two-way cycle track options, there are no sections that fully accommodate a 30mph desirable minimum track but there are four sections (out of six) that could fully accommodate a two-way 30mph absolute minimum cycle track. This is illustrated further in **Figure 5.37** and **Figure 5.38**.

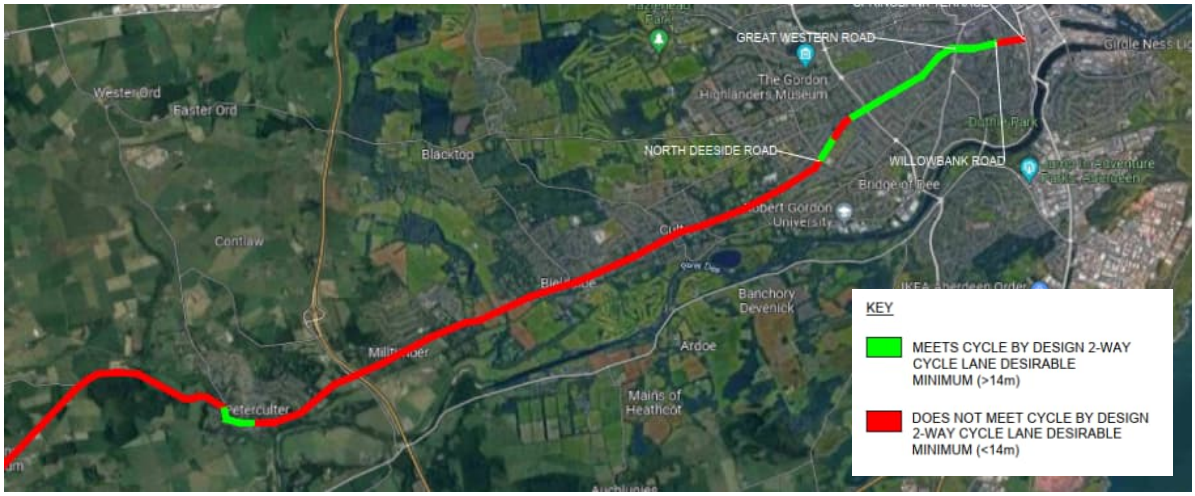


Figure 5.37: Two-Way 30mph Desirable Minimum Feasibility

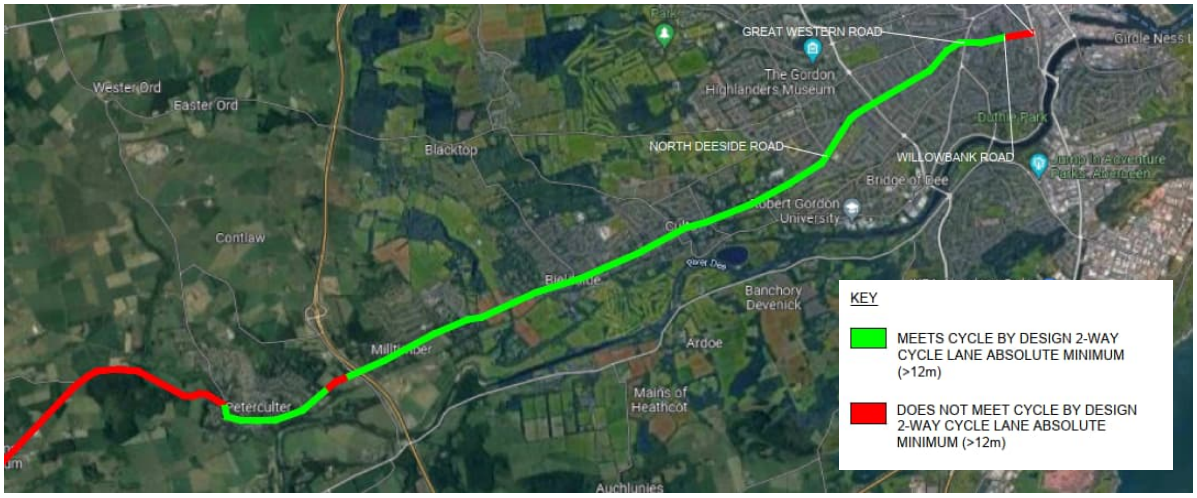


Figure 5.38: Two-Way 30mph Absolute Minimum Feasibility

The following sections provide additional detail on the potential for two-way cycling infrastructure along the corridor within Aberdeen City.

Section 1a – Springbank Terrace

The typical width of this section is 11.4m. There is currently no provision for cyclists and the carriageway is not a sufficient width for larger vehicles to safely pass each other without pulling into the parking bays which can cause congestion.

To allow greater space for the provision of cycling facilities, the parking bays along this section could be removed. There are currently parking facilities on the adjacent Springbank Street and Rosebank Terrace which provide access to the majority of Springbank Terrace properties. There are also a number of properties with private parking facilities.

As outlined in **Table 5.9**, a two-way segregated cycling facility cannot be accommodated on this section of the corridor. Alternatively, a one-way segregated cycle track (in one direction) could be constructed with a reduction on the eastbound footway from 2.2m to 1.7m. This would bring the footway width below the desirable minimum but would remain above the absolute minimum. The cycle track is proposed westbound as there are driveways located in the eastbound direction which would create a conflict between cyclists and vehicles turning into the driveways. The carriageway width has been proposed at 6.0m as the street is not a bus route and therefore this width would be sufficient for cars to pass each other safely.

Stepped construction could be used to create space for a two-way cycle track, as this would remove the need for a 0.5m buffer creating more space for active travel facilities. This option would be more difficult to construct, however, and may require raising or relocating existing gullies and chambers. Furthermore, the absence of a kerbed reserve may entice motor traffic to use the stepped track for parking or loading activities. Nevertheless, this may still be a more attractive option as cyclists would be able to use the cycle track in both the eastbound and westbound directions.

A third option would be to reduce the carriageway to a one-way carriageway. This would allow the desirable minimum to be met for a two-way cycle track and the adjacent footways. This could be implemented east of the junction with Bon Accord Street, with the small section west of this point proposed as the stepped construction noted above. As the adjacent Springbank Street is a one-way street with traffic travelling westbound it would be proposed that Springbank Terrace would have traffic travelling eastbound.

Section 1b – Willowbank Road

The existing width of a typical cross-section of Willowbank Road is 15.2m which is significantly greater than that of Springbank Terrace. A typical cross-section of the road consists of two 3.0m footways, two 2.0m parking bays and a 5.2m carriageway. Similarly to Springbank Terrace, there is currently no provision for cyclists and the carriageway is not a sufficient width for vehicles to safely pass each other without pulling into the parking bays.

If both parking bay lanes were to be removed, a fully segregated two-way cycle track that met the desirable minimum width could be accommodated within the existing typical cross-section. One footway would also have to be reduced unless the preference would be to leave the footways at the existing width and reduce the width of the proposed cycle track to 2.2m which would meet the absolute minimum requirements.

One lane of parking bays could be maintained while meeting the desirable minimum for footways and the absolute minimum for a two-way cycle track. The parking bay lane could either be provided between the carriageway and the cycle track which may allow cyclists to feel more protected from the carriageway, or between the carriageway and footway across from the cycle track, which would remove any risk of passenger doors hitting cyclists.

Stepped construction could also be used for either of these proposed scenarios which would generate an additional 0.5m of space from where the buffer was proposed that could be allocated to the footway or cycle track. It should be noted that this would be a more difficult form of construction which may require raising existing gullies/chambers located where the cycle track would be proposed. There would also be a risk that vehicles would use the stepped cycle track for parking or loading activities.

Section 2a – Great Western Road (Typical)

Three cross-sections were taken on Great Western Road due to the varied widths along this section of the corridor. A typical section has been used for the analysis below. The typical section consists of two footways (2.2m

and 2.9m), a one-way advisory cycle lane (1.2m) alongside a two-way carriageway (5.8m) and a lane of parking bays (2.0m).

If parking bays were to be removed then a fully segregated two-way cycle track that meets the desirable minimum could be fit into the existing network. One footway would have to be reduced to allow this though the footway would remain at the desirable minimum width of 2.0m.

For parking bays to be maintained, both footways and the two-way cycle track would have to be reduced to below the desirable minimum widths. However, the absolute minimum widths can still be achieved.

Alternatively, stepped construction could be used which would allow 0.5m to be reallocated to one of the footways which would then meet the desirable minimum width.

Section 2b – Great Western Road (Shortest Width)

The shortest width along Great Western Road is almost 2.0m less than the typical width, with narrower footways and no parking bays provided. Currently, one of the footways meets the desirable minimum (2.3m) while the other meets the absolute minimum (1.8m) width.

A fully segregated cycle track could be fitted into this width that meets the absolute minimum. The carriageway and both footways would have to be reduced to allow this but the carriageway would be kept consistent at 6.5m and the footways would remain over the absolute minimum width of 1.5m. Light segregation such as bollards could be used as an alternative along the short sections which would allow approximately 0.3m to be reallocated to the footways or cycle track.

Similarly stepped construction would provide an additional 0.5m of width that could be distributed amongst the footways and cycle track.

Section 3 – North Deeside Road

North Deeside Road is currently made up of two footways (1.2m and 1.5m), two advisory cycle lanes (1.2m each) and a 7.6m carriageway. One of the footways is currently below the absolute minimum width.

A two-way segregated cycle track could be introduced for Section 3 at the absolute minimum width of 2.0m. The carriageway width would be required to be reduced to 6.5m and footways would be able to be provided at 2.0m and 1.8m widths.

To provide a two-way segregated cycle track at desirable minimum width (3.0m), a stepped system could be introduced alongside a 6.5m carriageway and footways of 1.6m each, which only meets absolute minimum width requirements.

To provide both footways at the desirable minimum width of 2.0m and a carriageway of 6.5m, only a fully segregated one-way cycle track could be provided in one direction.

Section 4 – North Deeside Road (Cults)

The footways increase and the carriageway narrows along the North Deeside Road in Cults. The options along this section would be the same as the options discussed for Section 3 with a 0.3m reduction required from the footways and/or the cycle track. Another option would be to use light segregation instead of full segregation which would result in an approximate 0.3m reduction and therefore, would maintain existing widths.

Section 5 – North Deeside Road (Milltimber)

North Deeside Road through Milltimber has a similar total width as Sections 3 and 4 but the carriageway is narrower, and the footways are wider than these sections. To provide a 6.5m carriageway and a cycle track would require the footways to be reduced significantly but would be consistent with the previous sections and greater than the absolute minimum width.

Section 6 – North Deeside Road (Peterculter)

The total width for a typical cross-section of the North Deeside Road in Peterculter is in line with Section 5. In this area however, there is on-street parking that would have to be removed to provide a cycle track that meets the absolute minimum width.

As with Section 3, a fully segregated two-way cycle track could be provided if the footways were reduced to 1.8m which is above the absolute minimum but below the desirable minimum. Alternatively, a 2.1m stepped cycle track could be provided which would allow footways at the desirable minimum of 2.0m.

To provide both footways at the desirable minimum width of 2.0m and a carriageway of 6.5m, a fully segregated one-way cycle track that meets the absolute minimum width could be provided in one direction.

Option AT41 could not be implemented in combination with PT1 or PT2. It should be considered in line with O16, O17, O19, O20, O24, O25 and O26.

AT43 – Increase pavement width on the south side of the A93 in proximity to Anderson Drive

The footway on the south side of Great Western Road between the junctions of Hammerfield Avenue and Granville Place is approximately 1.9m, which is below the desirable minimum defined in Cycle by Design. A typical cross-section of this section is shown in **Figure 5.39**.

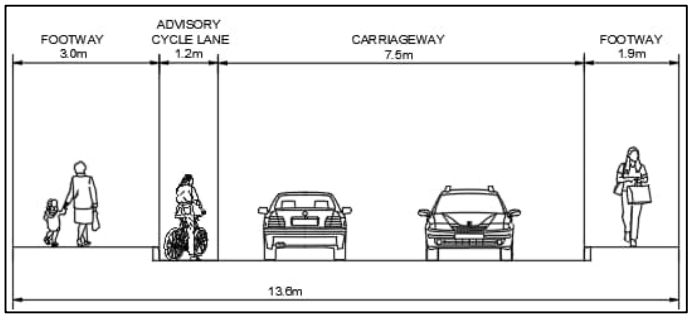


Figure 5.39: A93 Cross-Section in Proximity to Anderson Drive

There are various options that could be considered using the existing total width to increase the width of the southern footway, including reducing the carriageway width to 6.5m and increasing the footway to 2.9m. This would improve the level of service for walking and wheeling in this location.

However, if the southern footway was to be increased significantly, a number of options considering segregated cycling infrastructure would be adversely affected, including Option AT4 (implement segregated cycle provision through the A93/Anderson Drive Junction) and AT41 (implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City).

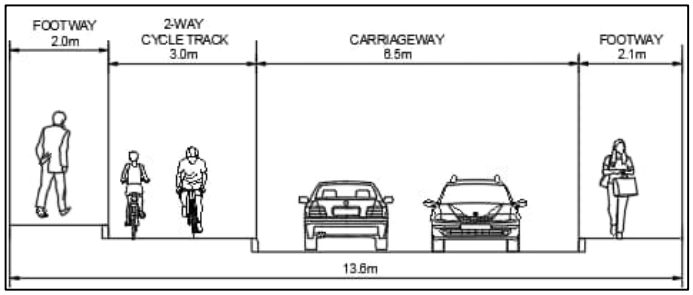


Figure 5.40: Proposed A93 Cross-Section in Proximity to Anderson Drive

Within the available width, it is possible to provide a segregated stepped two-way cycle lane with the Cycle by Design desirable minimum widths being met for a 3.0m cycle lane and 2.0m footways. However, this would only provide an increase of 0.1m to the southern footway and the northern footway width would have to be decreased to accommodate this.

Alternatively, a two-way stepped cycle lane that meets the absolute minimum width of 2.0m could be provided with footways at widths of 2.5m and 2.6m. The same widths could also be used for a one-way cycle lane travelling in one direction which would meet the desirable minimum width for a one-way cycle track.

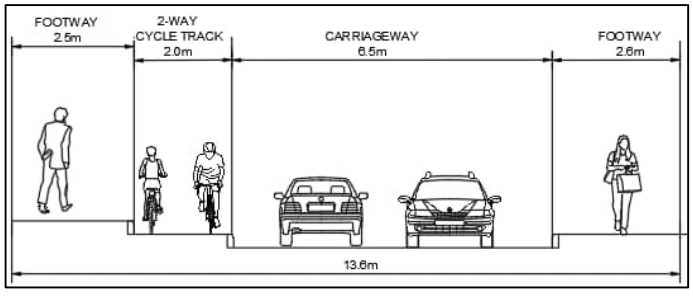


Figure 5.41: Alternative Proposed A93 Cross-Section in Proximity to Anderson Drive

Option AT43 to be considered in line with AT4 and O2.

AT44 – Implement a shared footway on the A93 corridor between Peterculter and Banchory

The existing facilities for pedestrians on the A93 between Peterculter and Banchory are generally relatively poor or non-existent and there is no segregated cycling infrastructure in place. The diagram below summarises existing provision between Peterculter and Drumoak.

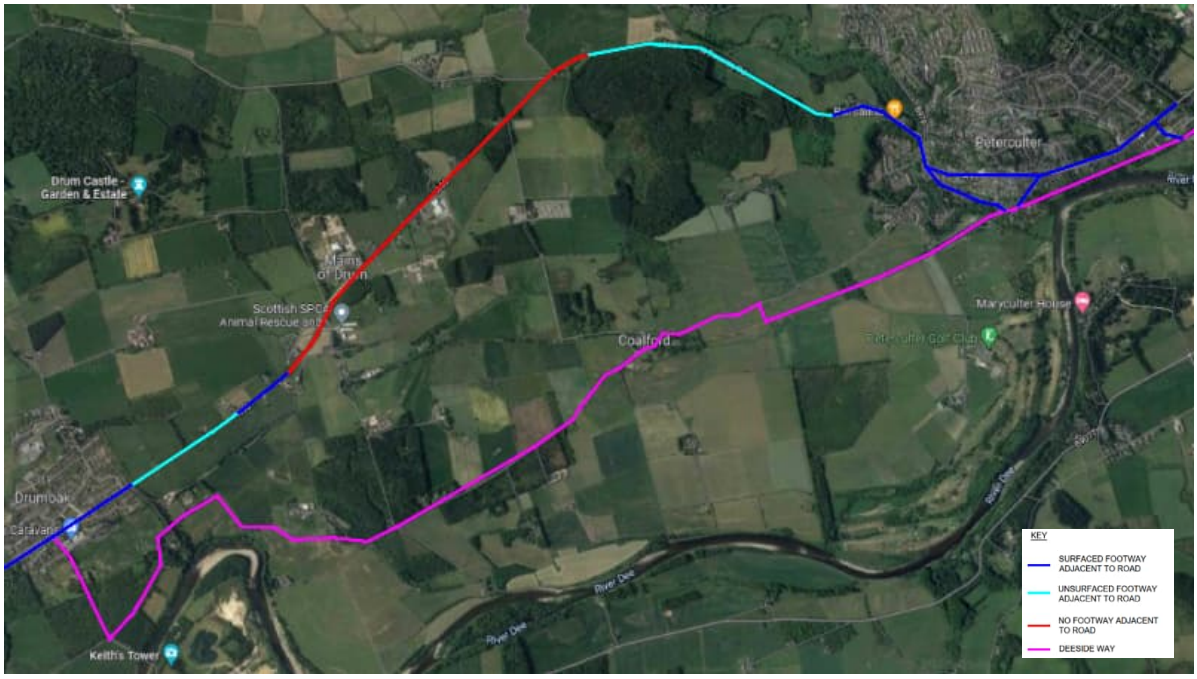


Figure 5.42: Existing Footway Provision – Peterculter to Drumoak

As shown above, there are sections of footway between Peterculter and Drumoak, however, they are very narrow and with very little buffer to the adjacent 60mph carriageway. The unsurfaced sections of footpath are also in poor condition and do not provide a safe place for people to walk and are not accessible for wheelchair users.

Figure 5.43 shows the existing typical cross-section of the A93 between Peterculter and Drumoak, with a total width of 12.3m. Within this width, a shared footway in line with Cycle by Design standards could not be provided. If a 6.5m carriageway was provided and the minimum buffer width for a 60mph road (2.5m) was used, 3.2m would remain for a shared footway which is 0.8m short of the absolute minimum of 4.0m and 1.8m short of the desirable minimum of 5.0m.

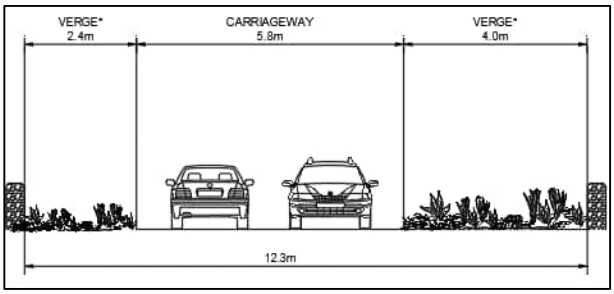


Figure 5.43: Cross-Section between Peterculter and Drumoak

The Deeside Way is an alternative to this route for active travel users, however, the section between Peterculter and Drumoak is largely via rural roads that vehicles can use to access farms which may discourage active travel users. A shared use path would be expensive to deliver. Land acquisition would be required, and a route would have to be designed with this in mind. There are also numerous crossings with minor farm roads where consideration would be required of crossing facilities (i.e. a direct crossing or an underpass, which would significantly increase the cost).

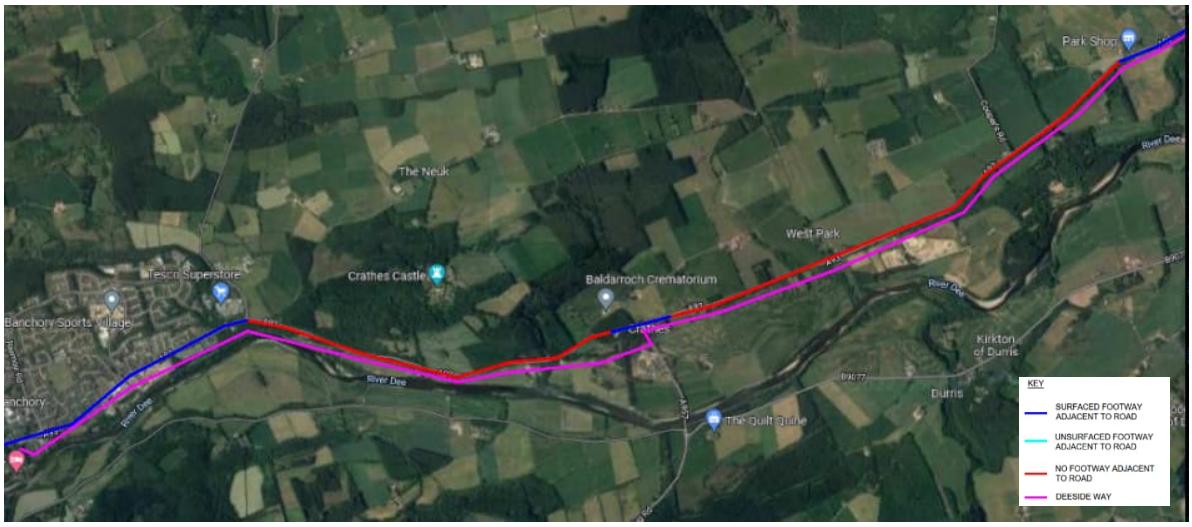


Figure 5.44: Existing Footway Provision - Drumoak to Banchory

Between Drumoak and Banchory, there is no footway adjacent to the carriageway, with the exception of a short section at Crathes and no segregated cycling facilities. The typical existing width along the A93 between Drumoak and Banchory would also not be sufficient to provide a shared footway. If the carriageway was reduced to 6.5m and the recommended buffer for a 60mph road (2.5m) was used, 3.7m would remain for a shared footway which is 0.3m short of the absolute minimum and 1.3m short of the desirable minimum.

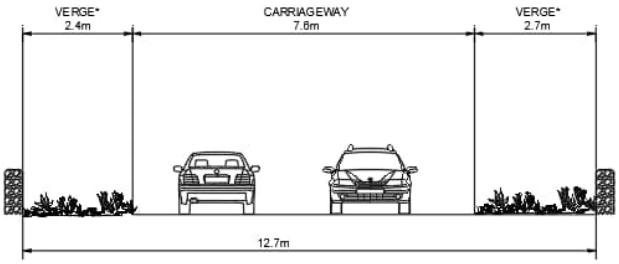


Figure 5.45: Cross-Section between Drumoak and Banchory

The Deeside Way is a more attractive option along this section as there is a segregated path that runs south of the A93 between the west of Drumoak and Banchory, with only a short section at Crathes where vehicles can access.

Option AT44 to be considered in line with AT19, AT20 and AT45.

AT45 – Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north

See commentary on **Option AT20** in **Section 5.2.3**. It is recommended that a footway is provided from Peterculter to the junction leading to Hardgate as indicated by the purple line in **Figure 5.46** below. As shown by the blue dashed line, there is also an alternative 'quiet route' network which could be utilised.

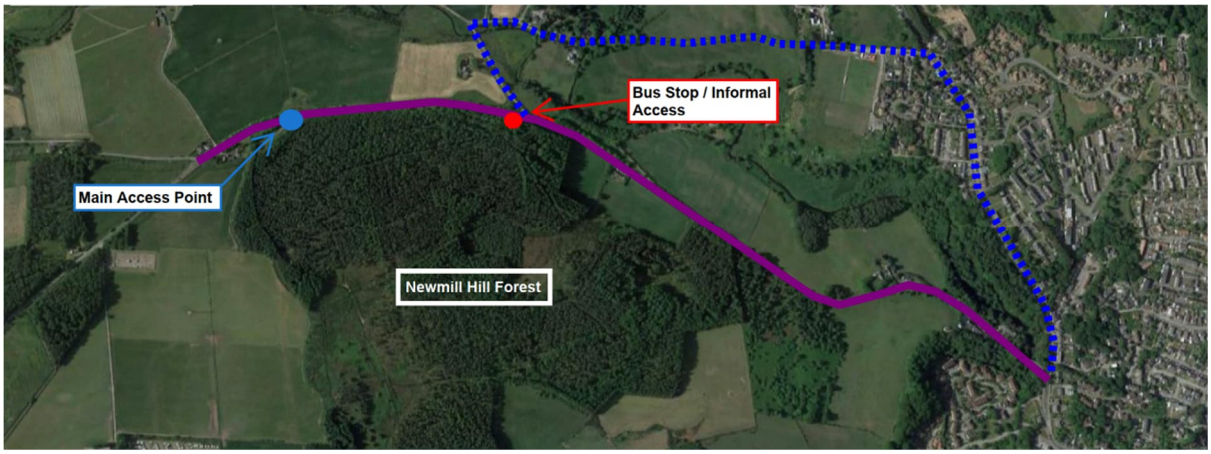


Figure 5.46: Newmill Hill Forest Potential Access

Option AT45 to be considered in line with AT20 and AT44.

AT47 – Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle

A footway is available on the north side of the A93 between Mains of Drum and Drumoak. However, the link is very narrow to the west of Rosehill Farm, which likely limits the attractiveness of the route for non-motorised users. **Figure 5.47** outlines the existing footway provision at this location.

At this point, the carriageway speed is 60mph and the existing carriageway width ranges from 6.5m to 7.0m and therefore, any widening of the footway would require the verge or third-party land.

The full corridor width (including verge space) ranges from approximately 10.5m to 12.5m, which provides potential options to widen the footway. If maintaining a 7.0m carriageway, 3.5m remains that could be allocated to non-motorised users. It is noted that farmland lies both to the north and south of the A93 and there is a gradient difference on the south side from the verge onto the field.

Figure 5.47: A93 Footway Provision East of Drumoak

Option AT47 to be considered in line with AT19 and AT32.

AT48 – Implement cycle lanes on either side of the carriageway through Drumoak and Park

The typical cross-section through Drumoak is shown in **Figure 5.48** below, outlining that the total width available is 11.4m, with a 6.8m carriageway and footways measuring 2.6m and 1.9m. Within available widths, it is not possible to accommodate cycle lanes on both sides of the carriageway. There is potential to accommodate a one-way cycle track travelling in one direction only via stepped or light segregation.

Figure 5.49 outlines how stepped construction can be achieved by reducing the carriageway width to 6.5m and reducing the footways to 1.7m to allow for a one-way cycle track at the absolute minimum of 1.5m.

The cross-section through Park varies greatly, with the largest cross-section at approximately 19.5m and the shortest at 12.5m. It would therefore not be possible to implement cycle lanes on both sides of the carriageway through the entire section. A segregated or stepped one directional one-way cycle track could be provided throughout Park, though this would likely only be effective in encouraging increased active travel if cycle infrastructure was provided from Banchory and/or through Drumoak.

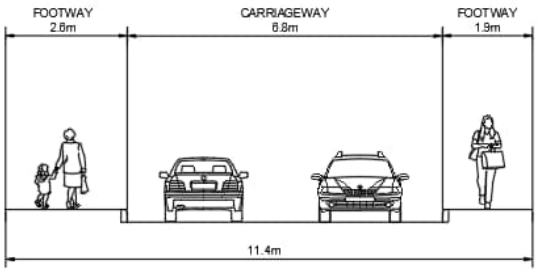


Figure 5.48: Drumoak to Park Cross-Section

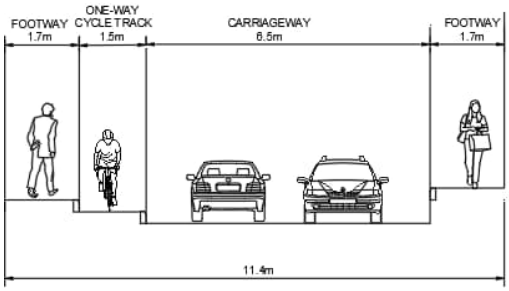


Figure 5.49: One-Way Stepped Cycleway

AT49 – Implement cycling infrastructure along the High Street in Banchory

There are several options to provide cycle infrastructure along Banchory High Street due to the large 19.1m total width for a typical cross-section. The existing cross-section is made up of footways measuring 4.8m and 2.7m wide, two lanes of 2.0m parking bays and a 7.7m carriageway.

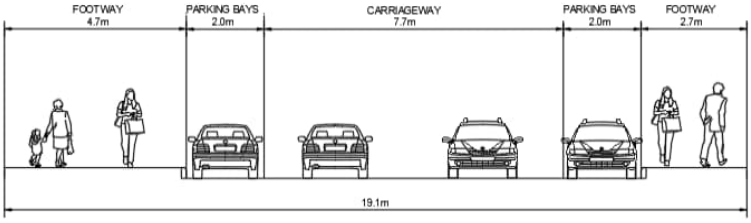


Figure 5.50: Banchory - Existing Cross-Section

A fully segregated two-way cycle track could be provided by reducing the carriageway to 6.5m, removing one row of parking bays and reducing one footway by 0.3m. The reduction of the footway could be mitigated by providing light segregation or stepped construction.

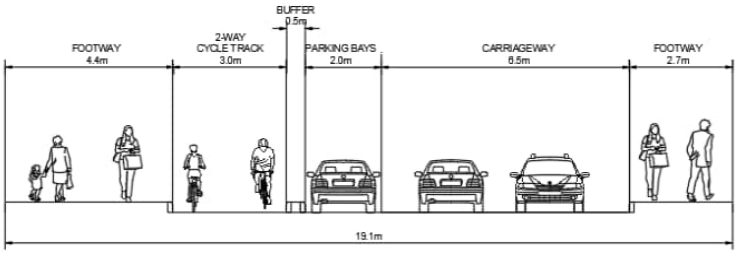


Figure 5.51: Two-Way Segregated Cycleway Cross-Section

Both rows of parking could also be maintained by reducing the 4.7m footway to 2.4m. This would keep the footways above the desirable minimum of 2.0m but would be a significant reduction to the existing width.

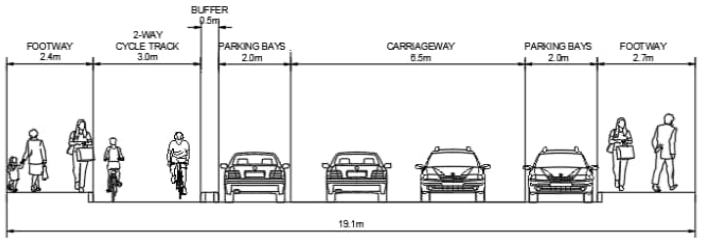


Figure 5.52: Two-Way Segregated Cycleway with Parking

A fully segregated one-way cycle track could also be provided in both directions that complies with the desirable minimum of 2.0m. This would require one row of parking bays to be lost and a reduction of 1.8m to the footway(s).

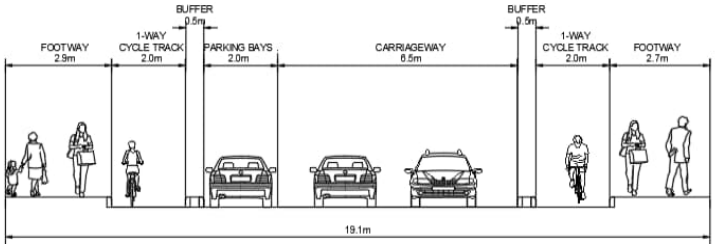


Figure 5.53: With-Flow Segregated Cycleways Cross-Section

Option AT49 to be considered in line with AT35, O7, O18, O23, O27 and O42.

5.2.7 Other Connections

This grouping contains the following options:

Table 5.10: Options Connections Options

AT55	**Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)**
AT56	**Develop a greater network of active travel connections from Park Bridge to the south of the river**
AT57	**Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes**
AT58	**Implement a contraflow cycle lane on Bridge Street in Banchory**
AT59	**Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor**

AT55 – Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)

Resurfacing of key active travel routes would provide significant improvements to existing facilities which would encourage active travel without the requirement for land purchase. This would require the engagement of the local community to know which routes to target to encourage active travel.

Option AT55 to be considered in line with O24, O25 and O26.

AT56 – Develop a greater network of active travel connections from Park Bridge to the south of the river

There is currently no dedicated cycle infrastructure from south of Drumoak. Active travel could be encouraged from this location to Stonehaven (approximately 15km away) if dedicated cycle infrastructure was provided. The potential to provide a segregated cycle track within the available width of the B9077 and the A957 would need to be assessed. If this was not possible, land would have to be purchased, making this an expensive option.

AT57 – Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes

As shown in **Figure 5.54** below, the current access controls located on Park Bridge only leave a narrow width for pedestrians and cyclists to use the bridge. Redesigning these would open the structure up to recumbent cycle and cargo bike users. The current controls are also not practical for wheelchair users and the redesign would also need to take these users into account. There is also the opportunity to improve the visual impact of the access controls. Sustrans recommend that the feature be unique and reflect the character of the area and that designers work with local artists, urban designers and schools to produce designs for access points (see **Figure 5.55**).

Figure 5.54: Park Bridge Access Controls

Figure 5.55: Access Controls Example on NCN78

AT58 – Implement a contraflow cycle lane on Bridge Street in Banchory

Bridge Street has a carriageway ranging from 5.3m to 6.3m along its length. The existing layout consists of a one-way running lane and parking bays along the south side of the carriageway. Parking restrictions are in place Monday to Saturday, 8am to 6pm, with a stay of 45 minutes permitted and no return within 15 minutes.

A running lane of 3.0m minimum width is required throughout, which leaves 2.3m to 3.0m remaining width for consideration of cycle contraflow and parking. Cycling by Design specifies a desirable minimum width of a cycle lane to be 2.0m and absolute minimum of 1.5m. To provide a cycle contraflow compliant with Cycling by Design along Bridge Street, parking along the full length would require removal.

Sections of at least 6.0m width would be able to incorporate 2.0m parking bays alongside a 1.0m cycle contraflow, however this would not comply with Cycling by Design Standards. It is noted that off-street parking facilities are available in close proximity to Bridge Street, therefore options to remove on-street parking could be considered.

Figure 5.56: Bridge Street Cycle Contraflow Feasibility

In line with options for contraflow cycling in the city centre, an alternative option would be to introduce a cycle contraflow without full segregation. This would be achieved by providing entry point segregation and then either providing white lining as a cycle lane or allowing contraflow cycles to mix with traffic, with suitable signage provided for all road users. It is recommended that further review is undertaken at the next stage of the design process to identify the most appropriate design solution for Bridge Street.

AT59 – Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor

The current roads that connect Inchmarlo to the A93 are single carriageway and do not include a footway. This is unsafe for residents and an enhanced path network would provide a safe connection for local people. In Torphins, the road connections to the A93 are the B983 and the A980, both of which do not have footways. This means pedestrians are unable to travel to surrounding settlements such as Inchmarlo or Banchory. There is also no dedicated cycle infrastructure which may discourage this mode of transport. An enhanced network of paths would provide enhanced connectivity between these communities. It would also encourage recreational use for pedestrians and cyclists. However, provision of this network would be costly as land would have to be purchased and there may be environmental constraints to consider.

5.3 Public Transport Options

5.3.1 Bus Priority Infrastructure

This grouping contains the following options:

Table 5.11: Bus Priority Infrastructure Options

PT1	**Implement an eastbound bus lane along the A93 corridor**
PT2	**Implement a westbound bus lane along the A93 corridor**

Further engineering work would be required to establish the feasibility of introducing bus lanes along the A93 corridor. The table below outlines the width requirements for the introduction of bus lanes along the corridor in comparison to available widths.

As noted in **Section 4**, due to constrained corridor widths, it would not be feasible to provide both an eastbound and westbound bus lane without significant land purchase. Similarly, providing bus lanes in combination with segregated cycling infrastructure would not be feasible due to width constraints.

Table 5.12: Bus Lane Cross-Section Widths

Section	Location	Width	Bus Lane One Direction (Desirable Minimum)	Bus Lane One Direction (Absolute Minimum)	Bus Lane Both Directions (Desirable Minimum)	Bus Lane Both Directions (Absolute Minimum)
1	Springbank Terrace	11.4	13.75	12.5	17	15.5
	Willowbank Road	15.2	13.75	12.5	17	15.5
2	Great Western Road	14.7	13.75	12.5	17	15.5
	Great Western Road	14.2	13.75	12.5	17	15.5
	Great Western Road	13.7	13.75	12.5	17	15.5
3	Great Western Road	15.6	13.75	12.5	17	15.5
	North Deeside Road	12.8	13.75	12.5	17	15.5
	North Deeside Road	12.9	13.75	12.5	17	15.5
4	Cults	13.3	13.75	12.5	17	15.5
	Cults	12.5	13.75	12.5	17	15.5
	Bieldside	12.6	13.75	12.5	17	15.5
5	Milltimber	12.5	13.75	12.5	17	15.5
	Milltimber	13.4	13.75	12.5	17	15.5
6	Peterculter	11.5	13.75	12.5	17	15.5
	Peterculter	12.6	13.75	12.5	17	15.5

Section	Location	Width	Bus Lane One Direction (Desirable Minimum)	Bus Lane One Direction (Absolute Minimum)	Bus Lane Both Directions (Desirable Minimum)	Bus Lane Both Directions (Absolute Minimum)
	Peterculter	14.6	13.75	12.5	17	15.5
7	A93 between Peterculter and Drumoak	9.7	13.75	12.5	17	15.5
	A93 between Peterculter and Drumoak	5.8	13.75	12.5	17	15.5
8	Drumoak	11.4	13.75	12.5	17	15.5
9	A93 between Drumoak and Banchory	7.7	13.75	12.5	17	15.5
	A93 between Drumoak and Banchory	7.4	13.75	12.5	17	15.5
10	Banchory	12	13.75	12.5	17	15.5
	Banchory	11.4	13.75	12.5	17	15.5
11	Banchory High Street	19.1	13.75	12.5	17	15.5

Options PT1 and PT2 would be required for the implementation of Option PT21. Options PT1 and PT2 could not be implemented in combination with AT41.

5.3.2 Bus Stop Review

This grouping contains the following options:

Table 5.13: Bus Stop Review Options

PT4	**Conduct a route wide review of bus stop provision and infrastructure**
PT5	**Consider options to improve boarding and alighting times on bus services along the corridor**

PT4 – Conduct a route wide review of bus stop provision and infrastructure

It is recommended that a review of existing bus stop provision is undertaken to ensure that the network best meets community demand. This would be assessed through establishing bus stop locations, distance between stops, current footfall and usage numbers as well as looking at infrastructure at stops such as shelters, benches etc.

PT5 – Consider options to improve boarding and alighting times on bus services along the corridor

Improvements to boarding and alighting times will require further discussions with the bus operator to establish what measures could be considered to benefit this. Options will likely be the responsibility of the bus operator to introduce.

5.3.3 Multi-Modal Journeys

This grouping contains the following options:

Table 5.14: Multi-Modal Journeys Options

PT8	**Enhance opportunities for cycle carriage on bus services on the A93 corridor**
PT9	**Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses**
PT10	**Implement ticketing options for multi-modal journeys**
PT11	**Implement a Park and Ride site in the east of Banchory**

PT8 – Enhance opportunities for cycle carriage on bus services on the A93 corridor
PT9 – Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses
PT10 – Implement ticketing options for multi-modal journeys

The delivery of multi-modal journey options will be required to be delivered in partnership with the bus operators. Ensuring ease of access for bikes on buses and multi-modal ticketing options will help support the use of different transport options for journeys.

PT11 – Implement a Park and Ride site in the east of Banchory

The potential to introduce a Park and Ride site in the east of Banchory is identified in the Aberdeenshire Council Proposed Local Development Plan 2020 (OP1) alongside housing and leisure facilities. Further work requires to be undertaken to identify any potential construction barriers including environmental and third-party land constraints. An exercise will also be required to establish the potential demand for a Park and Ride facility at this location and requirement for electric vehicle charging points.

5.3.4 Demand Responsive Services

This grouping contains the following option:

Table 5.15: Demand Responsive Services Option

PT17	**Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)**

Demand responsive service options will be required to be delivered in partnership with bus operators and/or with transport authority support.

5.3.5 Service Variations

This grouping contains the following options:

Table 5.16: Service Variations Options

PT21	**Increase the frequency of bus services on the A93**
PT24	**Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory**

Service variation options will be required to be delivered in partnership with bus operators. Current journey origins and destinations will require assessment to understand potential demand for these options.

Option PT21 could not be implemented without the delivery of PT1 or PT2.

5.3.6 Traffic Signals

This grouping contains the following options:

Table 5.17: Traffic Signals Options

PT25	**Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor**
PT26	**Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor**

PT25 – Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor

The introduction of Traffic Light Priority (TLP) would help to support bus journey times utilising the existing Split Cycle and Offset Optimisation Technique (SCOOT) network at a number of junctions along the A93 corridor. TLP would reduce delays to buses at the traffic signals by adjusting the staging or green times e.g. where a bus is detected the traffic signals could reduce the green time on the current stage running and activate the approach where the bus has been detected to allow a continuous movement. The modern technology for allowing TLP involves the On Board Ticket Machine (OBTM) interacting with the bus companies' back office server and the traffic signal junction. These in turn communicate with the Local Authority's Urban Traffic Management SCOOT System. The SCOOT system is continually monitoring real time traffic flows and adjusting each set of traffic signals to optimise the throughput. Including criteria for bus priority allows the system to adjust the same sets of traffic signals and has the added benefit of being able to exclude 'out of service' vehicles and those which are ahead of their respective journey time schedules.

Option PT25 to be considered in line with O43.

PT26 – Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor

It is recommended that a review of signal timings be undertaken at the Anderson Drive/Great Western Road junction and consideration made to the introduction of adaptive traffic signals to improve traffic flow through the junction for all users.

Option PT26 to be considered in line with AT3 and O2.

5.4 Other Options

5.4.1 Junction Reviews

This grouping contains the following options:

Table 5.18: Junction Reviews Options

O1	**Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation**
O2	**Review the layout of the A93/Anderson Drive Junction**
O3	**Review the layout of the A93/Pitfodels Station Road Junction**
O4	**Review the layout of the A93/Abbotshall Road Junction**
O5	**Review the layout of the A93/Malcolm Road Junction**
O6	**Review the layout of the A93/Hill of Banchory East Junction**
O7	**Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory**

O1 – Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation

See commentary on **Option AT2** in **Section 5.2.2**.

Option O1 to be considered in line with AT2.

O2 – Review the layout of the A93/Anderson Drive Junction

See commentary on **Option AT3/AT4** in **Section 5.2.2**.

Option O2 to be considered in line with AT3, AT4, AT43 and PT26.

O3 – Review the layout of the A93/Pitfodels Station Road Junction

There is poor visibility at the A93/Pitfodels Station Road junction from Pitfodels Station Road due to the gradient on approach to the A93 and property boundary walls. It is proposed that blind spot spherical mirrors could be introduced to support overall safety at the junction.

Potential junction improvements are limited by the existing property boundaries and overall corridor width. The existing crossing over Pitfodels Station Road has limited visibility for users from the tactile paving affecting overall safety. Options should be considered to improve crossing facilities on each arm of the junction.

Figure 5.57: Pitfodels Station Road Junction - Existing Layout (Source: Google Street View)

O4 – Review the layout of the A93/Abbotshall Road Junction

The current junction layout has advisory with-flow cycle lanes on North Deeside Road (A93) and an uncontrolled crossing point across Abbotshall Road.

The approach from Abbotshall Road has a steep gradient which, along with property boundaries, influences visibility at the junction. There is currently a 'Stop' line to help support safety at the junction. Blind spot spherical mirrors could be introduced to further support overall safety at the junction.

The ability to alter the junction is limited by property boundaries and existing corridor width. There is the potential to introduce crossing points across the A93 to support active travel journeys utilising Abbotshall Road.

Option O4 to be considered in line with AT23.

O5 – Review the layout of the A93/Malcolm Road Junction

The A93 junction with the B979 (Malcolm Road) has been identified as requiring improvement. High vehicle speeds on the A93 are currently observed at this section. It is proposed the speed limit is reduced to 20mph at this section. In addition, the carriageway can be narrowed by 0.3m on the west side and the footway widened to 1.8m. Any further reduction in the carriageway without a speed limit reduction is not advised due to the higher lane width needed by vehicles travelling at higher speeds. The installation of a gateway feature should also act as a natural/passive speed limit enforcement.

Figure 5.58: A93/Malcolm Road Junction - Existing Layout (Source: Google Maps)

The existing white hatching on the B979 at the junction can be replaced with a physical island to reduce speeds of oncoming vehicles on approach to the junction. A cyclist bypass with 'SLOW' marking can be allowed for at the back of the island. It should be noted, the proposed arrangement retains the existing corner radius on the B979 which currently does not allow for HGV/long vehicle manoeuvres to the A93 West.

A second white hatching island is proposed to be replaced with a physical island at the North Deeside Road bend. This would act as a visual narrowing of the carriageway encouraging lower vehicle speeds. The location could also be used for a new pedestrian crossing but further assessment of this option is required, in particular in respect of the sight lines.

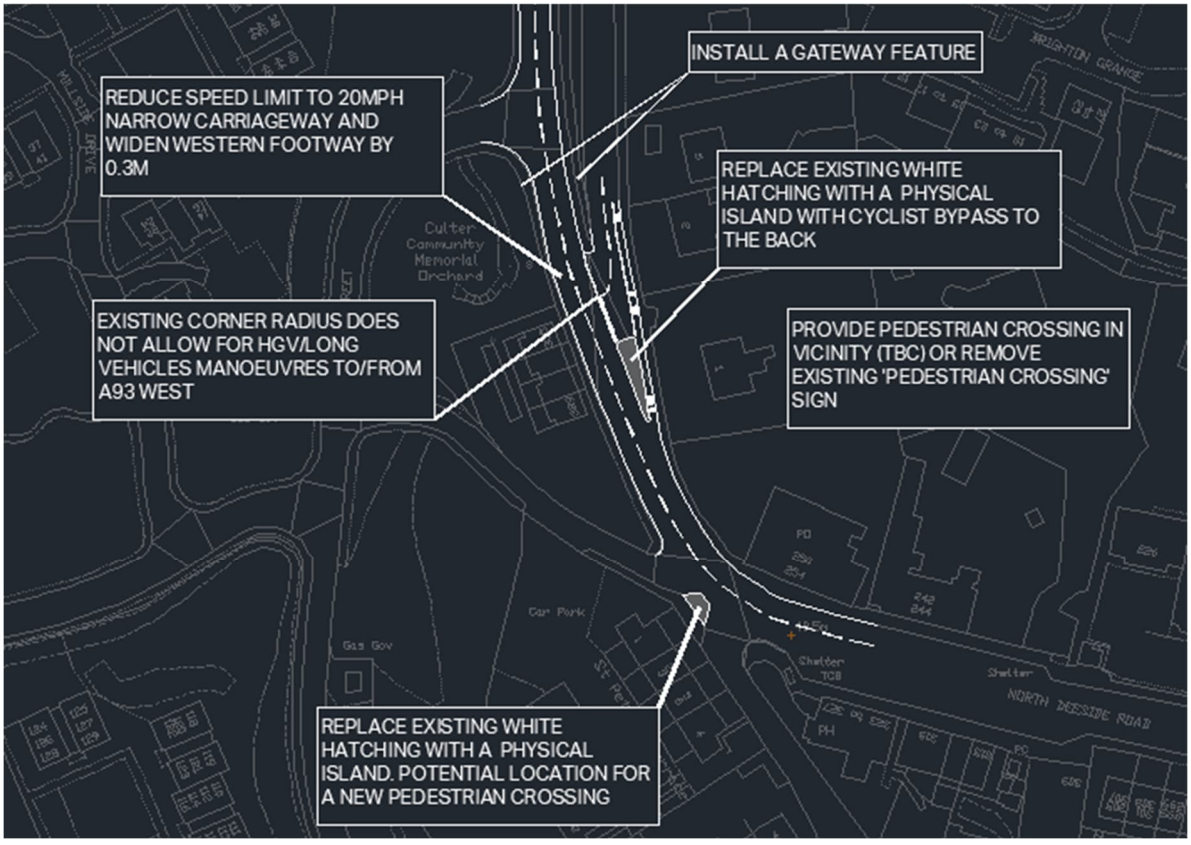


Figure 5.59: A93/Malcolm Road Junction - Proposed Layout

O6 – Review the layout of the A93/Hill of Banchory Junction

As indicated in the figure below the junction could be narrowed from the existing kerb line (green) to a reduced width (pink) to provide greater space to non-motorised users as well as reducing vehicle speeds. The narrowing has been established through a vehicle tracking exercise using an FTA Rigid Vehicle.

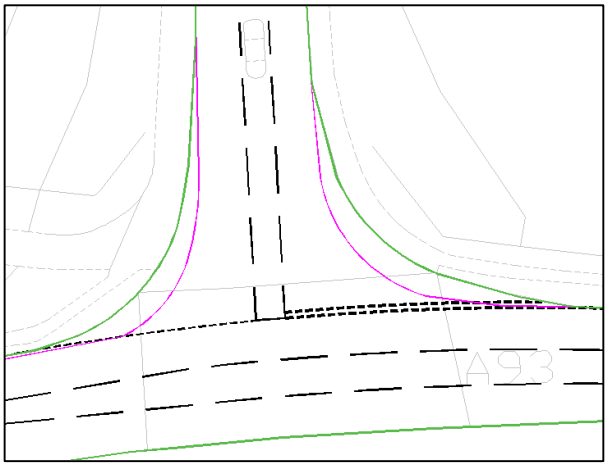


Figure 5.60: Hill of Banchory East Junction Kerb Lines

In addition, the need for the right-turn lane could be re-evaluated through turn count data. If not required, the carriageway space available could be reallocated to active travel improvements, such as footway widening, cycleway provision or the introduction of shared facilities.

The existing crossing facilities at the junction consist of two informal D-island crossings approximately 20m and 45m north of the junction on Hill of Banchory East. Dependent on usage, a single formal crossing could be considered. Changing the crossing type to remove the island may allow for further narrowing of the junction.

O7 – Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory

The existing junction is relatively wide and therefore leaves scope to narrow the junction radii and allocate a greater amount of space to non-motorised users. This was confirmed through a vehicle tracking exercise using a Refuse Vehicle and FTA Rigid Vehicle.

The figure below shows potential narrowing options whilst maintaining a 7.0m carriageway, providing additional space which could be utilised to improve the junction for people walking, wheeling or cycling. Options could be considered to introduce a protected junction which segregates pedestrians, cyclists and motorised vehicles or introduce shared footways and upgrade existing signalised crossings to toucan/parallel crossings.

Figure 5.61: Dee Street Junction Kerb Lines

Figure 5.62: Protected Junction Layout (Source: Glasgow City Council)

Option O7 to be considered in line with AT49, O23, O27 and O42.

5.4.2 Other

This grouping contains the following options:

Table 5.19: Other Options

O8	**Review pedestrian safety at island crossings along the A93 corridor**
O10	**Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR**
O12	**Implement a link road between A93 and Inchgarth Road**
O14	**Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak**

O8 – Review pedestrian safety at island crossings along the A93 corridor

Island crossings can help facilitate pedestrian movements over busy carriageways by providing a refuge point between traffic lanes. There are several uncontrolled island crossing points along the A93 corridor. It is recommended that a safety review be undertaken at each crossing location to ensure suitable width, tactile paving provision and visibility to road users.

O10 – Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR

Improved signage will help to support road users when travelling along the corridor as well as encouraging tourism and visitors to the area, supporting the local economy. Proposals for any new signage would require discussions with the relevant roads authority.

O12 – Implement a link road between A93 and Inchgarth Road

Pitfodels Station Road and Westerton Road currently provide a road link between Inchgarth Road and North Deeside Road (A93). Both links have a narrow carriageway, steep gradients and traffic calming measures. A proposed new link road forms part of the planning application for a Community Retirement Village at this location as shown in **Figure 5.63** below. The existing plans also include a shared use cycle/pedestrian path which would help support active travel movements in the area. The delivery of a link road would require further study and design development. Constraints for the introduction of a new link road include environment, conservation and land availability.

Figure 5.63: Inchgarth Road Development Overview Plan (Source: ACC Planning Portal)

O14 – Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak

If vehicles were discouraged from parking on the access road this would free up space for pedestrians and cyclists. Public transport use may also increase from people that would ordinarily drive to and park at this location before using the Deeside Way.

5.4.3 Parking Reviews

This grouping contains the following options:

Table 5.20: Parking Reviews Options

O16	**Conduct a review of parking in Cults**
O17	**Conduct a review of parking in Peterculter**
O18	**Conduct a review of parking in Banchory**

It is recommended that a car parking review be undertaken in each of the communities to better understand current parking patterns, requirements and potential need for electric vehicle charge points. This will help to support potential placemaking interventions and improvements to provision for non-motorised users.

O16 – Conduct a review of parking in Cults

Cults has a public car park on Dunmail Avenue which is free to users and there are also customer only car parks for the Courtyard and Sainsburys to the rear of premises, south of the A93. There is short stay on-street car parking along the A93 outside local amenities.

Option O16 to be considered in line with AT41, O19 and O25.

O17 – Conduct a review of parking in Peterculter

In Peterculter there is currently one public car park located at Millside to the west of the community centre. There is also a high level of on-street parking, understood to be a combination of residential and amenity access parking.

Option O17 to be considered in line with AT41, O20 and O26.

O18 – Conduct a review of parking in Banchory

Banchory has a number of off-street parking locations near the High Street including Bellfield 1 and 2, Bridge Street, Scott Skinner Square, The Square and Town Hall Car Parks. The figure below shows the location of the car parks and the table outlines capacity at each of the sites. On-street parking facilities on the High Street appear to be used frequently however given the proximity of various car parks to the High Street there is the potential to remove parking provision to provide greater space to pedestrians and create a sense of place.

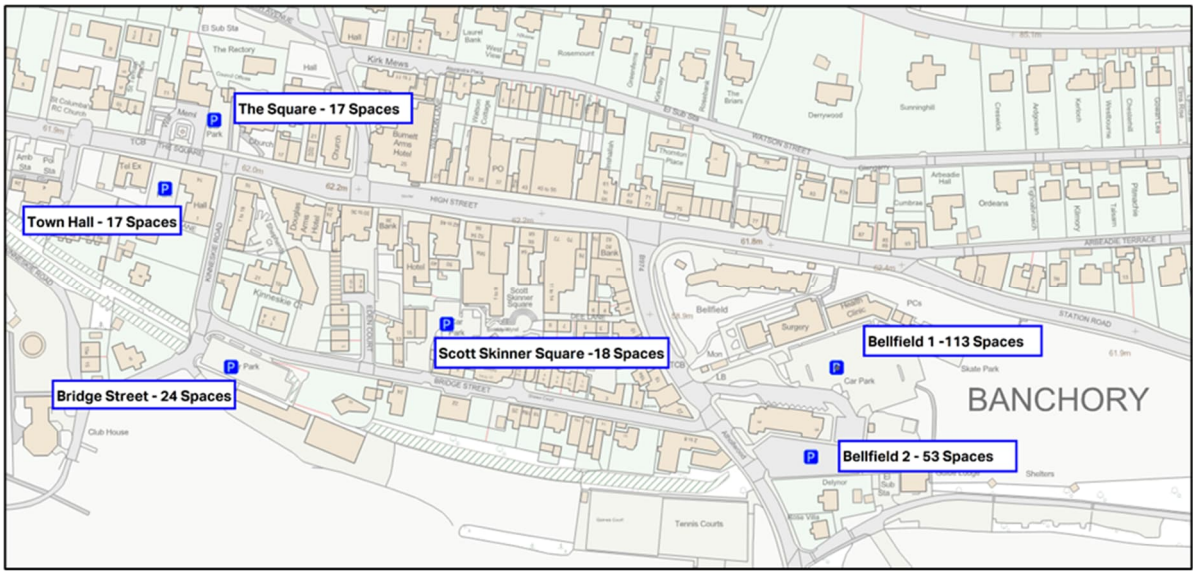


Figure 5.64: Banchory Car Park Locations (Source: Aberdeenshire Council)

Table 5.21: Banchory Car Parking Capacity (Source: Aberdeenshire Council)

Car Park	Spaces Available
Bellfield 1 Car Park	94 Pay & Display Spaces 9 Free Spaces 4 Lorry / Bus Spaces 6 Disabled Spaces 10 Covered Cycle Spaces
Bellfield 2 Car Park	53 Free Spaces
Bridge Street Car Park	24 Free Spaces
Scott Skinner Square Car Park	16 Pay & Display Spaces 2 Disabled Spaces

Car Park	Spaces Available
The Square Car Park	15 Free Spaces 2 Disabled Spaces
Town Hall Car Park	15 Free Spaces 2 Disabled Spaces
Total Available	**110 Pay & Display Spaces** **116 Free Spaces** **12 Disabled Spaces**

Option O18 to be considered in line with AT35, AT49, O23, O27 and O42.

5.4.4 Placemaking

This grouping contains the following options:

Table 5.22: Placemaking Options

O19	**Introduce placemaking and gateway features in Cults**
O20	**Introduce placemaking and gateway features in Peterculter**
O21	**Implement gateway signage on approach to Drumoak in both directions**
O22	**Implement gateway signage on approach to Crathes in both directions**
O23	**Introduce placemaking and gateway features in Banchory Town Centre**
O24	**Implement package of measures to support 20-minute neighbourhood in Mannofield**
O25	**Implement package of measures to support 20-minute neighbourhood in Cults**
O26	**Implement package of measures to support 20-minute neighbourhood in Peterculter**
O27	**Implement package of measures to support 20-minute neighbourhood in Banchory**

O19 – Introduce placemaking and gateway features in Cults
O20 – Introduce placemaking and gateway features in Peterculter
O23 – Introduce placemaking and gateway features in Banchory Town Centre

The introduction of placemaking and gateway features is a proposed option for Cults, Peterculter and Banchory. This helps to create a sense of place and enhance the environment for the local community. Considerations of design, location, infrastructure and logistics are required as part of this process and could include creating low traffic neighbourhoods, introducing seating places, planting and green infrastructure.

In each of the communities, a combination or variation of the design considerations below could be adopted. On-street car parking within the community centres may require reallocation to support the area to be people focussed.

Gateway features that could be adopted include signage, zebra crossings, traffic calming etc. This can help to reduce vehicle speeds when entering communities which support a sense of place as well as enhancing safety.

In terms of the assessment against policy, the implementation of placemaking and gateway features complies with the Scottish Government's Designing Streets policy in terms of helping to make places distinctive and welcoming.

Option O19 to be considered in line with AT23, AT24, AT25, AT41, O16 and O25. Segregated cycling infrastructure unlikely to be required if placemaking features are implemented in the community centre.
Option O20 to be considered in line with AT29, AT41, O17 and O26. Segregated cycling infrastructure unlikely to be required if placemaking features are implemented in the community centre.
Option O23 to be considered in line with AT35, AT49, O7, O18, O27, O38 and O42. Segregated cycling infrastructure unlikely to be required if placemaking features are implemented in the town centre.

Design Considerations

Traffic Management

Permeable filters to reduce traffic to create safer environments for active travel and street play

Traffic Calming and School Zones

Street Furniture

Informal Seating

Information and Wayfinding Signage

Planting / Green Infrastructure

Raingardens

Planting beds

Surfacing

Feature paving to highlight key aspects of the area

Different paving colours to define areas

Figure 5.65: Placemaking Design Considerations

O21 – Implement gateway signage on approach to Drumoak in both directions
O22 – Implement gateway signage on approach to Crathes in both directions

Gateway signage could be provided when entering the communities of Crathes and Drumoak. Given the rural nature of these communities, such signage may help support the reduction of speed.

In terms of the assessment against policy, the implementation of gateway signage complies with the Scottish Government's Designing Streets policy in terms of helping to make places distinctive and welcoming. Gateway signage would require development in line with design standards.

Option O21 to be considered in line with O33.

O24 – Implement package of measures to support 20-minute neighbourhood in Mannofield
O25 – Implement package of measures to support 20-minute neighbourhood in Cults
O26 – Implement package of measures to support 20-minute neighbourhood in Peterculter
O27 – Implement package of measures to support 20-minute neighbourhood in Banchory

The 20-minute neighbourhood concept allows people to be able to meet most of their essential needs within a 20 minute walk or cycle of their home. The aim is to reduce the volume and speed of traffic and improve accessibility for local people to walk, cycle, wheel and spend time outdoors in their community. This is to be achieved within a 20 minute walk (approximately 800 metres).

Possible measures include:

- Restricting access to certain streets for vehicles;
- One-way streets;
- Traffic Calming;
- Creating new pocket parks and community spaces;
- Bus gates; and
- Modal filters.

The potential for 20-minute neighbourhoods has been considered for the communities of Mannofield, Cults, Peterculter and Banchory.

O24 – Implement package of measures to support 20-minute neighbourhood in Mannofield

The 20-minute walking radius for Mannofield is shown in **Figure 5.66**. A full list of improvements for the central area is shown in **Appendix A**.

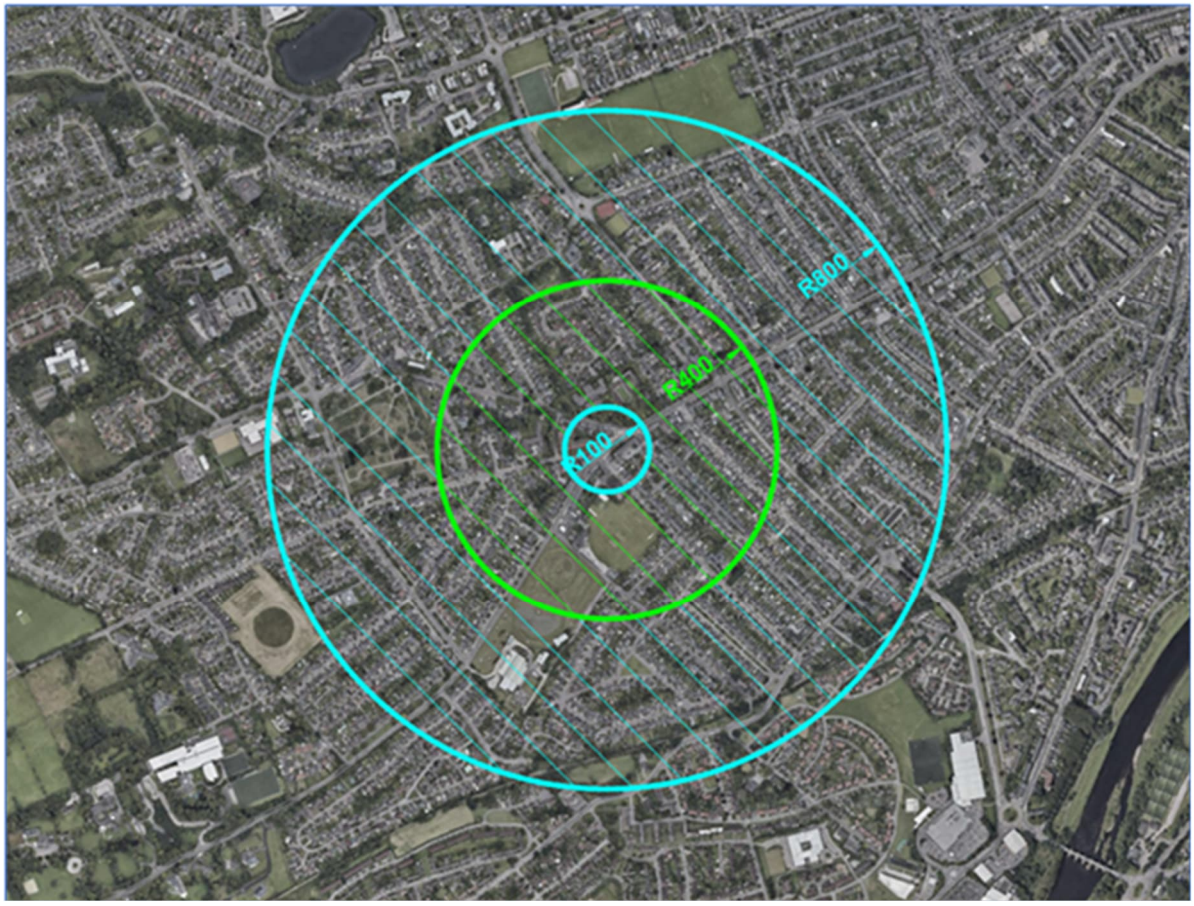


Figure 5.66: Mannofield Area within Radius of 100m, 400m and 800m

Option O24 to be considered in line with AT41 and AT55.

O25 – Implement package of measures to support 20-minute neighbourhood in Cults

The 20-minute walking radius for Cults is shown in **Figure 5.67**. A full list of options for improvement of the central area is shown in **Appendix A**.

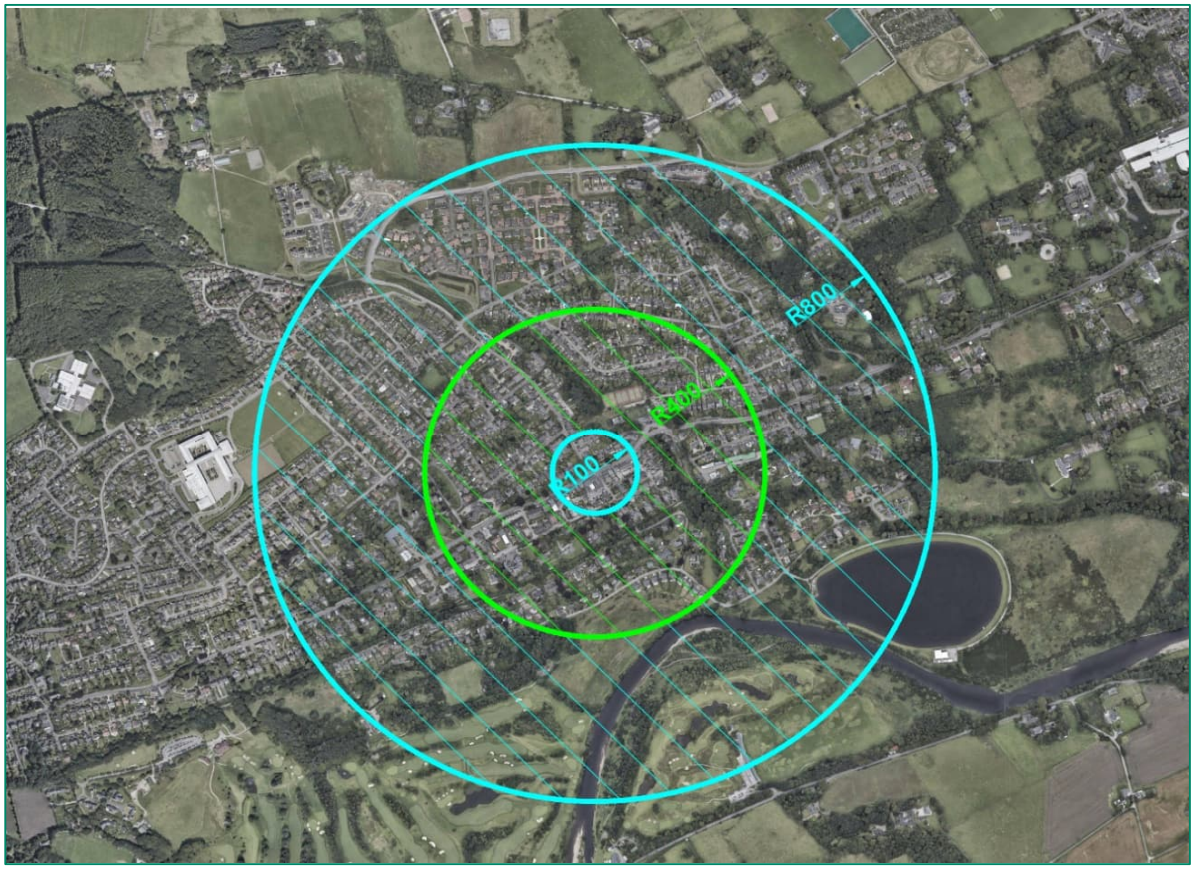


Figure 5.67: Cults Area within Radius of 100m, 400m and 800m

Potential measures that could be introduced in Cults include reducing the speed limit to 20mph, installing cycle parking and seating areas, reviewing on-street parking provision and providing pedestrian priorities at side roads e.g. continuous footways.

Option O25 to be considered in line with AT23, AT24, AT25, AT41, AT55, O16 and O19.

O26 – Implement package of measures to support 20-minute neighbourhood in Peterculter

The 20-minute walking radius for Peterculter is shown in **Figure 5.68**. A full list of options for improvement of the central area is shown in **Appendix A**.

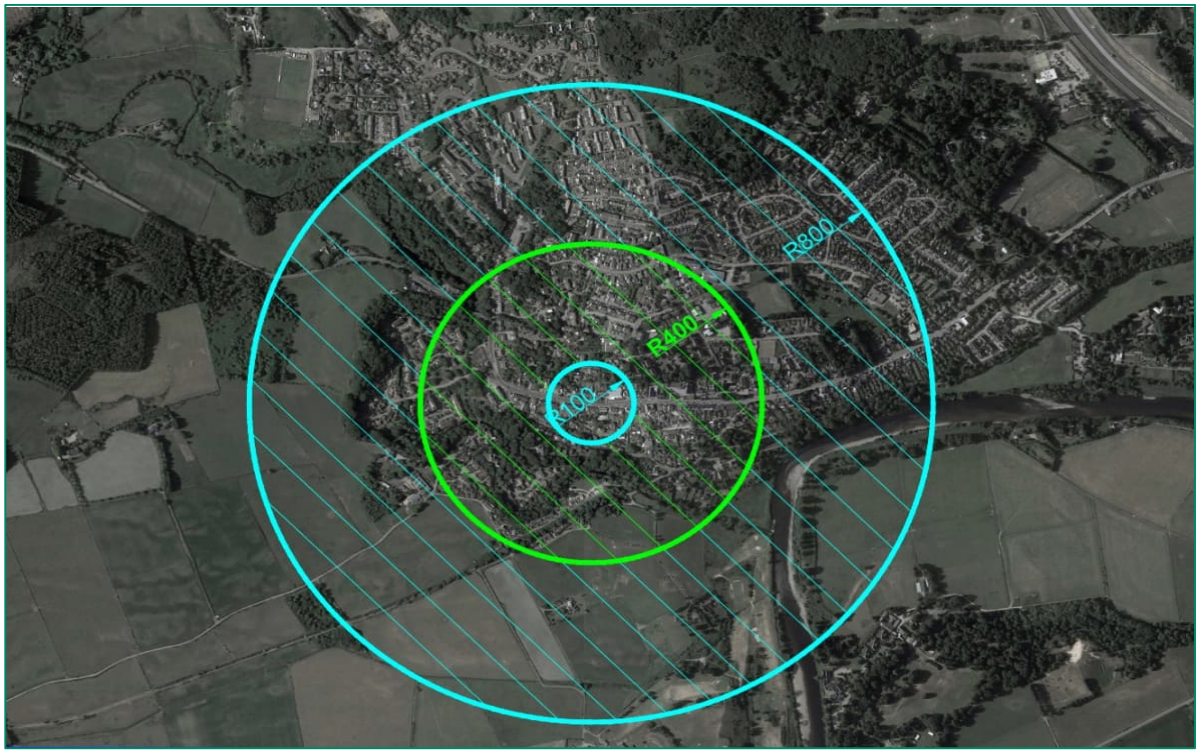


Figure 5.68: Peterculter Area within Radius of 100m, 400m and 800m

The urbanised area ends roughly at the 400m radius to the west beyond the bridge over the Culter Burn where the A93 North Deeside Road continues. Potential considerations within Peterculter include installing gateway features, reducing the speed limit to 20mph, enhancing crossing facilities, installation of cycle storage and seating areas, reviewing on-street parking and providing pedestrian priority at side roads.

Option O26 to be considered in line with AT29, AT41, AT55, O17 and O20.

O27 – Implement package of measures to support 20-minute neighbourhood in Banchory

The 20-minute walking radius from the centre of Banchory is shown in **Figure 5.69**. A full list of options for improvement of the central area is shown in **Appendix A**.

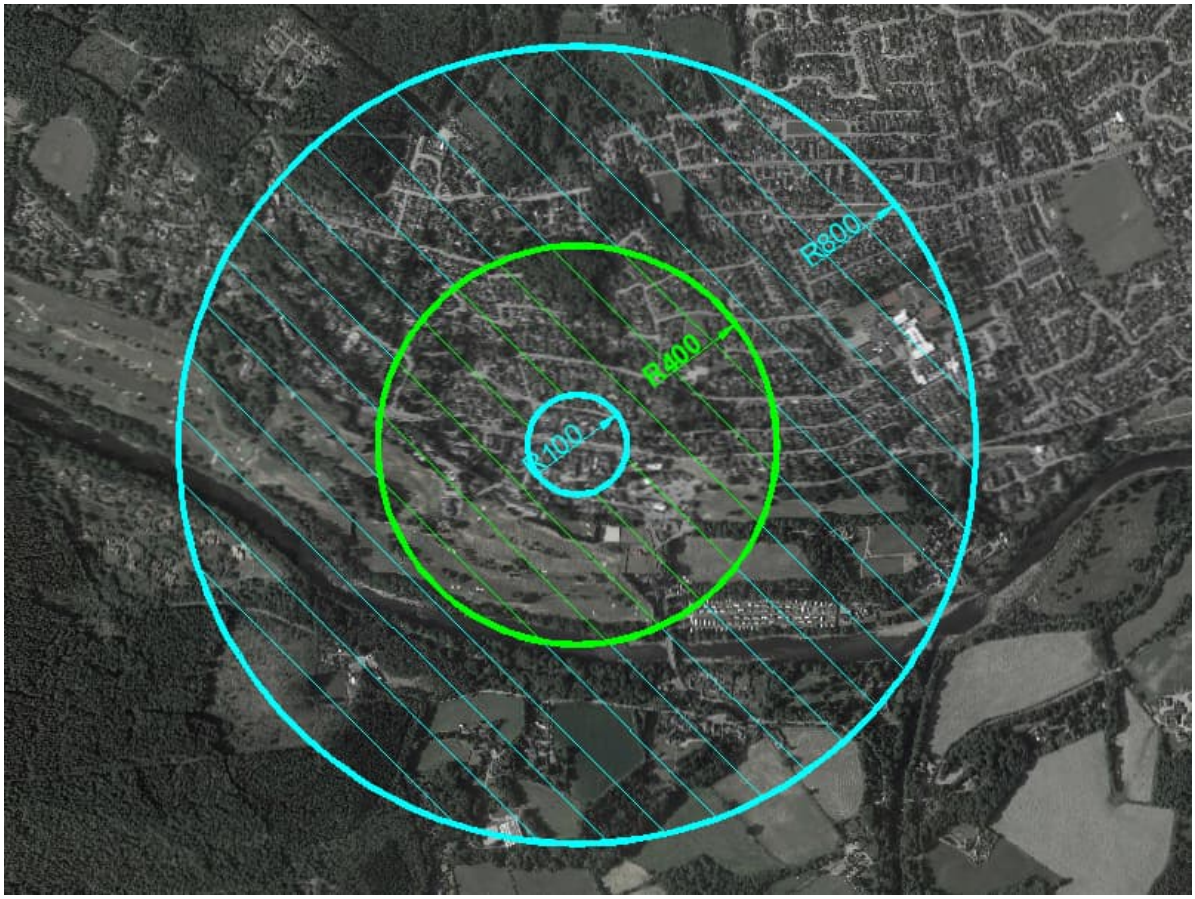


Figure 5.69: Banchory Area within Radius of 100m, 400m and 800m

Potential options include narrowing existing carriageway widths, installing cycle storage and seating areas, reviewing on-street parking provision and providing pedestrian priority at side roads.

Option O27 to be considered in line with AT35, AT49, O7, O18, O23 and O42.

Proposed Design Process

During the creation of 20-minute neighbourhoods, it is important to engage with the local community to ensure designs best meet their needs. A proposed design process is shown below. The timeline for the full process could be around 9-10 months.

5.4.5 Reduced Speeds

This grouping contains the following options:

Table 5.23: Reduced Speeds Options

O28	**Implement additional flashing speed limit signs along the A93 corridor**
O31	**Reduce the speed limit on Kennerty Road**
O32	**Increase the number of speed limit signs on approach to Drumoak in both directions**
O33	**Extend 30mph speed limit 50m east at the eastern entrance to Drumoak**
O34	**Reduce speed limit on Sunnyside Drive to 20mph**
O35	**Extend 30mph speed limit from Drumoak to Park**
O38	**Implement additional 20mph speed limit signage on the High Street in Banchory**
O39	**Implement temporary 20mph speed limit to support movements to/from the International School on the A93**

O28 – Implement additional flashing speed limit signs along the A93 corridor

The introduction of flashing speed limit signage would help to ensure drivers are aware of the speed limits along the corridor. This will help to encourage drivers to keep to the speed limit enforced and will provide safety benefits along the corridor especially in each of the communities.

In terms of the assessment against Aberdeenshire Council policy, Section 1.2 of the Variable and Vehicle-Activated Signs Manual states that 'the use of these signs is now widespread throughout all areas of Aberdeenshire however there are concerns regarding their use or overuse: they can prove to be expensive to maintain, there is evidence that the effectiveness of some types may reduce with time and there are concerns that they can dilute the impact of other signs'.

In line with Section 7 of the Variable and Vehicle-Activated Signs Manual, a site assessment should be carried out to determine suitable locations where such signs would be effective.

O31 – Reduce the speed limit on Kennerty Road

The speed limit on Kennerty Road varies from Coalford into Peterculter – national speed limit applies where the Deeside Way meets Kennerty Road and then reduces to 30mph and 20mph on approach to Peterculter. The rural nature of Kennerty Road prior to entering Peterculter will influence the effectiveness of reducing the speed limit at this point.

O32 – Increase the number of speed limit signs on approach to Drumoak in both directions

As shown in the figure below signage only exists where there is a change in speed limit as the speed drops from 60mph to 30mph. The minimum visibility of a speed limit sign when changing from 60mph to 30mph is 115m, which would need to be confirmed on site, however, based on street view observations the existing signage meets requirements.

Countdown signs giving advance indication of a change in the speed limit could be used both to the east and west of Drumoak where the speed limit reduces from 60mph. This aligns with Aberdeenshire Council policy. Section 6.4 of the Speed Limits Manual states that 'where an immediate reduction from the national speed limit to a lower speed limit may cause risks with vehicles slowing down too quickly or where additional interventions are required to give advance warning of the reduced speed limit, then countdown markers may be used on the approach to speed limit terminal signs.' Although countdown markers are not prescribed in Chapter 3 of the Traffic Signs Manual, their use is permitted by a blanket authorisation issued in 1995 by the Scottish Office and Transport Scotland have previously used this form of signage in various locations.

Alternative options include introducing speed road markings or 'your speed' cameras to make drivers more aware of their speed and the speed limit. In addition, visual cues such as changes to surfacing or reducing the visual width of the road can help to slow traffic speeds.

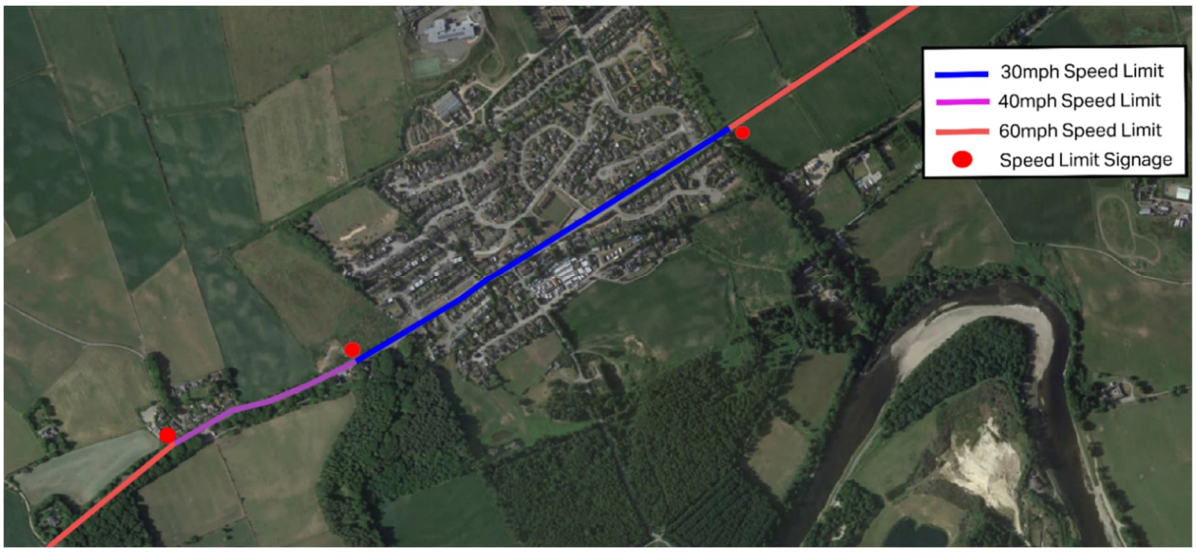


Figure 5.70: Drumoak Speed Limits

Option O32 to be considered in line with O33.

O33 – Extend 30mph speed limit 50m east at the eastern entrance to Drumoak

Extending the 30mph speed limit east of Drumoak will support vehicles reducing their speed to 30mph prior to entering the village.

In terms of the assessment against Aberdeenshire Council policy, Table 6.1 in the Speed Limits Manual outlines that the maximum distance the start of a speed limit should be from the frontage of a property is 60m. Currently, the speed limit is approximately 20m away, meaning that the speed limit can only be extended by 40m to the east.

Option O33 to be considered in line with O21 and O32.

O34 – Reduce speed limit on Sunnyside Drive to 20mph

The current speed limit on Sunnyside Drive in Drumoak is 30mph. Given the residential nature of the area it would be appropriate to reduce the speed limit to 20mph. Traffic calming measures such as speed cushions could also be included to help support this change and reduce speeds of vehicles travelling downhill.

In terms of the assessment against Aberdeenshire Council policy, the Speed Limits Manual includes guidance from the Scottish Government's Designing Streets which states that 'for residential streets, a maximum design speed of 20mph should normally be an objective'.

O35 – Extend 30mph speed limit from Drumoak to Park

The speed limit could be extended from Drumoak into Park to remove the short section of 40mph which is currently in place. Drumoak and Park share similar characteristics in regard to residential frontages. As such, extending the 30mph speed limit would provide some consistency through the two settlements.

In terms of the assessment against Aberdeenshire Council policy, Section 6.3 of the Speed Limits Manual states that when two settlements independently satisfy the village speed limit criteria and the gap between the settlements is less than 600m then the reduced speed limit shall extend over the combined length of the settlements. The assessment has determined that Drumoak and Park both satisfy the village speed limit criteria: the gap between the settlements is approximately 350m and the lower speed limit is 30mph throughout Drumoak. It is therefore considered appropriate for the speed limit throughout Drumoak and Park to be 30mph.

O38 – Implement additional 20mph speed limit signage on the High Street in Banchory

Speed limit signs currently only exist at changes to speed limits and therefore, more regular signage may be of benefit to reinforce the speed limit. Alternatively, traffic calming measures including placemaking interventions could be looked at to improve the environment for people.

In terms of the assessment against Aberdeenshire Council policy, Table 5.1 of the Speed Limits Manual notes repeater signs to be a traffic calming measure.

Option O38 to be considered in line with O23.

O39 – Implement temporary 20mph speed limit to support movements to/from the International School on the A93

There are no specific barriers that would prevent the introduction of a temporary 20mph speed limit being introduced around the International School. Signage would likely take the form of "flashing 20 signs". This would help support non-motorised user movements to and from the International School.

5.4.6 Traffic Calming

This grouping contains the following options:

Table 5.24: Traffic Calming Options

O40	**Implement traffic calming measures along Willowbank Road/Springbank Terrace**
O41	**Implement traffic calming measures on School Road in proximity to Culter School**
O42	**Implement traffic calming measures on Banchory High Street**

Traffic calming measures such as speed bumps, carriageway narrowing, and chicanes can be introduced in a wide variety of locations to help reduce vehicle speeds. These measures can also be considered in combination with placemaking and low traffic neighbourhood interventions.

In terms of the assessment against Aberdeenshire Council policy, Table 5.1 of the Speed Limits Manual outlines the traffic calming features required for 20mph zones.

Option O42 to be considered in line with AT35, AT49, O7, O18, O23 and O27.

5.4.7 Traffic Signals

This grouping contains the following option:

Table 5.25: Traffic Signals Options

O43	**Introduce adaptive timings at traffic signals along the corridor**

The introduction of adaptive traffic signal timings at junctions along the A93 corridor, where it does not exist currently, will help to support the flow of traffic through each junction, which will have a positive impact on journey times. SCOOT was introduced in London to help improve traffic flow and journey times. It responds intelligently and continuously as traffic flows change and fluctuate throughout the day. On average, installing SCOOT at a junction reduces traffic disruption by between 8 and 12 per cent[8].

Option O43 to be considered in line with PT25.

[8] Delivering the future of London's traffic signals - Transport for London (tfl.gov.uk)

6. Option Packaging

Following the option development process, options were grouped into six packages for the purposes of appraisal and consultation as follows:

- Active Travel – Strategic Routes;
- Active Travel – Other Measures;
- Public Transport – Priority;
- Public Transport – Other Measures;
- Neighbourhoods and Placemaking; and
- Other Measures.

The options included within each package are detailed in the following sections.

6.1 Active Travel – Strategic Routes

Table 6.1: Active Travel – Strategic Routes Options

Ref	Description
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park
AT49	Implement cycling infrastructure along the High Street in Banchory

6.2 Active Travel – Other Measures

Table 6.2: Active Travel – Other Measures Options

Ref	Description
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre

Ref	Description
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way
AT18	Improve priority for Deeside Way users across Pittengullies Brae
AT19	Implement an active travel link from Deeside Way to Drum Castle
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way
AT21	Improve access to the Deeside Way in the west of Drumoak
AT23	Implement crossing facilities near Abbotshall Road
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities
AT25	Implement additional formalised crossing facilities in Cults
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae
AT27	Implement improved crossing facilities for Deeside Way users across the B979
AT29	Implement additional zebra crossing points in Peterculter
AT31	Consider locations for additional crossing facilities within Drumoak
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy
AT35	Implement crossing facilities on the western section of Banchory High Street
AT36	Implement additional cycle parking within Cults, particularly near bus stops
AT37	Implement a Park and Pedal facility near the AWPR Junction
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter
AT40	Implement additional cycle parking within Banchory Town Centre
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor

6.3 Public Transport – Priority

Table 6.3: Public Transport – Priority Options

Ref	Description
PT1	Implement an eastbound bus lane along the A93 corridor
PT2	Implement a westbound bus lane along the A93 corridor
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor
O43	Introduce adaptive timings at traffic signals along the corridor

6.4 Public Transport – Other Measures

Table 6.4: Public Transport – Other Measures Options

Ref	Description
PT4	Conduct a route wide review of bus stop provision and infrastructure
PT5	Consider options to improve boarding and alighting times on bus services along the corridor
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses
PT10	Implement ticketing options for multi-modal journeys
PT11	Implement a P&R site in the east of Banchory
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)
PT21	Increase the frequency of bus services on the A93
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory

6.5 Neighbourhoods and Placemaking

Table 6.5: Neighbourhoods and Placemaking Options

Ref	Description
O19	Introduce placemaking and gateway features in Cults
O20	Introduce placemaking and gateway features in Peterculter
O21	Implement gateway signage on approach to Drumoak in both directions
O22	Implement gateway signage on approach to Crathes in both directions
O23	Introduce placemaking and gateway features in Banchory Town Centre
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield
O25	Implement package of measures to support 20-minute neighbourhood in Cults
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter
O27	Implement package of measures to support 20-minute neighbourhood in Banchory
O41	Implement traffic calming measures on School Road in proximity to Culter School
O42	Implement traffic calming measures on Banchory High Street

6.6 Other Measures

Table 6.6: Other Measures Options

Ref	Description
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation
O2	Review the layout of the A93/Anderson Drive Junction
O3	Review the layout of the A93/Pitfodels Station Road Junction
O4	Review the layout of the A93/Abbotshall Road Junction
O5	Review the layout of the A93/Malcolm Road Junction
O6	Review the layout of the A93/Hill of Banchory East Junction
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory
O8	Review pedestrian safety at island crossings along the A93 corridor
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR

Ref	Description
O12	Implement a link road between A93 and Inchgarth Road
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak
O16	Conduct a review of parking in Cults
O17	Conduct a review of parking in Peterculter
O18	Conduct a review of parking in Banchory
O28	Implement additional flashing speed limit signs along the A93 corridor
O31	Reduce the speed limit on Kennerty Road
O32	Increase the number of speed limit signs on approach to Drumoak in both directions
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak
O34	Reduce speed limit on Sunnyside Drive to 20mph
O35	Extend 30mph speed limit from Drumoak to Park
O38	Implement additional 20mph speed limit signage on the High Street in Banchory
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace

7. Summary

This note has presented 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 A93 Multi-Modal Corridor Study.

It has set out the approach to option generation, with 128 options being generated in the long-list across active travel, public transport and other options. It has outlined the approach to option sifting, with options undergoing a high-level assessment against the established TPOs, Deliverability Criteria and the Sustainable Investment Hierarchy. The option sifting process resulted in the removal of 33 options from further consideration.

It has set out dependencies, noting which options cannot be delivered in combination with each other and it has summarised the outcomes from the option development process.

The next stage of the study will involve the appraisal of options to identify those which perform best against the established TPOs, STAG Criteria and Deliverability Criteria.

Appendix A – Low Traffic Neighbourhood Drawings

Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ISO A1 594mm x 841mm

KEY

- CENTRE OF THE LOCAL COMMUNITY
- OPTIMISE ON-STREET PARKING
- EXISTING PEDESTRIAN CROSSING
- PROPOSED PEDESTRIAN CROSSING
- EXISTING ACCESS/ EGRESS IMPROVEMENTS
- TOWN ENTRY POINT IMPROVEMENT/ GATEWAY FEATURE
- PROPOSED PARKING/LOADING RESTRICTIONS FOR REFUSE/DELIVERY VEHICLES

NARROW EXISTING CARRIAGEWAY WIDTH
REDUCE SPEED LIMIT TO 20MPH
INSTALL CYCLE STORAGE
INSTALL SEATING AREAS
RETAIN AS MUCH PARKING SPACES AS POSSIBLE (RELOCATE)
PEDESTRIAN PRIORITY AT SIDE ROAD CROSSINGS

FURTHER CONSIDERATIONS TO CROSSING POINTS AND VEHICLE MOVEMENTS REQUIRED

MANNOFIELD

Scale
0 20 40 80 160m
Original Size (A1) 1:2000 @ A1 1:4000 @ A3

AECOM

PROJECT

A93 STAG STUDY

CLIENT

ABERDEEN CITY COUNCIL

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www.aecom.com

NOTES

1. LAYOUTS PROVIDED ARE SOLELY FOR REPRESENTATIONAL PURPOSES AND DO NOT FORM PART OF A DESIGN PROPOSAL.

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

6066691

SHEET TITLE

A93 MANNOFIELD LOW TRAFFIC NEIGHBOURHOOD OVERVIEW SHEET 1 OF 1

SHEET NUMBER

6066691-SHT-LTN-OVERVIEW-001

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Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ISO A1 594mm x 841mm

KEY

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- OPTIMISE ON-STREET PARKING
- EXISTING PEDESTRIAN CROSSING
- PROPOSED PEDESTRIAN CROSSING
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- TOWN ENTRY POINT IMPROVEMENT/ GATEWAY FEATURE
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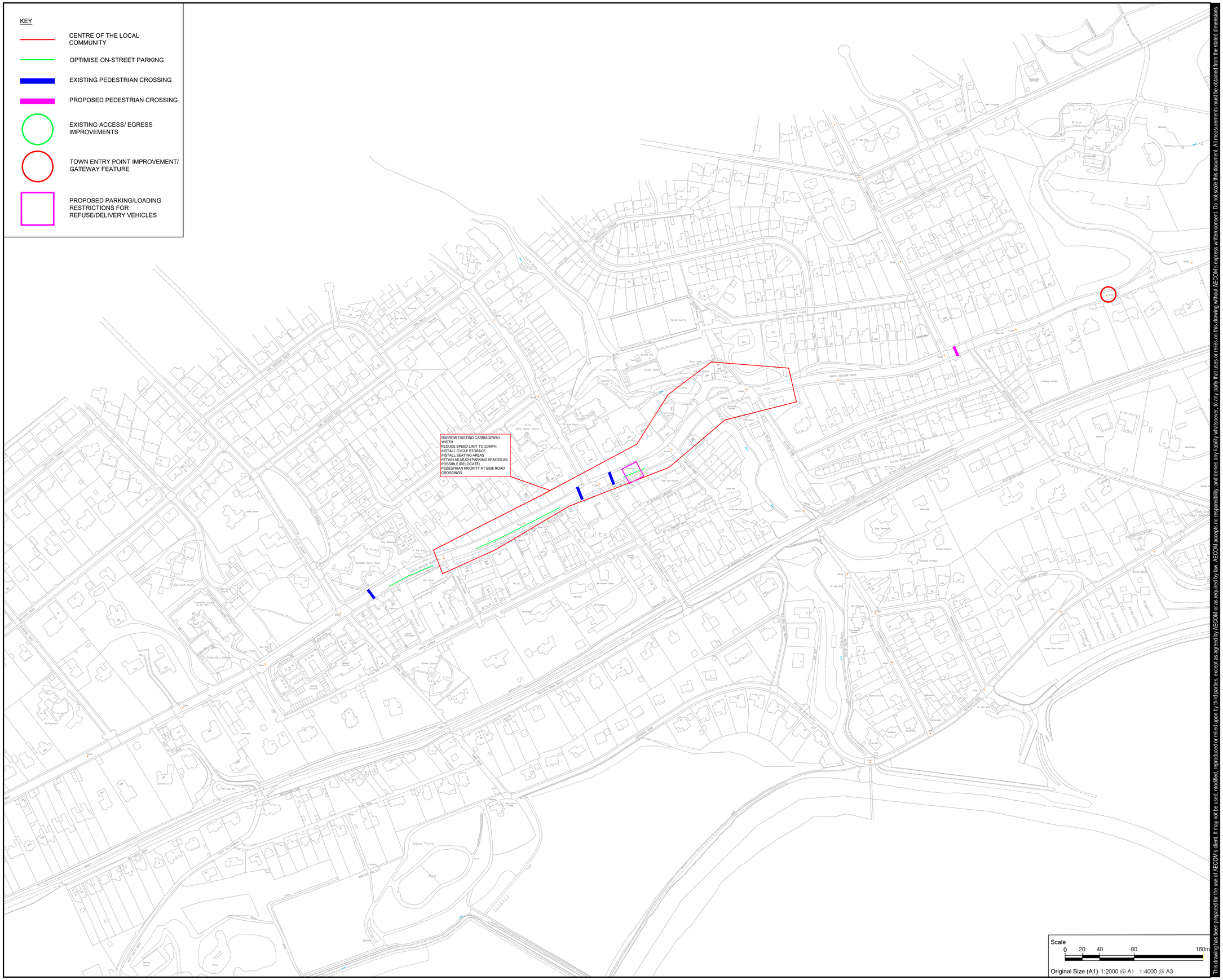

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ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

6066691

SHEET TITLE

A93 CULTS LOW TRAFFIC NEIGHBOURHOOD OVERVIEW
SHEET 1 OF 1

SHEET NUMBER

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Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ISO A1 594mm x 841mm

KEY

- CENTRE OF THE LOCAL COMMUNITY
- OPTIMISE ON-STREET PARKING
- EXISTING PEDESTRIAN CROSSING
- PROPOSED PEDESTRIAN CROSSING
- EXISTING ACCESS/ EGRESS IMPROVEMENTS
- TOWN ENTRY POINT IMPROVEMENT/ GATEWAY FEATURE
- PROPOSED PARKING/LOADING RESTRICTIONS FOR REFUSE/DELIVERY VEHICLES

REDUCE SPEED LIMIT TO 20MPH
NARROW CARRIAGEWAY AND WIDEN WESTERN FOOTWAY BY 0.3M

INSTALL A GATEWAY FEATURE

REPLACE EXISTING WHITE HATCHING WITH A PHYSICAL ISLAND WITH CYCLIST BYPASS TO THE BACK

EXISTING CORNER RADIUS DOES NOT ALLOW FOR HGV/LONG VEHICLES MANOEUVRES TO/FROM A93 WEST

PROVIDE PEDESTRIAN CROSSING IN VICINITY (TBC) OR REMOVE EXISTING 'PEDESTRIAN CROSSING' SIGN

NARROW EXISTING CARRIAGEWAY WIDTH
REDUCE SPEED LIMIT TO 20MPH
INSTALL CYCLE STORAGE
INSTALL SEATING AREAS
RETAIN AS MUCH PARKING SPACES AS POSSIBLE (RELOCATE)
PEDESTRIAN PRIORITY AT SIDE ROAD CROSSINGS

REPLACE EXISTING WHITE HATCHING WITH A PHYSICAL ISLAND. POTENTIAL LOCATION FOR A NEW PEDESTRIAN CROSSING

Scale
0 20 40 80 160m
Original Size (A1) 1:2000 @ A1 1:4000 @ A3

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PROJECT

A93 STAG STUDY

CLIENT

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I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

6066691

SHEET TITLE

A93 PETERCULTER LOW TRAFFIC NEIGHBOURHOOD OVERVIEW SHEET 1 OF 1

SHEET NUMBER

6066691-SHT-LTN-OVERVIEW-003

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Last saved by: JAKE.CHALMERS Last Plotted: 2022-05-31

Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ISO A1 594mm x 841mm

KEY

- CENTRE OF THE LOCAL COMMUNITY
- OPTIMISE ON-STREET PARKING
- EXISTING PEDESTRIAN CROSSING
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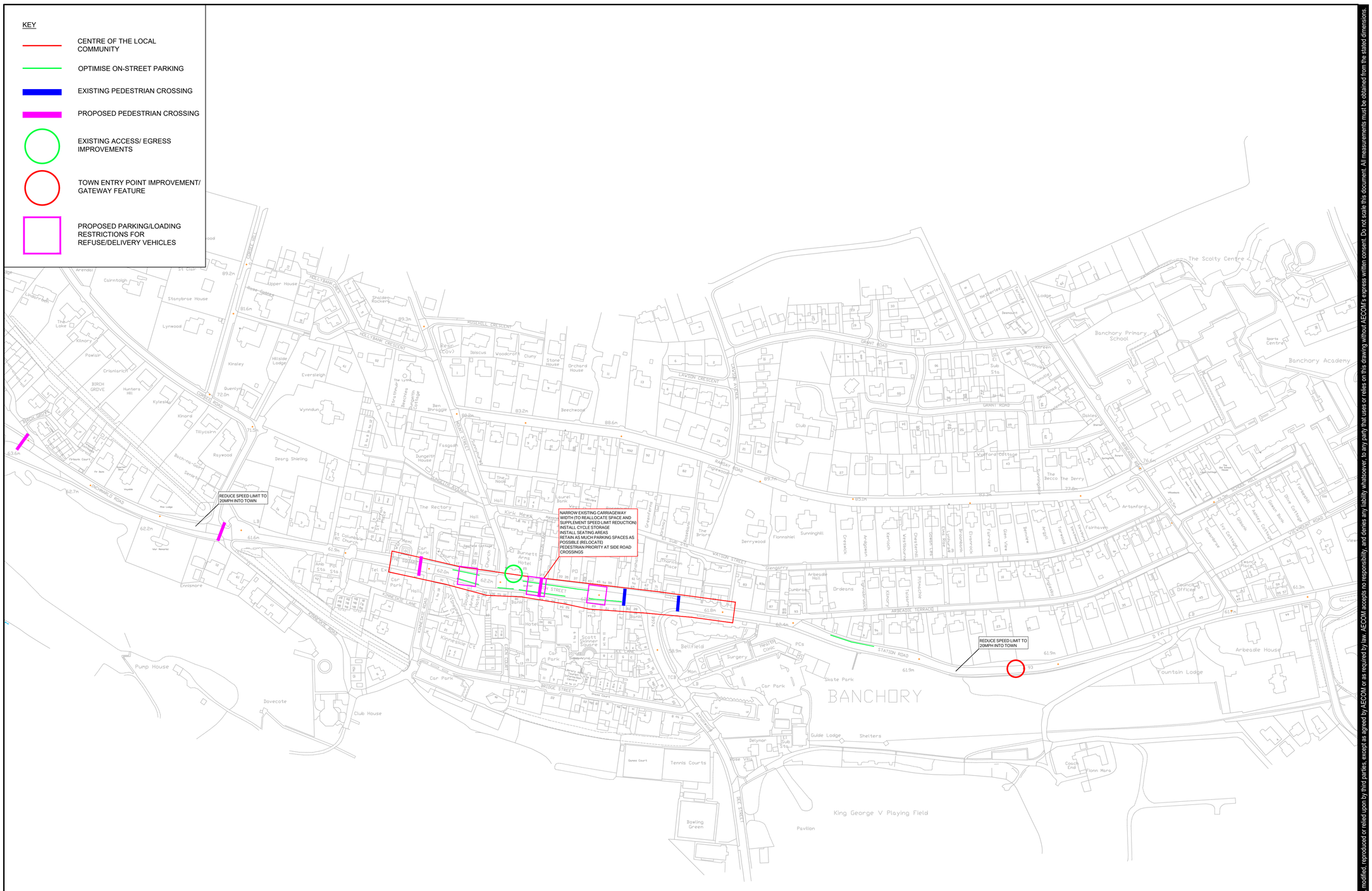

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Last saved by: JAKE.CHALMERS Last Plotted: 2022-05-31

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PROJECT

A93 STAG STUDY

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ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

Scale
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Original Size (A1) 1:2000 @ A1 1:4000 @ A3

PROJECT NUMBER

6066691

SHEET TITLE

A93 BANCHORY LOW TRAFFIC NEIGHBOURHOOD OVERVIEW
SHEET 1 OF 1

SHEET NUMBER

6066691-SHT-LTN-OVERVIEW-004

Appendix B – Option Package Drawings

Active Travel - Strategic Routes

Ref	Other Options
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor

AT2: Create a protected junction at Great Western Road/Holburn Street junction for cyclists.

AT41: Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City.

AT47: Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle.

AT3: Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction.

AT4: Implement segregated cycle provision through the A93/Anderson Drive Junction.

AT43: Increase pavement width on the south side of the A93 in proximity to Anderson Drive.

AT6: Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling.

AT45: Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north.

AT44: Implement a shared footway on the A93 corridor between Peterculter and Banchory.

AT48: Implement cycle lanes on either side of the carriageway through Drumoak and Park.

AT49: Implement cycling infrastructure along the High Street in Banchory.

0 2.5 5 km

N

Key

- Neighbourhood Centres
- 20-minute neighbourhood
- 20-minute walk from neighbourhood centre

Active Travel - Other Measures

Ref	Other Options
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility
AT25	Implement additional formalised crossing facilities in Cults
AT29	Implement additional zebra crossing points in Peterculter
AT31	Consider locations for additional crossing facilities within Drumoak
AT36	Implement additional cycle parking within Cults, particularly near bus stops
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter
AT40	Implement additional cycle parking within Banchory Town Centre
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor

AT9: Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street.

AT11: Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way.

AT24: Upgrade informal crossing point east of Kirk Brae to formal crossing facilities.

AT26: Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae.

AT37: Implement a Park and Pedal facility near the AWPR Junction.

Implement contraflow cycle lanes on Dee Street, Ferryhill Place, Ferryhill Terrace, Fonthill Terrace and Prospect Terrace to facilitate connection between the Deeside Way and the city centre.

AT23: Implement crossing facilities near Abbotshall Road.

AT19: Implement an active travel link from Deeside Way to Drum Castle.

AT32: Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle.

AT27: Implement improved crossing facilities for Deeside Way users across the B979.

AT21: Improve access to the Deeside Way in the west of Drumoak.

AT18: Improve priority for Deeside Way users across Pittengullies Brae.

AT20: Implement enhanced path connections between Newmill Hill Forest and the Deeside Way.

AT38: Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location.

AT35: Implement crossing facilities on the western section of Banchory High Street.

AT57: Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes.

AT17: Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way.

AT56: Develop a greater network of active travel connections from Park Bridge to the south of the river.

AT34: Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy.

AT33: Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods.

AT58: Implement a contraflow cycle lane on Bridge Street in Banchory.

0 2.5 5 km

N

Key

- Neighbourhood Centres
- 20-minute neighbourhood
- 20-minute walk from neighbourhood centre

Public Transport - Priority

Ref	Other Options
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor
O43	Introduce adaptive timings at traffic signals along the A93 corridor

PT1: Implement an eastbound bus lane along the A93 corridor.

PT2: Implement a westbound bus lane along the A93 corridor.

PT26: Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93.

It should be noted that PT1 and PT2 cannot be implemented in combination with each other.

0 2.5 5 km

N

Key

- Neighbourhood Centres
- 20-minute neighbourhood
- 20-minute walk from neighbourhood centre

Neighbourhoods and Placemaking

O24: Implement package of measures to support 20-minute neighbourhood in Mannofield.

O19: Introduce placemaking and gateway features in Cults.

O41: Implement traffic calming measures on School Road in proximity to Culter School.

O26: Implement package of measures to support 20-minute neighbourhood in Peterculter.

O25: Implement package of measures to support 20-minute neighbourhood in Cults.

O20: Introduce placemaking and gateway features in Peterculter.

O21: Implement gateway signage on approach to Drumoak in both directions.

O42: Implement traffic calming measures on Banchory High Street.

O23: Introduce placemaking and gateway features in Banchory Town Centre.

O22: Implement gateway signage on approach to Crathes in both directions.

O27: Implement package of measures to support 20-minute neighbourhood in Banchory.

0 2.5 5 km

N

Key

- Neighbourhood Centres
- 20-minute neighbourhood
- 20-minute walk from neighbourhood centre

Other Measures

Ref	Other Options
O8	Review pedestrian safety at island crossings along the A93 corridor
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR
O16	Conduct a review of parking in Cults
O17	Conduct a review of parking in Peterculter
O18	Conduct a review of parking in Banchory
O28	Implement additional flashing speed limit signs along the A93 corridor
O38	Implement additional 20mph speed limit signage on the High Street in Banchory

O1: Review the layout of the Great Western Road/Holburn Street junction, including consideration of signal timings and lane allocation.

O40: Implement traffic calming measures along Willowbank Road/Springbank Terrace.

O2: Review the layout of the A93/Anderson Drive Junction.

O4: Review the layout of the A93/Abbotshall Road Junction.

O39: Implement temporary 20mph speed limit to support movements to/from the International School on the A93.

O12: Implement a link road between A93 and Inchgarth Road.

O3: Review the layout of the A93/Pitfodels Station Road Junction.

O34: Reduce speed limit on Sunnyside Drive to 20mph.

O32: Increase the number of speed limit signs on approach to Drumoak in both directions.

O5: Review the layout of the A93/Malcolm Road Junction.

O31: Reduce the speed limit on Kennerty Road.

O6: Review the layout of the A93/Hill of Banchory East Junction.

O35: Extend 30mph speed limit from Drumoak to Park.

O14: Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak.

O32: Increase the number of speed limit signs on approach to Drumoak in both directions.

O33: Extend 30mph speed limit 50m east at the eastern entrance to Drumoak.

O7: Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory.

0 2.5 5 km

N

Key

- Neighbourhood Centres
- 20-minute neighbourhood
- 20-minute walk from neighbourhood centre

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Appendix D – Individual Option Appraisal

Option		TPOs				
Option Ref	Option Title	TPO1 - Increase the modal share of active travel on the A93 road corridor for all journey types	TPO2 - Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	TPO3 - Increase the modal share of public transport on the A93 road corridor for all journey types	TPO4 - Support sustainable communities along the A93 corridor	TPO5 - Support the role of the A93 corridor as the gateway to Royal Deeside
Active Travel – Strategic Routes						
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	+1	0	0	0	0
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	+1	0	0	0	0
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	+1	0	0	0	0
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	+1	0	0	0	0
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	+1	+1	0	+1	+1
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	+3	0	0	+2	+1
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	0	0	0	0
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	+2	0	0	+1	+1
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	+1	+1	0	0	0
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	+1	0	0	+1	0
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0	0	0	0
AT49	Implement cycling infrastructure along the High Street in Banchory	+2	0	0	+2	0
Active Travel – Other Measures						
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	+1	+1	0	+1	+2
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	+1	0	0	+1	+1
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	+1	+1	0	0	0
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	+1	+1	0	0	0
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	+1	+1	0	0	0
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	+1	+1	0	0	0
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	+1	+1	0	0	0
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	+1	+1	0	0	0
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	+1	+1	0	0	0
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	+1	+2	0	+1	+1
AT18	Improve priority for Deeside Way users across Pittengullies Brae	+1	0	0	0	+1
AT19	Implement an active travel link from Deeside Way to Drum Castle	+1	+1	0	0	+1
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	+1	+1	0	0	0
AT21	Improve access to the Deeside Way in the west of Drumoak	+1	0	0	0	+1
AT23	Implement crossing facilities near Abbotshall Road	+1	0	0	+1	0
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	+1	0	0	+1	0
AT25	Implement additional formalised crossing facilities in Cults	+1	0	0	+1	0
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	+1	+1	0	0	+1
AT27	Implement improved crossing facilities for Deeside Way users across the B979	+1	0	0	0	+1
AT29	Implement additional zebra crossing points in Peterculter	+1	0	0	+1	0
AT31	Consider locations for additional crossing facilities within Drumoak	+1	0	0	+1	0
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	+1	0	0	0	+1
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	+1	0	0	0	0
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	+1	0	0	+1	0
AT35	Implement crossing facilities on the western section of Banchory High Street	+1	0	0	+1	0
AT36	Implement additional cycle parking within Cults, particularly near bus stops	+1	+1	+1	+1	+1
AT37	Implement a Park and Pedal facility near the AWPR Junction	+2	+2	0	+1	+1
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	+2	+2	0	+1	+1
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	+1	+1	+1	+1	+1
AT40	Implement additional cycle parking within Banchory Town Centre	+1	+1	+1	+1	+1
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	+2	+1	0	+2	0
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	+1	+2	0	+1	0
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	+1	+1	0	0	0
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	+1	0	0	0	0

Option		TPOs				
Option Ref	Option Title	TPO1 - Increase the modal share of active travel on the A93 road corridor for all journey types	TPO2 - Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities	TPO3 - Increase the modal share of public transport on the A93 road corridor for all journey types	TPO4 - Support sustainable communities along the A93 corridor	TPO5 - Support the role of the A93 corridor as the gateway to Royal Deeside
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	+1	+2	0	0	0
Public Transport – Priority						
PT1	Implement an eastbound bus lane along the A93 corridor	-1	0	+3	+1	0
PT2	Implement a westbound bus lane along the A93 corridor	-1	0	+3	+1	+1
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	0	0	+1	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	0	0	+1	0	0
O43	Introduce adaptive timings at traffic signals along the corridor	0	0	+1	0	0
Public Transport – Other Measures						
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	+1	+1	+1	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	0	0	+1	0	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	+1	+1	+1	0	+1
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	+1	+1	+1	0	+1
PT10	Implement ticketing options for multi-modal journeys	+1	0	+1	+1	+1
PT11	Implement a P&R site in the east of Banchory	0	+3	+1	+1	0
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	0	+2	+1	0	0
PT21	Increase the frequency of bus services on the A93	0	+1	+2	+1	+1
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	0	0	0	0	0
Neighbourhoods and Placemaking						
O19	Introduce placemaking and gateway features in Cults	+1	0	0	+2	0
O20	Introduce placemaking and gateway features in Peterculter	+1	0	0	+2	0
O21	Implement gateway signage on approach to Drumoak in both directions	0	0	0	0	0
O22	Implement gateway signage on approach to Crathes in both directions	0	0	0	0	0
O23	Introduce placemaking and gateway features in Banchory Town Centre	+1	0	0	+2	0
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	+1	+1	0	+3	0
O25	Implement package of measures to support 20-minute neighbourhood in Cults	+1	+1	0	+3	0
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	+1	+1	0	+3	0
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	+1	+1	0	+3	0
O41	Implement traffic calming measures on School Road in proximity to Culter School	+1	0	0	+1	0
O42	Implement traffic calming measures on Banchory High Street	+1	0	0	0	0
Other Measures						
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	0	0	0	0	0
O2	Review the layout of the A93/Anderson Drive Junction	0	0	0	0	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	0	0	0	0	0
O4	Review the layout of the A93/Abbotshall Road Junction	0	0	0	0	0
O5	Review the layout of the A93/Malcolm Road Junction	0	0	0	0	0
O6	Review the layout of the A93/Hill of Banchory East Junction	0	0	0	0	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	0	0	0	0	0
O8	Review pedestrian safety at island crossings along the A93 corridor	+1	0	0	+1	0
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	0	0	0	+2
O12	Implement a link road between A93 and Inchgarth Road	+1	0	0	0	0
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0	0	0	0
O16	Conduct a review of parking in Cults	0	0	0	+1	0
O17	Conduct a review of parking in Peterculter	0	0	0	+1	0
O18	Conduct a review of parking in Banchory	0	0	0	+1	0
O28	Implement additional flashing speed limit signs along the A93 corridor	0	0	0	0	0
O31	Reduce the speed limit on Kennerty Road	0	0	0	0	0
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	0	0	0	0	0
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	0	0	0	0	0

Option		TPOs				
Option Ref	**Option Title**	**TPO1 - Increase the modal share of active travel on the A93 road corridor for all journey types**	**TPO2 - Improve accessibility to active travel and public transport infrastructure on the A93 corridor from nearby communities**	**TPO3 - Increase the modal share of public transport on the A93 road corridor for all journey types**	**TPO4 - Support sustainable communities along the A93 corridor**	**TPO5 - Support the role of the A93 corridor as the gateway to Royal Deeside**
O34	Reduce speed limit on Sunnyside Drive to 20mph	0	0	0	0	0
O35	Extend 30mph speed limit from Drumoak to Park	0	0	0	0	0
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0	0	0	0
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	0	0	0	0	0
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	0	0	0	0	0

Option		Environment							
Option Ref	Option Title	Biodiversity and Habitats	Geology and Soils	Land Use (including Agriculture and Forestry)	Water, Drainage and Flooding	Air Quality	Historic Environment	Landscape	Noise and Vibration
Active Travel – Strategic Routes									
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	0	0	0	0	0	0	0	0
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	0	0	0	0	0	0	0	0
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	0	0	0	0	0	0	0	0
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	0	0	0	0	0	0	0	0
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	0	0	0	0	0	0	0	0
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	0	0	0	0	0	0	0	0
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	0	0	0	0	0	0	0
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	-1	-1	0	-1	0	0	-1	0
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	-1	-1	0	-1	0	0	-1	0
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	-1	-1	0	-1	0	0	-1	0
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0	0	0	0	0	0	0
AT49	Implement cycling infrastructure along the High Street in Banchory	0	0	0	0	0	0	0	0
Active Travel – Other Measures									
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	0	0	0	0	0	0	0	0
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	0	0	0	0	0	0	0	0
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	0	0	0	0	0	0	0	0
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	0	0	0	0	0	0	0	0
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	0	0	0	0	0	0	0	0
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	0	0	0	0	0	0	0	0
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0	0	0	0	0	0
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0	0	0	0	0	0
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0	0	0	0	0	0
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	-1	-1	0	-1	0	0	-1	0
AT18	Improve priority for Deeside Way users across Pittengullies Brae	-1	-1	0	-1	0	0	0	0
AT19	Implement an active travel link from Deeside Way to Drum Castle	0	0	0	0	0	0	0	0
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	-1	-1	0	-1	0	0	-1	0
AT21	Improve access to the Deeside Way in the west of Drumoak	0	0	0	0	0	0	0	0
AT23	Implement crossing facilities near Abbotshall Road	0	0	0	0	0	0	0	0
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	0	0	0	0	0	0	0	0
AT25	Implement additional formalised crossing facilities in Cults	0	0	0	0	0	0	0	0
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	0	0	0	0	0	0	0	0
AT27	Implement improved crossing facilities for Deeside Way users across the B979	0	0	0	0	0	0	0	0
AT29	Implement additional zebra crossing points in Peterculter	0	0	0	0	0	0	0	0
AT31	Consider locations for additional crossing facilities within Drumoak	0	0	0	0	0	0	0	0
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	0	0	0	0	0	0	0	0
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	0	0	0	0	0	0	0	0
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	0	0	0	0	0	0	0	0
AT35	Implement crossing facilities on the western section of Banchory High Street	0	0	0	0	0	0	0	0
AT36	Implement additional cycle parking within Cults, particularly near bus stops	0	0	0	0	0	0	0	0
AT37	Implement a Park and Pedal facility near the AWPR Junction	-1	-1	-1	-1	0	0	-1	0
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	0	0	0	0	0	0	0	0
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	0	0	0	0	0	0	0	0
AT40	Implement additional cycle parking within Banchory Town Centre	0	0	0	0	0	0	0	0
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	0	0	0	0	0	0	0	0
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	-1	-1	0	-1	0	0	-1	0
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	0	0	0	0	0	0	0	0
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	0	0	0	0	0	0	0	0

Option		Environment							
Option Ref	Option Title	Biodiversity and Habitats	Geology and Soils	Land Use (including Agriculture and Forestry)	Water, Drainage and Flooding	Air Quality	Historic Environment	Landscape	Noise and Vibration
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	-1	-1	0	-1	0	0	-1	0
Public Transport – Priority									
PT1	Implement an eastbound bus lane along the A93 corridor	0	0	0	0	0	0	0	0
PT2	Implement a westbound bus lane along the A93 corridor	0	0	0	0	0	0	0	0
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	0	0	0	0	0	0	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	0	0	0	0	0	0	0	0
O43	Introduce adaptive timings at traffic signals along the corridor	0	0	0	0	0	0	0	0
Public Transport – Other Measures									
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	0	0	0	0	0	0	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	0	0	0	0	0	0	0	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	0	0	0	0	0	0	0	0
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	0	0	0	0	0	0	0	0
PT10	Implement ticketing options for multi-modal journeys	0	0	0	0	0	0	0	0
PT11	Implement a P&R site in the east of Banchory	-1	-1	-1	-1	0	0	-1	-1
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	0	0	0	0	0	0	0	0
PT21	Increase the frequency of bus services on the A93	0	0	0	0	0	0	0	0
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	0	0	0	0	0	0	0	0
Neighbourhoods and Placemaking									
O19	Introduce placemaking and gateway features in Cults	0	0	0	0	0	0	0	0
O20	Introduce placemaking and gateway features in Peterculter	0	0	0	0	0	0	0	0
O21	Implement gateway signage on approach to Drumoak in both directions	0	0	0	0	0	0	0	0
O22	Implement gateway signage on approach to Crathes in both directions	0	0	0	0	0	0	0	0
O23	Introduce placemaking and gateway features in Banchory Town Centre	0	0	0	0	0	0	0	0
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	0	0	0	0	0	0	0	0
O25	Implement package of measures to support 20-minute neighbourhood in Cults	0	0	0	0	0	0	0	0
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	0	0	0	0	0	0	0	0
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	0	0	0	0	0	0	0	0
O41	Implement traffic calming measures on School Road in proximity to Culter School	0	0	0	0	0	0	0	0
O42	Implement traffic calming measures on Banchory High Street	0	0	0	0	0	0	0	0
Other Measures									
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	0	0	0	0	0	0	0	0
O2	Review the layout of the A93/Anderson Drive Junction	0	0	0	0	0	0	0	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	0	0	0	0	0	0	0	0
O4	Review the layout of the A93/Abbotshall Road Junction	0	0	0	0	0	0	0	0
O5	Review the layout of the A93/Malcolm Road Junction	0	0	0	0	0	0	0	0
O6	Review the layout of the A93/Hill of Banchory East Junction	0	0	0	0	0	0	0	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	0	0	0	0	0	0	0	0
O8	Review pedestrian safety at island crossings along the A93 corridor	0	0	0	0	0	0	0	0
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	0	0	0	0	0	0	0
O12	Implement a link road between A93 and Inchgarth Road	-2	-2	0	-2	-1	0	-2	-1
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0	0	0	0	0	0	0
O16	Conduct a review of parking in Cults	0	0	0	0	0	0	0	0
O17	Conduct a review of parking in Peterculter	0	0	0	0	0	0	0	0
O18	Conduct a review of parking in Banchory	0	0	0	0	0	0	0	0
O28	Implement additional flashing speed limit signs along the A93 corridor	0	0	0	0	0	0	0	0
O31	Reduce the speed limit on Kennerty Road	0	0	0	0	0	0	0	0
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	0	0	0	0	0	0	0	0
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	0	0	0	0	0	0	0	0

Option		Environment							
Option Ref	Option Title	Biodiversity and Habitats	Geology and Soils	Land Use (including Agriculture and Forestry)	Water, Drainage and Flooding	Air Quality	Historic Environment	Landscape	Noise and Vibration
O34	Reduce speed limit on Sunnyside Drive to 20mph	0	0	0	0	0	0	0	0
O35	Extend 30mph speed limit from Drumoak to Park	0	0	0	0	0	0	0	0
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0	0	0	0	0	0	0
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	0	0	0	0	0	0	0	0
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	0	0	0	0	0	0	0	0

Option		Climate Change		
Option Ref	Option Title	Greenhouse Gas Emissions	Vulnerability to the Effects of Climate Change	Potential to Adapt to the Effects of Climate Change
Active Travel – Strategic Routes				
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	0	0	0
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	0	0	0
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	0	0	0
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	0	0	0
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	0	0	0
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	+1	0	0
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	0	0
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	+1	0	0
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	0	0	0
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	0	0	0
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0	0
AT49	Implement cycling infrastructure along the High Street in Banchory	0	0	0
Active Travel – Other Measures				
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	0	0	0
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	0	0	0
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	0	0	0
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	0	0	0
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	0	0	0
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	0	0	0
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	0	0	0
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	0	-1	0
AT18	Improve priority for Deeside Way users across Pittengullies Brae	0	0	0
AT19	Implement an active travel link from Deeside Way to Drum Castle	0	0	0
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	0	-1	0
AT21	Improve access to the Deeside Way in the west of Drumoak	0	0	0
AT23	Implement crossing facilities near Abbotshall Road	0	0	0
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	0	0	0
AT25	Implement additional formalised crossing facilities in Cults	0	0	0
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	0	0	0
AT27	Implement improved crossing facilities for Deeside Way users across the B979	0	0	0
AT29	Implement additional zebra crossing points in Peterculter	0	0	0
AT31	Consider locations for additional crossing facilities within Drumoak	0	0	0
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	0	0	0
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	0	0	0
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	0	0	0
AT35	Implement crossing facilities on the western section of Banchory High Street	0	0	0
AT36	Implement additional cycle parking within Cults, particularly near bus stops	0	0	0
AT37	Implement a Park and Pedal facility near the AWPR Junction	0	0	0
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	0	0	0
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	0	0	0
AT40	Implement additional cycle parking within Banchory Town Centre	0	0	0
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	0	0	0
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	0	-1	0
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	0	0	0

Option		Climate Change		
Option Ref	Option Title	Greenhouse Gas Emissions	Vulnerability to the Effects of Climate Change	Potential to Adapt to the Effects of Climate Change
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	0	0	0
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	0	0	0
Public Transport – Priority				
PT1	Implement an eastbound bus lane along the A93 corridor	+1	0	0
PT2	Implement a westbound bus lane along the A93 corridor	+1	0	0
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	0	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	0	0	0
O43	Introduce adaptive timings at traffic signals along the corridor	0	0	0
Public Transport – Other Measures				
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	0	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	0	0	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	0	0	0
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	0	0	0
PT10	Implement ticketing options for multi-modal journeys	0	0	0
PT11	Implement a P&R site in the east of Banchory	0	0	0
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	0	0	0
PT21	Increase the frequency of bus services on the A93	0	0	0
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	0	0	0
Neighbourhoods and Placemaking				
O19	Introduce placemaking and gateway features in Cults	+1	0	0
O20	Introduce placemaking and gateway features in Peterculter	+1	0	0
O21	Implement gateway signage on approach to Drumoak in both directions	0	0	0
O22	Implement gateway signage on approach to Crathes in both directions	0	0	0
O23	Introduce placemaking and gateway features in Banchory Town Centre	+1	0	0
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	+1	0	0
O25	Implement package of measures to support 20-minute neighbourhood in Cults	+1	0	0
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	+1	0	0
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	+1	0	0
O41	Implement traffic calming measures on School Road in proximity to Culter School	0	0	0
O42	Implement traffic calming measures on Banchory High Street	0	0	0
Other Measures				
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	0	0	0
O2	Review the layout of the A93/Anderson Drive Junction	0	0	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	0	0	0
O4	Review the layout of the A93/Abbotshall Road Junction	0	0	0
O5	Review the layout of the A93/Malcolm Road Junction	0	0	0
O6	Review the layout of the A93/Hill of Banchory East Junction	0	0	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	0	0	0
O8	Review pedestrian safety at island crossings along the A93 corridor	0	0	0
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	0	0
O12	Implement a link road between A93 and Inchgarth Road	-1	0	0
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0	0
O16	Conduct a review of parking in Cults	0	0	0
O17	Conduct a review of parking in Peterculter	0	0	0
O18	Conduct a review of parking in Banchory	0	0	0
O28	Implement additional flashing speed limit signs along the A93 corridor	0	0	0
O31	Reduce the speed limit on Kennerty Road	0	0	0

Option		Climate Change		
Option Ref	**Option Title**	**Greenhouse Gas Emissions**	**Vulnerability to the Effects of Climate Change**	**Potential to Adapt to the Effects of Climate Change**
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	0	0	0
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	0	0	0
O34	Reduce speed limit on Sunnyside Drive to 20mph	0	0	0
O35	Extend 30mph speed limit from Drumoak to Park	0	0	0
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0	0
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	0	0	0
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	0	0	0

Option		Health, Safety and Wellbeing				
Option Ref	Option Title	Accidents	Security	Health Outcomes	Access to Health and Wellbeing Infrastructure	Visual Amenity
Active Travel – Strategic Routes						
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	+2	0	+1	0	0
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	+2	0	+1	0	0
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	+1	0	0	0	0
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	+2	0	+1	0	0
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	+2	0	+1	0	0
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	+2	0	+3	+1	0
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	0	0	0	0
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	+2	0	+1	+1	0
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	+2	0	+1	0	0
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	+1	0	+1	0	0
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0	0	0	0
AT49	Implement cycling infrastructure along the High Street in Banchory	+2	0	+1	+1	0
Active Travel – Other Measures						
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	0	0	0	0	0
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	0	0	+1	+1	0
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	0	0	+1	+1	0
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	0	0	+1	+1	0
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	0	0	+1	+1	0
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	0	0	+1	+1	0
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	+1	+1	0
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	0	0	+1	+1	0
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	0	0	+1	+1	0
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	0	0	+1	0	0
AT18	Improve priority for Deeside Way users across Pittengullies Brae	0	0	+1	0	0
AT19	Implement an active travel link from Deeside Way to Drum Castle	0	0	+1	0	0
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	0	0	+1	0	0
AT21	Improve access to the Deeside Way in the west of Drumoak	0	0	+1	0	0
AT23	Implement crossing facilities near Abbotshall Road	+1	0	+1	+1	0
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	0	0	+1	0	0
AT25	Implement additional formalised crossing facilities in Cults	+1	0	+1	+1	0
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	+1	0	+1	0	0
AT27	Implement improved crossing facilities for Deeside Way users across the B979	+1	0	+1	0	0
AT29	Implement additional zebra crossing points in Peterculter	+1	0	+1	+1	0
AT31	Consider locations for additional crossing facilities within Drumoak	+1	0	+1	+1	0
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	+1	0	+1	0	0
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	+1	0	+1	0	0
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	+1	0	+1	+1	0
AT35	Implement crossing facilities on the western section of Banchory High Street	+1	0	+1	+1	0
AT36	Implement additional cycle parking within Cults, particularly near bus stops	0	0	+2	+1	0
AT37	Implement a Park and Pedal facility near the AWPR Junction	0	0	+2	0	-1
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	0	0	+2	0	0
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	0	0	+2	+1	0
AT40	Implement additional cycle parking within Banchory Town Centre	0	0	+2	+1	0
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	+1	0	+2	+1	0
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	0	0	+1	0	0
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	0	0	+1	0	0

Option		Health, Safety and Wellbeing				
Option Ref	Option Title	Accidents	Security	Health Outcomes	Access to Health and Wellbeing Infrastructure	Visual Amenity
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	0	0	+1	+1	0
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	0	0	+1	0	0
Public Transport – Priority						
PT1	Implement an eastbound bus lane along the A93 corridor	0	0	-1	0	0
PT2	Implement a westbound bus lane along the A93 corridor	0	0	-1	0	0
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	0	0	0	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	0	0	0	0	0
O43	Introduce adaptive timings at traffic signals along the corridor	0	0	0	0	0
Public Transport – Other Measures						
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	0	0	0	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	0	0	0	0	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	0	0	+1	0	0
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	0	0	+1	0	0
PT10	Implement ticketing options for multi-modal journeys	0	0	+1	0	0
PT11	Implement a P&R site in the east of Banchory	0	0	0	0	-1
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	0	0	0	0	0
PT21	Increase the frequency of bus services on the A93	0	0	0	0	0
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	0	0	0	0	0
Neighbourhoods and Placemaking						
O19	Introduce placemaking and gateway features in Cults	+2	0	+2	+1	+2
O20	Introduce placemaking and gateway features in Peterculter	+2	0	+2	+1	+2
O21	Implement gateway signage on approach to Drumoak in both directions	+1	0	0	0	0
O22	Implement gateway signage on approach to Crathes in both directions	+1	0	0	0	0
O23	Introduce placemaking and gateway features in Banchory Town Centre	+2	0	+2	+1	+2
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	+2	0	+2	+2	+1
O25	Implement package of measures to support 20-minute neighbourhood in Cults	+2	0	+2	+2	+1
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	+2	0	+2	+2	+1
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	+2	0	+2	+2	+1
O41	Implement traffic calming measures on School Road in proximity to Culter School	+1	0	0	0	0
O42	Implement traffic calming measures on Banchory High Street	+1	0	0	0	0
Other Measures						
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	+1	0	0	+1	0
O2	Review the layout of the A93/Anderson Drive Junction	+1	0	0	+1	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	+1	0	0	+1	0
O4	Review the layout of the A93/Abbotshall Road Junction	+1	0	0	+1	0
O5	Review the layout of the A93/Malcolm Road Junction	+1	0	0	+1	0
O6	Review the layout of the A93/Hill of Banchory East Junction	+1	0	0	+1	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	+1	0	0	+1	0
O8	Review pedestrian safety at island crossings along the A93 corridor	+1	0	0	+1	0
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	0	0	0	0
O12	Implement a link road between A93 and Inchgarth Road	0	0	0	0	-1
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0	0	0	0
O16	Conduct a review of parking in Cults	0	0	0	0	0
O17	Conduct a review of parking in Peterculter	0	0	0	0	0
O18	Conduct a review of parking in Banchory	0	0	0	0	0
O28	Implement additional flashing speed limit signs along the A93 corridor	+1	0	0	0	0
O31	Reduce the speed limit on Kennerty Road	+1	0	+1	0	0

Option		Health, Safety and Wellbeing				
Option Ref	**Option Title**	**Accidents**	**Security**	**Health Outcomes**	**Access to Health and Wellbeing Infrastructure**	**Visual Amenity**
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	+1	0	0	0	0
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	+1	0	+1	0	0
O34	Reduce speed limit on Sunnyside Drive to 20mph	+1	0	+1	0	0
O35	Extend 30mph speed limit from Drumoak to Park	+1	0	+1	0	0
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0	0	0	0
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	+1	0	+1	0	0
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	+1	0	+1	0	0

Option		Economy	
Option Ref	Option Title	Transport Economy Efficiency	Wider Economic Benefits
Active Travel – Strategic Routes			
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	0	0
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	-1	0
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	-1	0
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	-1	0
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	-1	0
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	+2	0
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	0
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	+1	+1
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	+1	0
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	0	+1
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0
AT49	Implement cycling infrastructure along the High Street in Banchory	+1	+1
Active Travel – Other Measures			
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	0	0
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	0	0
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	0	0
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	0	0
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	0	0
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	0	0
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	0	0
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	0	0
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	0	0
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	0	+1
AT18	Improve priority for Deeside Way users across Pittengullies Brae	0	0
AT19	Implement an active travel link from Deeside Way to Drum Castle	0	+1
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	0	0
AT21	Improve access to the Deeside Way in the west of Drumoak	0	0
AT23	Implement crossing facilities near Abbotshall Road	0	0
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	-1	0
AT25	Implement additional formalised crossing facilities in Cults	0	0
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	0	0
AT27	Implement improved crossing facilities for Deeside Way users across the B979	0	0
AT29	Implement additional zebra crossing points in Peterculter	0	0
AT31	Consider locations for additional crossing facilities within Drumoak	0	0
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	0	+1
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	0	0
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	0	0
AT35	Implement crossing facilities on the western section of Banchory High Street	-1	0
AT36	Implement additional cycle parking within Cults, particularly near bus stops	0	+1
AT37	Implement a Park and Pedal facility near the AWPR Junction	0	+1
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	0	+1
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	0	+1
AT40	Implement additional cycle parking within Banchory Town Centre	0	+1
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	0	+1
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	0	+1
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	0	0

Option		Economy	
Option Ref	Option Title	Transport Economy Efficiency	Wider Economic Benefits
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	0	0
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	0	+1
Public Transport – Priority			
PT1	Implement an eastbound bus lane along the A93 corridor	+1	0
PT2	Implement a westbound bus lane along the A93 corridor	+1	0
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	-1	0
O43	Introduce adaptive timings at traffic signals along the corridor	+1	0
Public Transport – Other Measures			
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	+1	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	0	+1
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	0	0
PT10	Implement ticketing options for multi-modal journeys	0	0
PT11	Implement a P&R site in the east of Banchory	0	+1
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	0	+1
PT21	Increase the frequency of bus services on the A93	0	0
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	0	0
Neighbourhoods and Placemaking			
O19	Introduce placemaking and gateway features in Cults	+2	+1
O20	Introduce placemaking and gateway features in Peterculter	+2	+1
O21	Implement gateway signage on approach to Drumoak in both directions	0	0
O22	Implement gateway signage on approach to Crathes in both directions	0	0
O23	Introduce placemaking and gateway features in Banchory Town Centre	+2	+1
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	+2	+1
O25	Implement package of measures to support 20-minute neighbourhood in Cults	+2	+1
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	+2	+1
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	+2	+1
O41	Implement traffic calming measures on School Road in proximity to Culter School	0	0
O42	Implement traffic calming measures on Banchory High Street	0	0
Other Measures			
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	0	0
O2	Review the layout of the A93/Anderson Drive Junction	0	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	0	0
O4	Review the layout of the A93/Abbotshall Road Junction	0	0
O5	Review the layout of the A93/Malcolm Road Junction	0	0
O6	Review the layout of the A93/Hill of Banchory East Junction	0	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	0	0
O8	Review pedestrian safety at island crossings along the A93 corridor	0	0
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	+1
O12	Implement a link road between A93 and Inchgarth Road	+1	0
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0
O16	Conduct a review of parking in Cults	0	0
O17	Conduct a review of parking in Peterculter	0	0
O18	Conduct a review of parking in Banchory	0	0
O28	Implement additional flashing speed limit signs along the A93 corridor	0	0
O31	Reduce the speed limit on Kennerty Road	0	0

Option		Economy	
Option Ref	**Option Title**	**Transport Economy Efficiency**	**Wider Economic Benefits**
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	0	0
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	0	0
O34	Reduce speed limit on Sunnyside Drive to 20mph	0	0
O35	Extend 30mph speed limit from Drumoak to Park	0	0
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	0	0
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	0	0

Option		Equality and Accessibility				
Option Ref	Option Title	Public Transport Network Coverage	Active Travel Network Coverage	Comparative Access by People Group	Comparative Access by Geographic Location	Affordability
Active Travel – Strategic Routes						
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	0	+1	+1	0	+1
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	0	+1	+1	0	+1
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	0	+1	+1	0	+1
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	0	+1	+1	0	+1
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	0	+1	+1	0	+1
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	0	+3	0	+1	+1
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	0	+1	+1	0	+1
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	0	+2	+1	+1	+1
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	0	+1	+1	+1	+1
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	0	+1	+1	0	+1
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	0	0	0	0	+1
AT49	Implement cycling infrastructure along the High Street in Banchory	0	+1	0	0	+1
Active Travel – Other Measures						
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	0	0	0	0	+1
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	0	+1	+2	+1	+1
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	0	+1	+1	+1	+1
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	0	+1	+1	+1	+1
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	0	+1	+1	+1	+1
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	0	+1	+1	+1	+1
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	0	+1	+1	+1	+1
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	0	+1	+1	+1	+1
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	0	+1	+1	+1	+1
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	0	+1	+1	+2	+1
AT18	Improve priority for Deeside Way users across Pittengullies Brae	0	0	+2	+1	+1
AT19	Implement an active travel link from Deeside Way to Drum Castle	0	+1	+1	+1	+1
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	0	+1	+1	+1	+1
AT21	Improve access to the Deeside Way in the west of Drumoak	0	0	0	0	+1
AT23	Implement crossing facilities near Abbotshall Road	0	+1	+1	+1	+1
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	0	+1	+1	+1	+1
AT25	Implement additional formalised crossing facilities in Cults	0	+1	+1	+1	+1
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	0	+1	+1	+1	+1
AT27	Implement improved crossing facilities for Deeside Way users across the B979	0	+1	+1	+1	+1
AT29	Implement additional zebra crossing points in Peterculter	0	+1	+1	+1	+1
AT31	Consider locations for additional crossing facilities within Drumoak	0	+1	+1	+1	+1
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	0	+1	+1	+1	+1
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	0	+1	+1	+1	+1
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	0	+1	+1	+1	+1
AT35	Implement crossing facilities on the western section of Banchory High Street	0	+1	+1	+1	+1
AT36	Implement additional cycle parking within Cults, particularly near bus stops	0	+1	+1	+1	+1
AT37	Implement a Park and Pedal facility near the AWPR Junction	0	+1	+1	+2	+1
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	0	+1	+1	+2	+1
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	0	+1	+1	+1	+1
AT40	Implement additional cycle parking within Banchory Town Centre	0	+1	+1	+1	+1
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	0	+1	+1	+1	+1
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	0	+1	+1	+2	+1
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	0	+1	+2	+1	+1
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	0	+1	+1	+1	+1

Option		Equality and Accessibility				
Option Ref	Option Title	Public Transport Network Coverage	Active Travel Network Coverage	Comparative Access by People Group	Comparative Access by Geographic Location	Affordability
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	0	+1	+1	+2	+1
Public Transport – Priority						
PT1	Implement an eastbound bus lane along the A93 corridor	+1	-2	-1	0	0
PT2	Implement a westbound bus lane along the A93 corridor	+1	-2	-1	0	0
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	+1	0	0	0	0
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	+1	0	0	0	0
O43	Introduce adaptive timings at traffic signals along the corridor	+1	0	0	0	0
Public Transport – Other Measures						
PT4	Conduct a route wide review of bus stop provision and infrastructure	0	0	0	0	0
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	0	0	0	0	0
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	0	+1	0	+1	0
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	0	0	0	+1	0
PT10	Implement ticketing options for multi-modal journeys	0	0	0	0	0
PT11	Implement a P&R site in the east of Banchory	+1	0	0	+2	0
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	+1	0	0	+2	0
PT21	Increase the frequency of bus services on the A93	+1	0	0	0	0
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	-1	0	0	0	0
Neighbourhoods and Placemaking						
O19	Introduce placemaking and gateway features in Cults	0	+1	0	0	+1
O20	Introduce placemaking and gateway features in Peterculter	0	+1	0	0	+1
O21	Implement gateway signage on approach to Drumoak in both directions	0	0	0	0	+1
O22	Implement gateway signage on approach to Crathes in both directions	0	0	0	0	+1
O23	Introduce placemaking and gateway features in Banchory Town Centre	0	+1	0	0	+1
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	0	+2	+1	+1	+1
O25	Implement package of measures to support 20-minute neighbourhood in Cults	0	+2	+1	+1	+1
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	0	+2	+1	+1	+1
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	0	+2	+1	+1	+1
O41	Implement traffic calming measures on School Road in proximity to Culter School	0	0	0	0	+1
O42	Implement traffic calming measures on Banchory High Street	0	0	0	0	+1
Other Measures						
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	0	+1	0	0	0
O2	Review the layout of the A93/Anderson Drive Junction	0	+1	0	0	0
O3	Review the layout of the A93/Pitfodels Station Road Junction	0	+1	0	0	0
O4	Review the layout of the A93/Abbotshall Road Junction	0	+1	0	0	0
O5	Review the layout of the A93/Malcolm Road Junction	0	+1	0	0	0
O6	Review the layout of the A93/Hill of Banchory East Junction	0	+1	0	0	0
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	0	+1	0	0	0
O8	Review pedestrian safety at island crossings along the A93 corridor	0	+1	0	0	+1
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	0	0	0	0	0
O12	Implement a link road between A93 and Inchgarth Road	+1	0	+1	+1	0
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	0	0	0	0	+1
O16	Conduct a review of parking in Cults	0	0	-1	0	+1
O17	Conduct a review of parking in Peterculter	0	0	-1	0	+1
O18	Conduct a review of parking in Banchory	0	0	-1	0	+1
O28	Implement additional flashing speed limit signs along the A93 corridor	0	0	0	0	+1
O31	Reduce the speed limit on Kennerty Road	0	0	0	0	+1
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	0	0	0	0	+1
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	0	0	0	0	+1

Option		Equality and Accessibility				
Option Ref	**Option Title**	**Public Transport Network Coverage**	**Active Travel Network Coverage**	**Comparative Access by People Group**	**Comparative Access by Geographic Location**	**Affordability**
O34	Reduce speed limit on Sunnyside Drive to 20mph	0	0	0	0	+1
O35	Extend 30mph speed limit from Drumoak to Park	0	0	0	0	+1
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	0	0	0	0	+1
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	0	0	0	0	+1
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	0	0	0	0	+1

Option		Deliverability		
Option Ref	Option Title	Feasibility	Affordability	Public Acceptability
Active Travel – Strategic Routes				
AT1	Implement early release signals for cyclists at all signalised junctions along the A93 corridor	Medium	Medium	Low
AT2	Create a protected junction at Great Western Road/Holburn Street Junction for cyclists	Medium	Medium	Medium
AT3	Increase pedestrian phasing at the A93/Anderson Drive Junction to support diagonal movements across the junction	Medium	Low	Low
AT4	Implement segregated cycle provision through the A93/Anderson Drive Junction	Medium	Medium	Medium
AT6	Review priority and crossings at the AWPR Junction and surrounding area for people walking, cycling and wheeling	Medium	Medium	Low
AT41	Implement two-way segregated cycling infrastructure along the A93 corridor in Aberdeen City	Medium	Medium	Medium
AT43	Increase pavement width on the south side of the A93 in proximity to Anderson Drive	Low	Medium	Low
AT44	Implement a shared footway on the A93 corridor between Peterculter and Banchory	High	High	Low
AT45	Implement a shared footway on the A93 corridor between Peterculter and Newmill Hill Forest and adjacent quiet road network to the north	Medium	High	Low
AT47	Formalise pedestrian path on north side of carriageway between Drumoak and Drum Castle	Medium	High	Low
AT48	Implement cycle lanes on either side of the carriageway through Drumoak and Park	Medium	Low	Low
AT49	Implement cycling infrastructure along the High Street in Banchory	Medium	Medium	Medium
Active Travel – Other Measures				
AT7	Conduct a route wide review of wayfinding signage to the Deeside Way	Low	Medium	Low
AT8	Redesign access controls onto and on the Deeside Way to improve accessibility	Medium	Medium	Low
AT9	Implement a continuous cycle route from the Deeside Way (at Duthie Park) to Union Street	High	Medium	Low
AT11	Implement a contraflow cycle lane on Duthie Terrace to facilitate connection to the Deeside Way	Low	Low	Low
AT12	Implement a contraflow cycle lane on Dee Street to facilitate connection between the Deeside Way and the city centre	Low	Low	Low
AT13	Implement a contraflow cycle lane on Ferryhill Place to facilitate connection between the Deeside Way and the city centre	Low	Low	Low
AT14	Implement a contraflow cycle lane on Ferryhill Terrace to facilitate connection between the Deeside Way and the city centre	Low	Low	Low
AT15	Implement a contraflow cycle lane on Fonthill Terrace to facilitate connection between the Deeside Way and the city centre	Low	Low	Low
AT16	Implement a contraflow cycle lane on Prospect Terrace to facilitate connection between the Deeside Way and the city centre	Low	Low	Low
AT17	Develop an integrated path network which connects settlements south of the River Dee with the A93 and Deeside Way	Medium	High	Low
AT18	Improve priority for Deeside Way users across Pittengullies Brae	Medium	Medium	Low
AT19	Implement an active travel link from Deeside Way to Drum Castle	Low	Medium	Low
AT20	Implement enhanced path connections between Newmill Hill Forest and the Deeside Way	Medium	Medium	Low
AT21	Improve access to the Deeside Way in the west of Drumoak	Medium	High	Low
AT23	Implement crossing facilities near Abbotshall Road	Low	Medium	Low
AT24	Upgrade informal crossing point east of Kirk Brae to formal crossing facilities	Low	Medium	Low
AT25	Implement additional formalised crossing facilities in Cults	Medium	Medium	Low
AT26	Implement a pedestrian island crossing at Bellenden Walk to enhance access to the Deeside Way via Milltimber Brae	High	Low	Low
AT27	Implement improved crossing facilities for Deeside Way users across the B979	Medium	Low	Low
AT29	Implement additional zebra crossing points in Peterculter	Low	Medium	Low
AT31	Consider locations for additional crossing facilities within Drumoak	Low	Medium	Low
AT32	Implement island crossing point east of Drumoak to enable safe crossing towards Drum Castle	Low	Medium	Low
AT33	Implement island crossing point at Crathes to enable safe crossing between bus stops at Crathes Woods	Low	Medium	Low
AT34	Implement a new pedestrian crossing over Station Road to facilitate access to Banchory Primary and Banchory Academy	Low	Medium	Low
AT35	Implement crossing facilities on the western section of Banchory High Street	Low	Medium	Low
AT36	Implement additional cycle parking within Cults, particularly near bus stops	Low	Low	Low
AT37	Implement a Park and Pedal facility near the AWPR Junction	High	High	Low
AT38	Implement a Park and Pedal facility at the former rail station in Peterculter using existing car parking in this location	Low	Low	Low
AT39	Implement additional cycle parking near bus stops and at the bus terminus in Peterculter	Low	Low	Low
AT40	Implement additional cycle parking within Banchory Town Centre	Low	Low	Low
AT55	Resurfacing of key active travel links within 20-minute neighbourhoods (e.g. The Bush in Peterculter)	Medium	High	Low
AT56	Develop a greater network of active travel connections from Park Bridge to the south of the river	Medium	High	Low
AT57	Redesign access controls at Park Bridge to allow for recumbent cycles and cargo bikes	Low	Low	Low

Option		Deliverability		
Option Ref	**Option Title**	**Feasibility**	**Affordability**	**Public Acceptability**
AT58	Implement a contraflow cycle lane on Bridge Street in Banchory	Medium	Low	Low
AT59	Implement an enhanced network of connecting paths from Inchmarlo and Torphins to the A93 corridor	High	High	Low
Public Transport – Priority				
PT1	Implement an eastbound bus lane along the A93 corridor	Medium	High	Medium
PT2	Implement a westbound bus lane along the A93 corridor	Medium	High	Medium
PT25	Conduct a traffic signal review to consider bus priority at all traffic signals along the A93 corridor	Medium	Medium	Low
PT26	Increase east-west phasing of traffic signals at A92 Anderson Drive to give more priority to flows on the A93 corridor	Medium	Low	Medium
O43	Introduce adaptive timings at traffic signals along the corridor	Low	Medium	Low
Public Transport – Other Measures				
PT4	Conduct a route wide review of bus stop provision and infrastructure	Low	Medium	Low
PT5	Consider options to improve boarding and alighting times on bus services along the corridor	High	Medium	Low
PT8	Enhance opportunities for cycle carriage on bus services on the A93 corridor	High	Medium	Low
PT9	Utilise app technology to provide real-time information to bus passengers of the ability to take bikes on buses	Medium	Medium	Low
PT10	Implement ticketing options for multi-modal journeys	High	Medium	Low
PT11	Implement a P&R site in the east of Banchory	Medium	High	Medium
PT17	Explore the feasibility of implementing Demand Responsive Services to allow surrounding settlements to connect with the A93 corridor (e.g. Inchmarlo and Torphins)	Medium	Medium	Low
PT21	Increase the frequency of bus services on the A93	High	Medium	Low
PT24	Trial a variation of the Stagecoach 201 service to travel direct through Banchory rather than via Hill of Banchory	High	Medium	Medium
Neighbourhoods and Placemaking				
O19	Introduce placemaking and gateway features in Cults	Low	Medium	Medium
O20	Introduce placemaking and gateway features in Peterculter	Low	Medium	Medium
O21	Implement gateway signage on approach to Drumoak in both directions	Low	Low	Low
O22	Implement gateway signage on approach to Crathes in both directions	Low	Low	Low
O23	Introduce placemaking and gateway features in Banchory Town Centre	Low	Medium	Medium
O24	Implement package of measures to support 20-minute neighbourhood in Mannofield	Low	Medium	Medium
O25	Implement package of measures to support 20-minute neighbourhood in Cults	Low	Medium	Medium
O26	Implement package of measures to support 20-minute neighbourhood in Peterculter	Low	Medium	Medium
O27	Implement package of measures to support 20-minute neighbourhood in Banchory	Low	Medium	Medium
O41	Implement traffic calming measures on School Road in proximity to Culter School	Low	Medium	Medium
O42	Implement traffic calming measures on Banchory High Street	Low	Medium	Medium
Other Measures				
O1	Review the layout of the Great Western Road/Holburn Street Junction, including consideration of signal timings and lane allocation	Medium	Medium	Low
O2	Review the layout of the A93/Anderson Drive Junction	Medium	Medium	Medium
O3	Review the layout of the A93/Pitfodels Station Road Junction	Low	Low	Low
O4	Review the layout of the A93/Abbotshall Road Junction	Low	Low	Low
O5	Review the layout of the A93/Malcolm Road Junction	High	Medium	Low
O6	Review the layout of the A93/Hill of Banchory East Junction	Low	Medium	Low
O7	Review the layout and traffic signal phasing at the A93/Dee Street Junction in Banchory	Low	Medium	Low
O8	Review pedestrian safety at island crossings along the A93 corridor	Medium	Medium	Low
O10	Increase road signage to tourist destinations and services along the A93 corridor, particularly from the AWPR	Low	Low	Low
O12	Implement a link road between A93 and Inchgarth Road	Medium	Medium	Low
O14	Implement signage to discourage vehicles from parking on the access road designated as the Deeside Way in Drumoak	Low	Low	Low
O16	Conduct a review of parking in Cults	Low	Medium	Medium
O17	Conduct a review of parking in Peterculter	Low	Medium	Medium
O18	Conduct a review of parking in Banchory	Low	Medium	Medium
O28	Implement additional flashing speed limit signs along the A93 corridor	Low	Low	Low
O31	Reduce the speed limit on Kennerty Road	Low	Low	Medium

Option		Deliverability		
Option Ref	**Option Title**	**Feasibility**	**Affordability**	**Public Acceptability**
O32	Increase the number of speed limit signs on approach to Drumoak in both directions	Low	Low	Low
O33	Extend 30mph speed limit 50m east at the eastern entrance to Drumoak	Low	Low	Low
O34	Reduce speed limit on Sunnyside Drive to 20mph	Low	Low	Low
O35	Extend 30mph speed limit from Drumoak to Park	Low	Low	Low
O38	Implement additional 20mph speed limit signage on the High Street in Banchory	Low	Low	Low
O39	Implement temporary 20mph speed limit to support movements to/from the International School on the A93	Low	Low	Low
O40	Implement traffic calming measures along Willowbank Road/Springbank Terrace	Low	Medium	High

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Appendix E – Part 2 Consultation Outcomes

A93 Banchory to Aberdeen City Multi-Modal Study: STAG-Based Appraisal

Part 2 Consultation Outcomes Technical Note

Aberdeen City Council

Project number: 60666961

September 2022

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
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Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	07-09-2022	Draft for Client Comment	AR	Andrew Robb	Project Manager
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Table of Contents

Figures

Tables

1. Introduction

1.1 Background and Objectives

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 A93 corridor between Banchory and Aberdeen.

A number of option concepts have been devised as part of the study and consultation has been undertaken to gain feedback on these from members of the public and key stakeholders. This is the second phase of consultation undertaken as part of the A93 Multi-Modal Study. An initial period of consultation took place in Autumn 2021 to identify problems, issues, constraints and opportunities along the corridor.

The second phase of consultation follows the development of option concepts and the feedback received will help to inform the appraisal of options. The consultation ran for 4 weeks between 22nd July 2022 and 19th August 2022.

1.2 Report Structure

Following this introduction, this note is set out as follows:

- Section 2: describes the methodology;
- Section 3: discusses the profile of respondents;
- Section 4: presents the consultation findings; and
- Section 5: presents key conclusions.

2. Methodology

2.1 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 2.1** below, displayed materials related to the study Transport Planning Objectives (TPOs), problems, issues, constraints and opportunities and option concepts showing indicative layouts, benefits, design considerations and precedent images. The online feedback form was also linked through this platform.

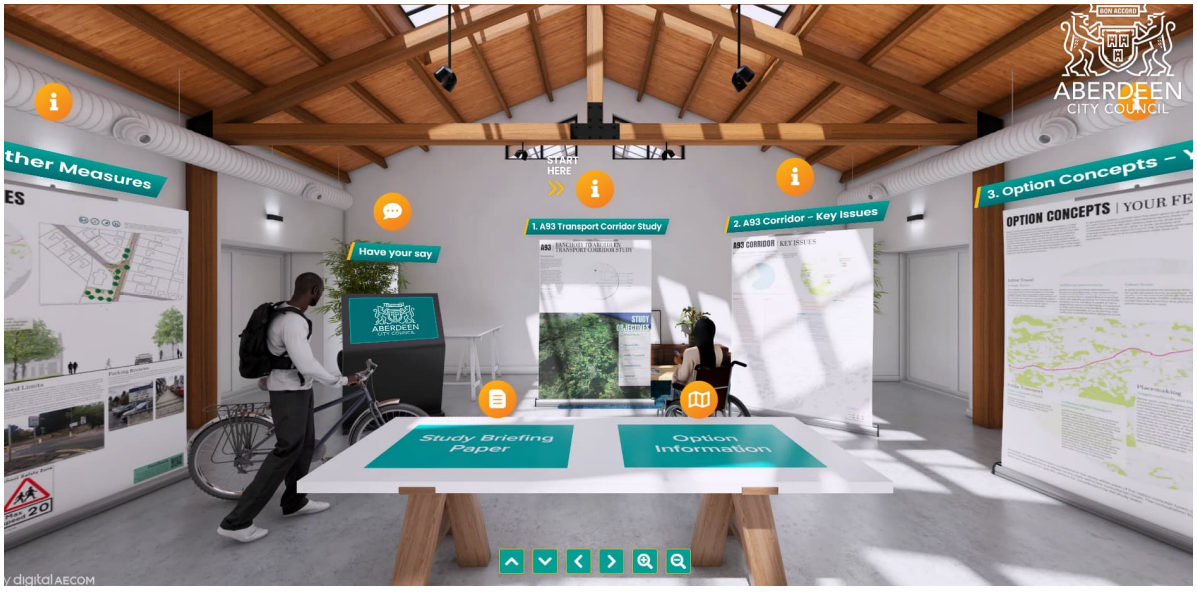

Figure 2.1: Virtual Consultation Room

2.2 Feedback Form

A feedback form was developed to collate responses to inform the appraisal. It sought views on:

- Current use of the A93 corridor;
- Option concepts, including anticipated future behaviour;
- Prioritisation of options, 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 concepts, 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.

2.3 Public Drop-In Events

The second phase of the consultation also included three in-person drop-in events. **Table 2.1** below shows the date, location and venue of each event. All events took place between 16:00-20:00.

Table 2.1: Public Drop-In Events

Date	Location	Venue
26th July 2022	Mannofield	Great Western Hotel (Aberdeen)
3rd August 2022	Peterculter	Culter Village Hall
4th August 2022	Banchory	Banchory West Church Hall

The events were attended by representatives from AECOM and Nestrans. During the events, 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. There were approximately 40 attendees across the three public drop-in sessions.

At each event, printed copies of the feedback form were available for attendees to complete, and they were also directed to the online form (via the Virtual Consultation Room) if they wished to give feedback outwith the event. While no attendees wished to complete a paper copy of the feedback form during any of the events, views expressed during the sessions have been captured in the analysis of each option concept.

Figure 2.2: Public Drop-In Event at Culter Village Hall

2.4 Online Drop-In Sessions

Additionally, two online live Q&A sessions (hosted through the Virtual Consultation Room) took place with members of the AECOM project team available to answer any questions directly. These took place on:

- Wednesday 10th August – 19:00-20:00; and
- Wednesday 17th August – 19:00-20:00.

No members of the public engaged with the online live Q&A sessions.

2.5 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.

2.5.1 Response Mechanisms

The number of responses for each response mechanism is shown in the table below.

Table 2.2: Number of Responses by Response Mechanism

	Online Questionnaire	Online Q&A	Direct Email	Total
Number of Responses	50	0	2	52

3. Respondent Profile

3.1 Type of Respondents

A total of 52 responses were received for the consultation. **Table 3.1** shows the response by each type of respondent, covering all response mechanisms.

Table 3.1: Type of Respondent

	Online Questionnaire	Online Q&A	Direct Email	Total	%
General Public	50	0	1	51	98%
Organisations	0	0	1	1	2%
Total	50	0	2	52	100%

3.2 Respondent Location

All members of the public who completed the questionnaire were asked to provide the first part of their postcode, to enable responses to be mapped. **Figure 3.1** below shows a map of the region where respondents were from.

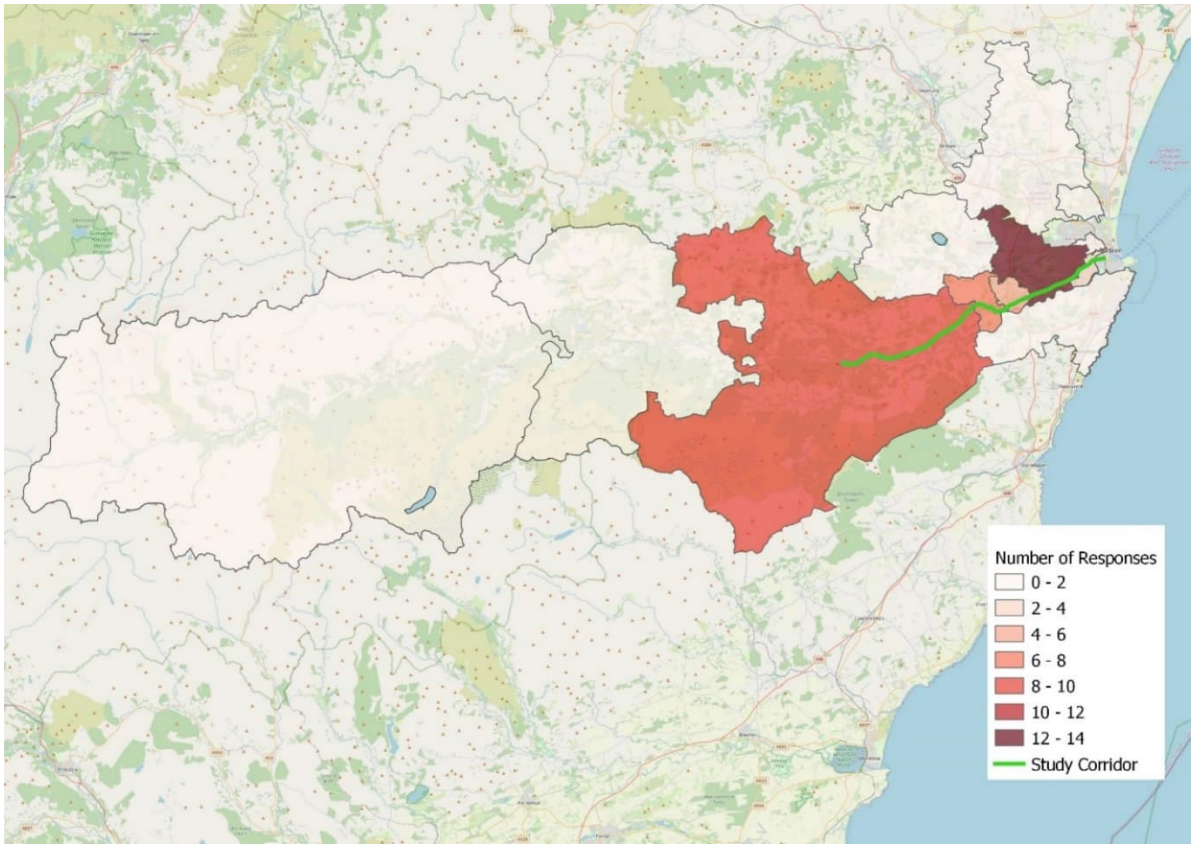

Figure 3.1: Responses by Postcode District

Table 3.2 below shows the count of responses by postcode district. Overall, 85% of all responses were from postcode districts directly on the corridor, with 15% from outside the corridor extents. The results of the survey therefore indicate that respondents typically were local people who live on the corridor but also captured responses from those who may not live on the corridor but are users of the route.

Table 3.2: Response by Postcode District

Postcode District	Location/Settlement	Count	%
AB15	Bieldside, Cults and Mannofield North	14	30%
AB31	Banchory and District	10	21%
AB14	Peterculter	8	17%
AB13	Milltimber	5	11%
AB10	Mannofield South and Garthdee	3	6%
AB32	Westhill and District	2	4%
AB12	Cove Bay and Portlethen	1	2%
AB21	Dyce and District	1	2%
AB25	Aberdeen City Centre	1	2%
AB34	Aboyne and District	1	2%
AB35	Ballater and Braemar	1	2%

3.3 Representativeness of Response

This section aims to compare the demographics of those who completed the online survey to those of the area as a whole (Aberdeen City and Aberdeenshire) to help ensure it is representative of the area.

Figure 3.2: Gender of Survey Respondents compared to 2011 Census for the Region

Figure 3.2 shows how the survey respondents compare to the 2011 Census in terms of gender. There was a 75-23% split of male-female respondents (with 2% selecting the 'prefer not to say' option) compared to a 49-51% split in the wider population.

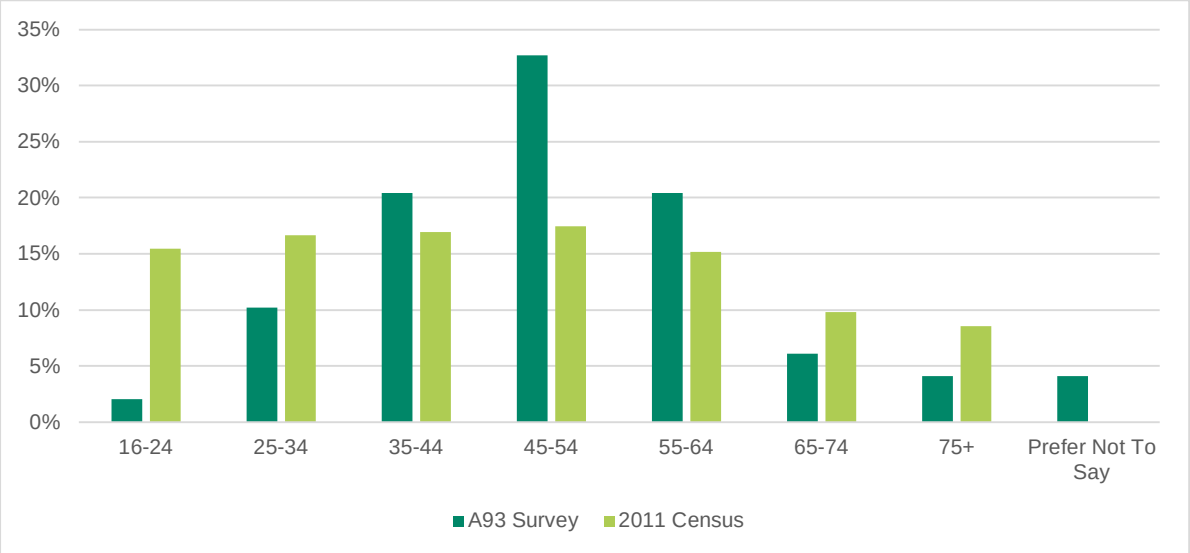

Figure 3.3: Age of Survey Respondents compared to 2011 Census for the Region

Figure 3.3 shows how the survey respondents compare to the 2011 Census in terms of age. There is a relatively balanced spread of ages represented within the survey responses. Certain groups such as 16-24, 25-34, 65-74 and 75+ are underrepresented in the survey responses with groups such as 35-44, 45-54 and 55-64 being overrepresented.

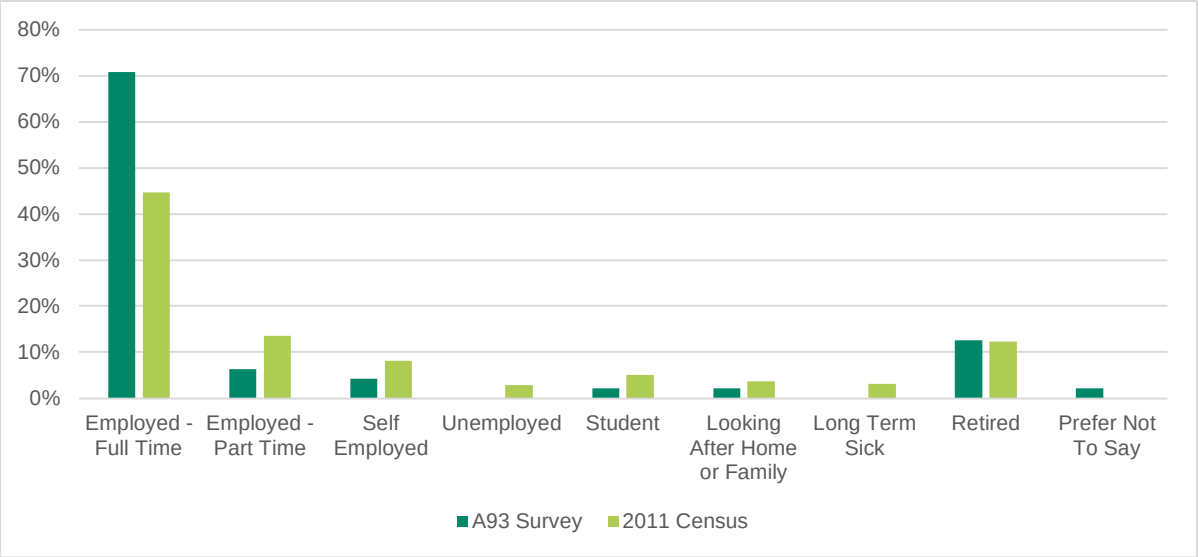

Figure 3.4: Employment Status of Survey Respondents compared to 2011 Census for the Region

Figure 3.4 shows how the survey respondents compare to the 2011 Census in terms of employment status. 'Employed - Full Time' and 'Retired' make up the majority of the responses in line with the census. Groups such as 'Employed – Part Time', 'Self Employed, 'Student' and 'Looking After Home or Family' are also represented, however 'Unemployed' and 'Long Term Sick' group are not represented.

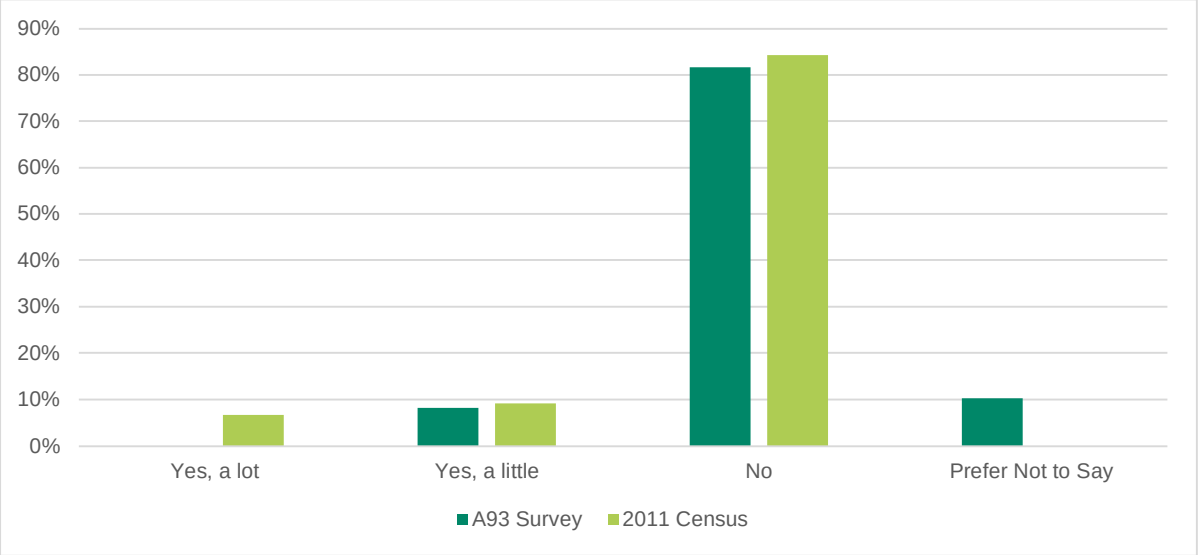

Figure 3.5: Health Condition of Survey Respondents compared to 2011 Census for Region

In terms of health, the majority of respondents did not have a health condition affecting their personal mobility. 8% of respondents said they had a condition which affected their mobility a little, therefore the profile of the sample is representative of the population for this metric.

4. Consultation Results

4.1 Public Drop-In Event

As noted in **Section 2.3**, approximately 40 people attended the public drop-in events across the three locations in Mannofield, Peterculter and Banchory. A summary of the key points of feedback are as follows:

- Limited support for the introduction of bus lane infrastructure on the corridor as it is generally considered that bus services are not delayed by general traffic on the corridor. Localised improvements at key junction locations were generally considered to be more appropriate.
- Safety concerns were raised for pedestrians and cyclists using the Deeside Way through Crathes, particularly the section alongside the main carriageway on approach to the A957 junction. It was proposed that the speed limit should be reduced from 40mph to 30mph throughout Crathes.
- Safety concerns were raised for all users at the Malcolm Road junction with the A93 in the west of Peterculter. It was noted that there has been previous attempts to introduce signage that prohibits certain vehicles from turning left onto Malcolm Road from the A93. It is understood through discussions with ACC that signage has been approved by Transport Scotland, with installation scheduled to take place during this financial year.
- Desire for improved connections by active travel and public transport between Peterculter and Westhill.
- Concerns were raised regarding the safety of existing advisory cycling infrastructure on the A93, with members of Grampian Cycle Partnership noting that they would opt to take quieter routes rather than travelling on the main A93. Members further highlighted issues with the Deeside Way for commuting due to high numbers of pedestrians and dog walkers using the route.
- Feedback was generally positive regarding the potential for formalisation of Park & Pedal facilities at the old rail station location in Peterculter.
- Bus reliability was raised as an issue, particularly on services to Banchory. It was suggested that one additional service during each peak period could alleviate these concerns.
- Safety concerns were raised for active travel users on the section of the corridor between Peterculter and Banchory due to use of the route by freight vehicles.
- An island crossing point would be beneficial to facilitate access to the bus stops in proximity to the Milton of Crathes junction.
- Support expressed for First Bus services trialling an extension of some services to the Retirement Park in Peterculter, although it was noted that the timing of these services may present a barrier to use of this service for some people.
- It was noted that it is difficult to increase the modal share of public transport when services are only provided radially and therefore, the majority of trips require interchange in the city centre.

4.2 Email Responses

During the consultation period, in addition to the online survey responses, two email responses were received. This included the following key points of feedback:

- Whilst there was general support for the objective of encourage increased active travel in urban areas, it is considered that upgrading the Deeside Way would provide better value for money than progressing significant works on the A93 itself.
- It is not considered that a bus lane would provide any benefit to the A93 because buses are not generally delayed by general traffic movements on the corridor.
- It is important to consider the demographics of the population and the needs of older people who are not able to travel actively for trips on the route.
- An upgrade of the informal crossing point east of Kirk Brae was not thought to be required given there is already a formal crossing point at the Kirk Brae/A93 junction.
- Support for funding towards developing aspirational core paths to improve links around Aberdeen.

4.3 Online Questionnaire

4.3.1 Frequency of Use of the A93 Corridor

Figure 4.1 provides an overview of the frequency of use on the A93 corridor.

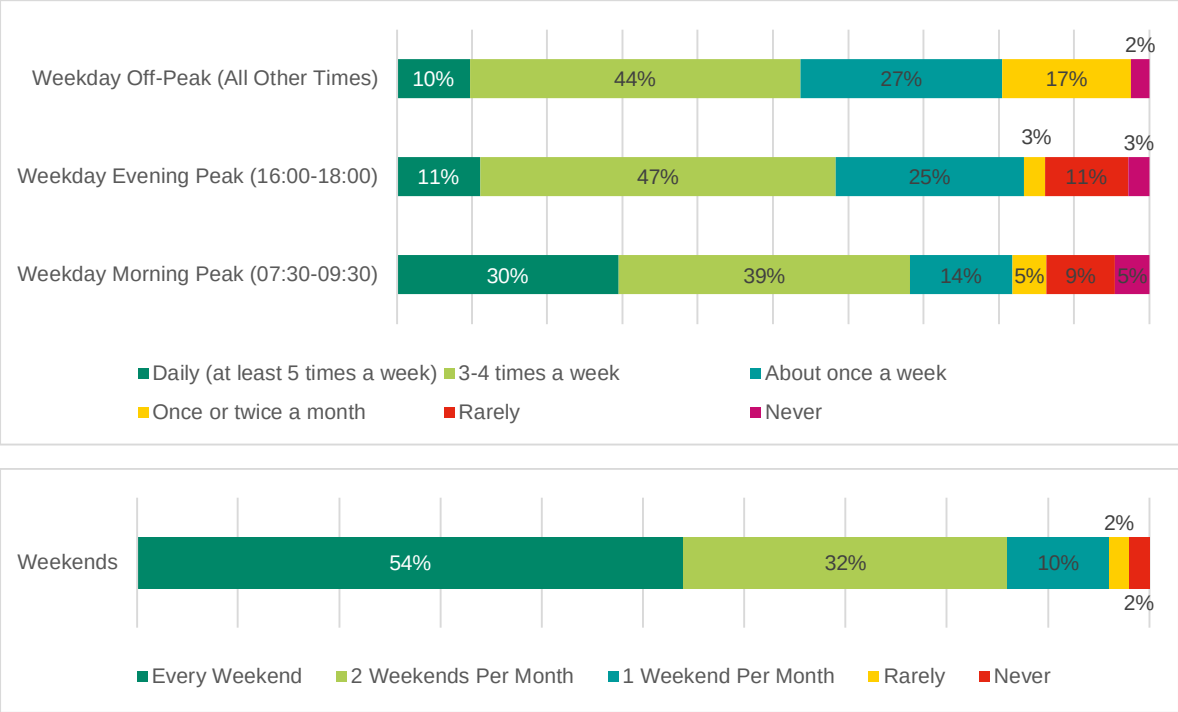

Figure 4.1: Use of the A93 Corridor

69% of respondents use the corridor regularly (at least 3-4 times a week) during the morning peak while 58% use it regularly during the evening peak. 54% of respondents are regular users of the route during weekday off-peak times. Notably there was a large number of respondents (86%) who use the route regularly at weekends.

4.3.2 Mode Choice on the A93 Corridor

Figure 4.2 shows the modes of transport used on the route. Respondents could select multiple options to reflect their full range of transport modes used and therefore percentages do not total 100%.

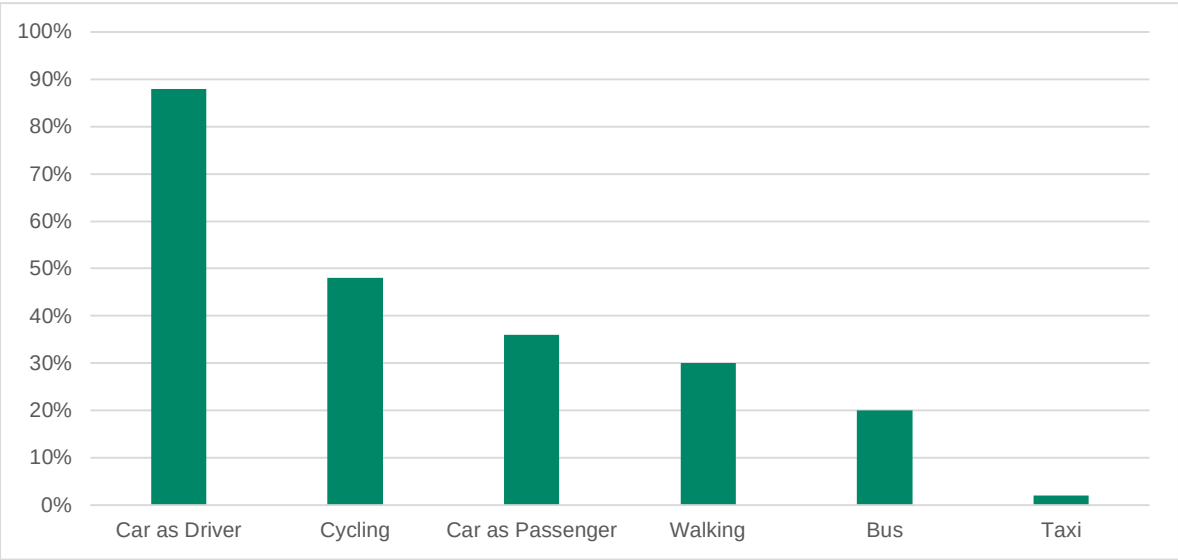

Figure 4.2: Transport Modes used on the A93 Corridor

As shown, car is used for journeys on the corridor by the majority of respondents, either as a driver (88%) or as a passenger (36%). Other commonly used modes on the corridor include cycling (48%), walking (30%) and bus (20%).

4.3.3 Trip Purpose on the A93 Corridor

Figure 4.3 shows the primary purpose of trips undertaken on the A93 corridor.

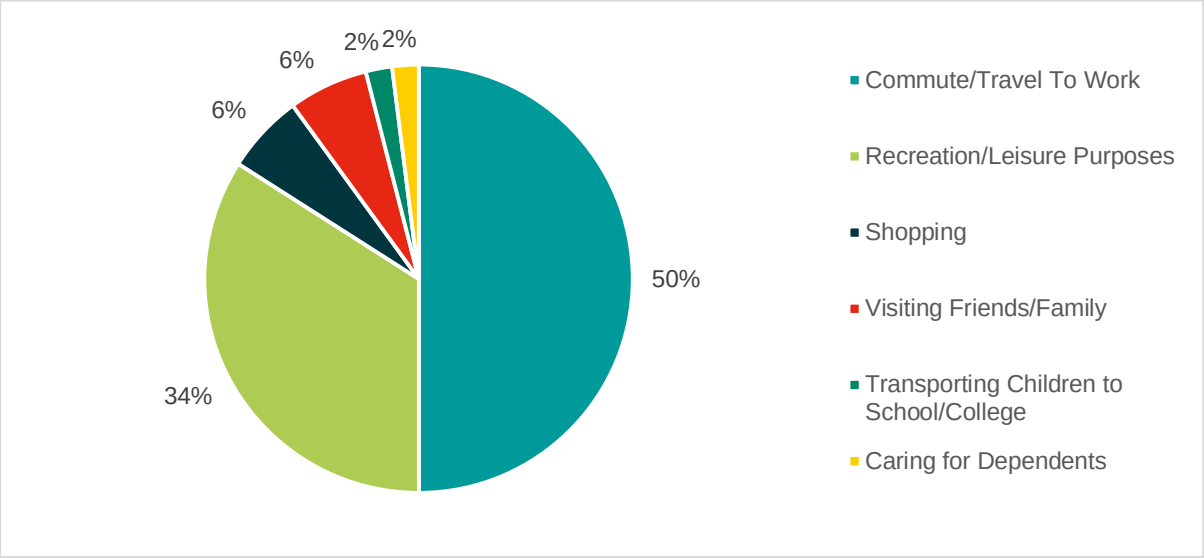

Figure 4.3: Main Trip Purpose on the A93 Corridor

As shown, 50% of respondents stated their primary trip purpose was 'Commuting/Travel to Work'. Other main trip purposes included recreation/leisure purposes (34%); shopping (6%); visiting friends or family (6%); transporting children to school or college (2%); and caring for dependents (2%).

4.3.4 Views on Active Travel – Strategic Route

Figure 4.4 outlines respondents' views on the Strategic Active Travel Route Concept.

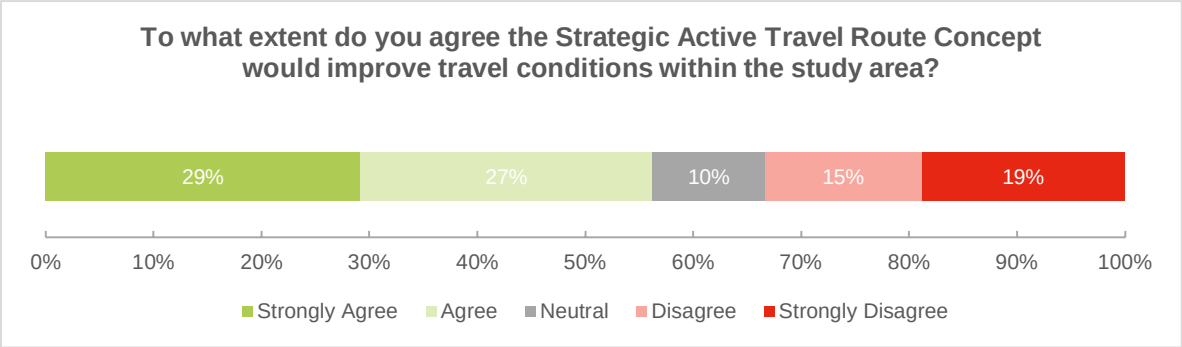

Figure 4.4: Views on Strategic Active Travel Route Concept

As shown, 56% in total agreed that this option concept would be beneficial while 34% in total disagreed with this option concept benefiting the corridor.

Figure 4.5 outlines the potential influence that implementation of the Strategic Active Travel Route concept could have on respondents' mode choice on the corridor.

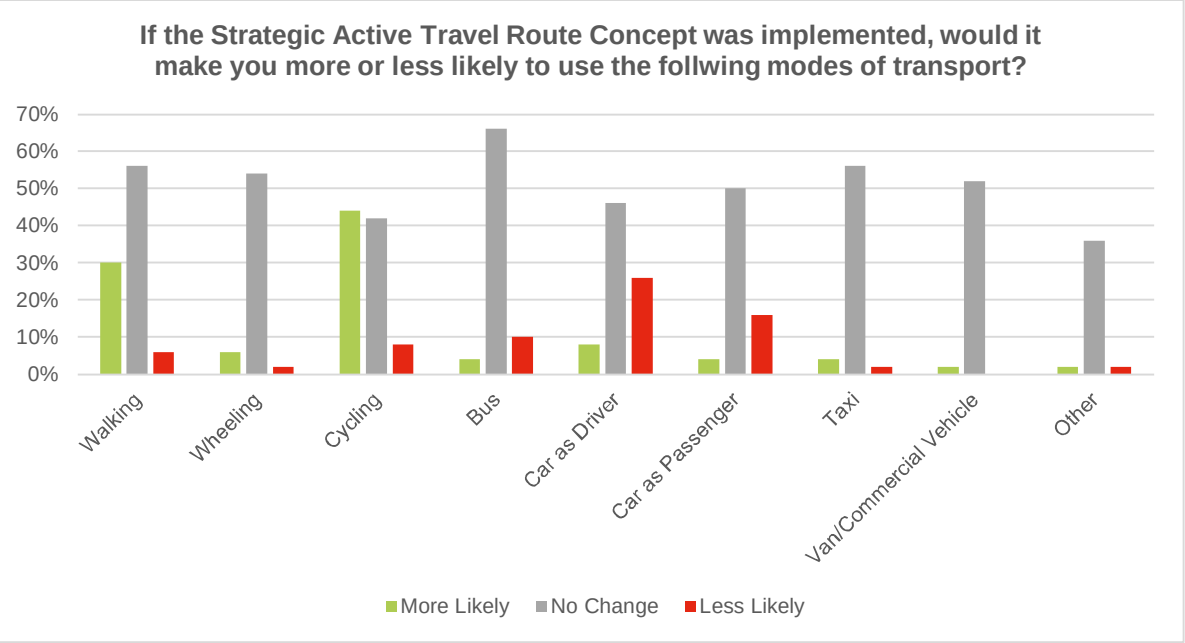

Figure 4.5: Strategic Active Travel Route – Influence on Mode Choice

As shown, this option concept would encourage people to use more sustainable modes such as walking (30%) and cycling (44%) and to use cars less, both as a driver (26%) and passenger (16%), though a greater proportion said they would not change their car use because of this option concept. 8% of respondents stated that this option concept would make them cycle less and 10% said it would make them use the bus less.

A number of additional comments were provided regarding the Strategic Active Travel Route concept. Common themes included:

- Support for safer cycling infrastructure on the corridor (18%, n=9);
- The requirement for upgrading of the Deeside Way (12%, n=6);
- Lack of support for improved cycling infrastructure or reallocating road space (10%, n=5);
- Concerns that proposals do not address poor active travel provision beyond Holburn Street junction towards the city centre (8%, n=4); and
- Traffic islands can be dangerous for cyclists having to merge with vehicles (6%, n=3).

Overall, comments were mixed on this option concept with some welcoming proposals for improved cycling infrastructure on the corridor, with comments pointing to the poor surface quality of existing cycling infrastructure on the A93. Whilst outwith the scope of the A93 Multi-Modal Study, some comments highlighted the poor condition of the Deeside Way and the requirement for improvements on this route. Furthermore, some concerns were raised regarding a lack of active travel proposals east of Holburn Street and safety concerns were raised around early release signals for cyclists.

4.3.5 Views on Active Travel – Other Measures

Figure 4.6 outlines respondents' views on the Active Travel – Other Measures concept.

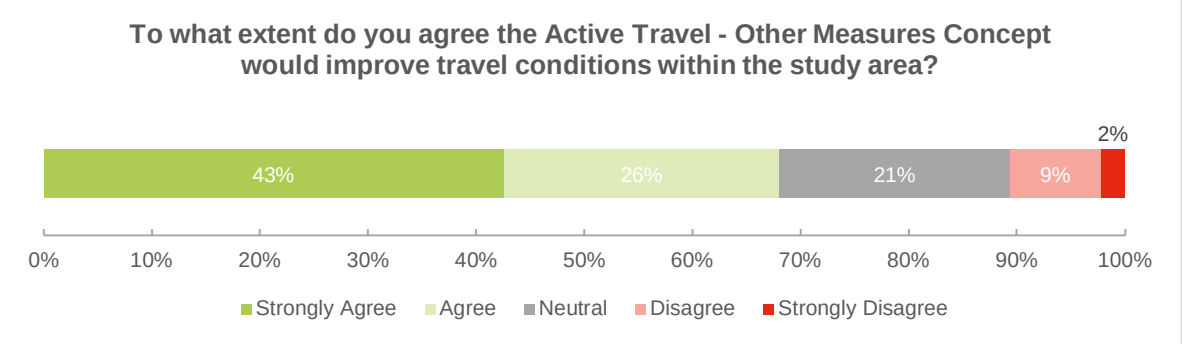

Figure 4.6: Views on Active Travel – Other Measures Concept

As shown, 69% in total agreed that this option concept would be beneficial, while only 11% in total disagreed with this option concept benefitting the corridor.

Figure 4.7 outlines the potential influence that implementation of the Active Travel – Other Measures concept could have on respondents' mode choice on the corridor.

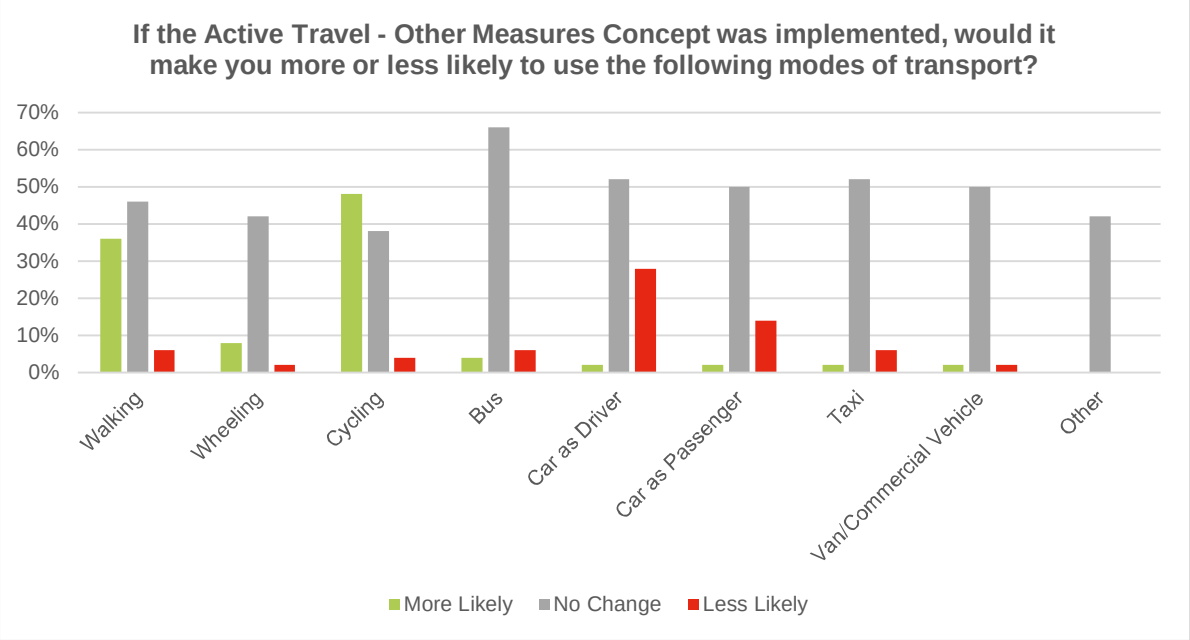

Figure 4.7: Active Travel Other Measures – Influence on Mode Choice

As shown, this option concept could encourage people to use more sustainable modes of transport, with 36% of respondents stating they would walk more if implemented and 48% stating they would cycle more if implemented. Additionally, the Active Travel – Other Measures concept would make 28% of respondents use the car less as a driver and 14% as a passenger.

A number of additional comments were provided regarding the Active Travel – Other Measures concept. Common themes included:

- Support for better connections to the Deeside Way (18%, n=9);
- The requirement for upgrading of the Deeside Way (14%, n=7); and
- Support for Park & Pedal facilities (10%, n=5).

Overall, comments received for this option concept were positive with many supportive of proposals for better connections to the Deeside Way, although there were some concerns around the impact of street reconfigurations in Aberdeen City, additional crossings in Cults and impacts on wildlife habitats. Furthermore, many comments highlighted problems with the Deeside Way including conflicts between users and the stop-start nature of the route for cyclists given the large number of crossings. There was support for the introduction of Park & Pedal facilities on the corridor given the large distances involved on the corridor for novice cyclists.

4.3.6 Views on Active Travel – School Route

Figure 4.8 outlines respondents' views on the Active Travel – School Route concept.

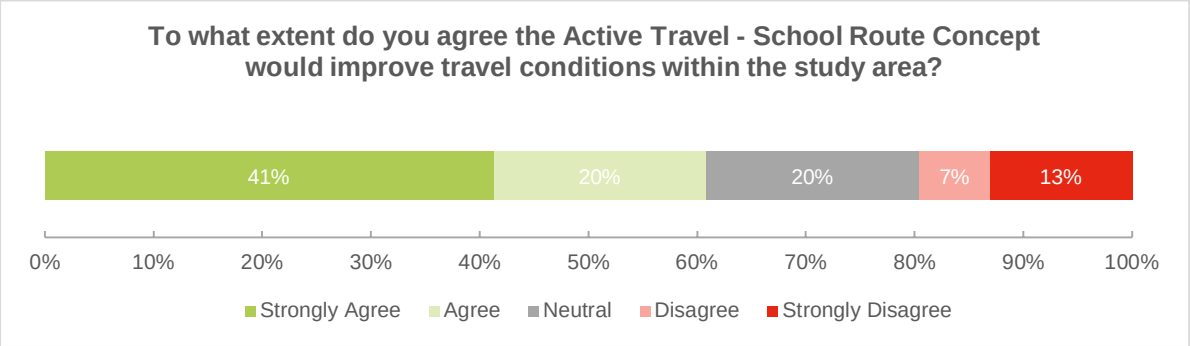

Figure 4.8: Views on Active Travel – School Route Concept

As shown, 61% in total agreed that this option concept would be beneficial, while 20% in total disagreed with this option concept benefitting the corridor.

Figure 4.9 outlines the potential influence that implementation of the Active Travel – School Route concept could have on respondents' mode choice on the corridor.

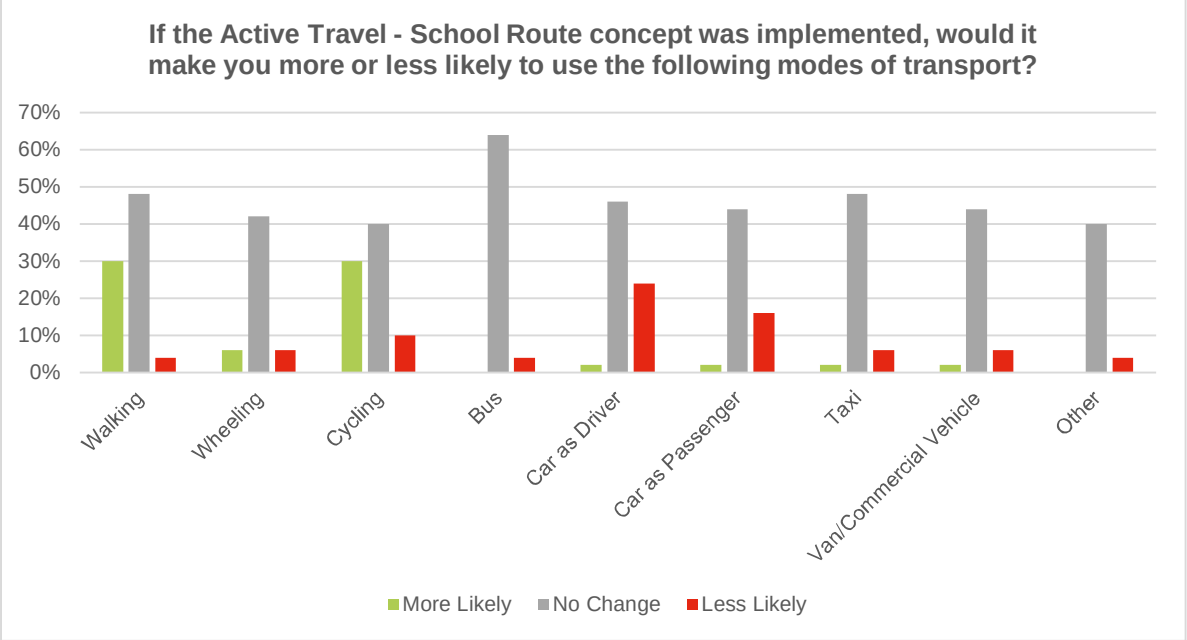

Figure 4.9: School Route – Influence on Mode Choice

As shown, this option concept would encourage 30% of respondents to travel by active modes more and travel by car less with 24% of respondents stating that they would drive less as a result of the implementation of this option concept.

A number of additional comments were provided regarding the Active Travel – School Route concept. Common themes included:

- Support for making routes to school safer for children (18%, n=9);
- Support for discouraging car drop offs at school and dangerous driving near schools (12%, n=6); and
- Concerns over impacts of traffic calming measures on adjacent roads (4%, n=2).

Overall, this option concept was received positively, although many respondents did not feel it was applicable to them. There was support for measures which make travel to school safer for children by active modes, discourage car journeys to schools and prevent dangerous driving around schools. There were some concerns the option concept would impact traffic volumes on other routes. There was also a suggestion that cycle parking should be improved at schools to realise the full benefits of this option concept.

4.3.7 Views on Public Transport – Priority Interventions

Figure 4.10 outlines respondents' views on the Public Transport – Priority Interventions option concept.

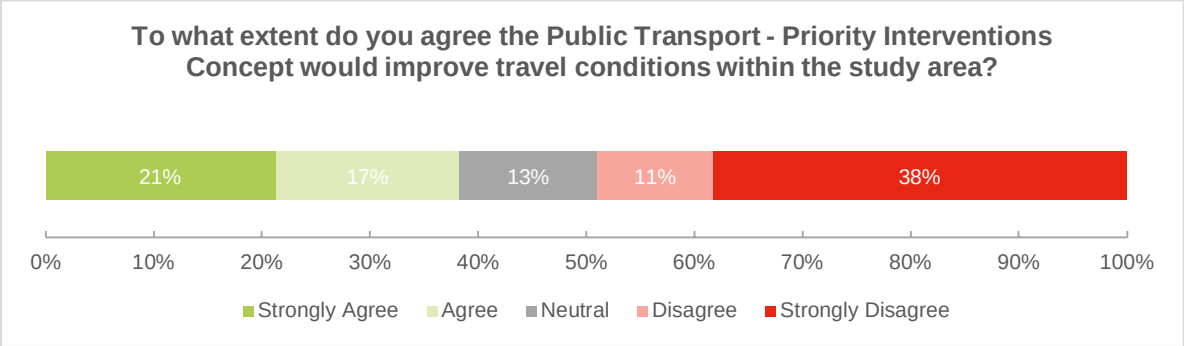

Figure 4.10: Views on Public Transport – Priority Interventions Concept

As shown, 38% in total agreed that this option concept would be beneficial, while 49% in total disagreed that this option concept would be beneficial for the corridor.

Figure 4.11 outlines the potential influence that implementation of the Public Transport – Priority Interventions option concept could have on respondents' mode choice on the corridor.

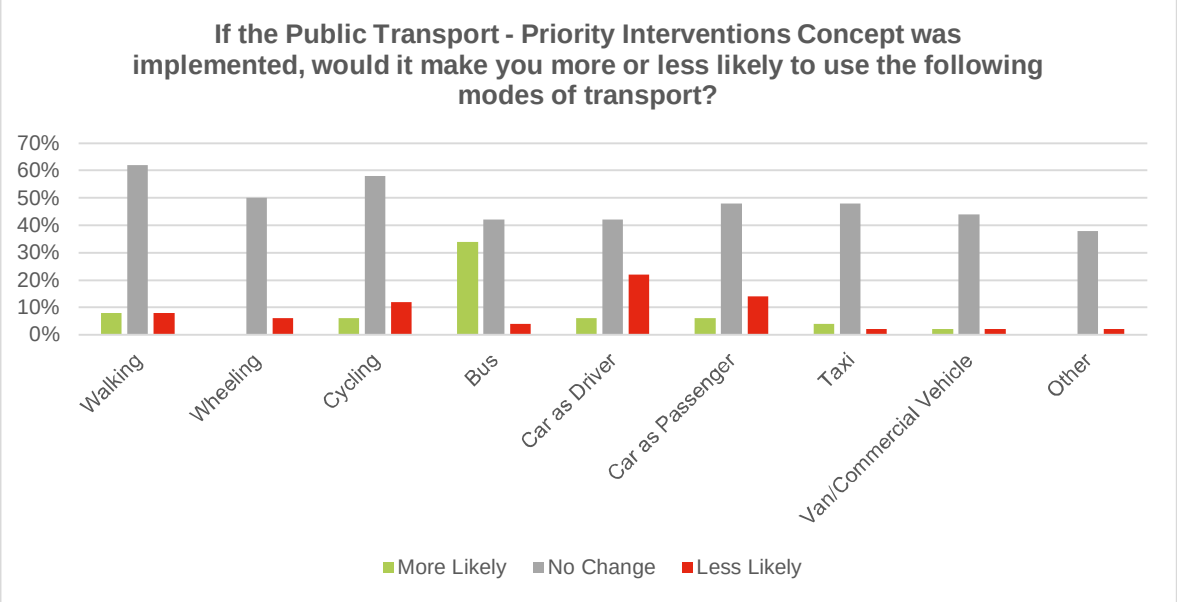

Figure 4.11: Public Transport Priority Interventions – Influence on Mode Choice

As shown, this option concept would encourage some uptake of public transport with 34% of respondents stating it would make them more likely to use the bus. 42% of respondents stated the option would have no impact on their bus use, and 22% said it would make them less likely to drive.

A number of additional comments were provided regarding the Public Transport – Priority Interventions concept. Common themes included:

- Concerns with aspects of existing public transport provision including journey times, service reliability and destinations served (22%, n=11);
- Support for measures which improve journey times, including an express limited stop service (16%, n=8);
- Preference for active travel improvements before public transport interventions (12%, n=6);
- View that the proposals will not impact on bus journey times and will negatively impact car drivers (12%, n=6); and
- Concerns about the space available for a bus lane (12%, n=6).

Overall, this option concept received a mixed response. Generally, those providing additional comments did not consider that the proposed interventions would impact on bus journey times as buses are not thought to experience delays due to general traffic at present on the corridor. Other comments focused on the aspiration for improved direct service provision to destinations such as Westhill and Aberdeen Royal Infirmary from the corridor.

4.3.8 Views on Public Transport – Other Measures

Figure 4.12 outlines respondents' views on the Public Transport – Other Measures concept.

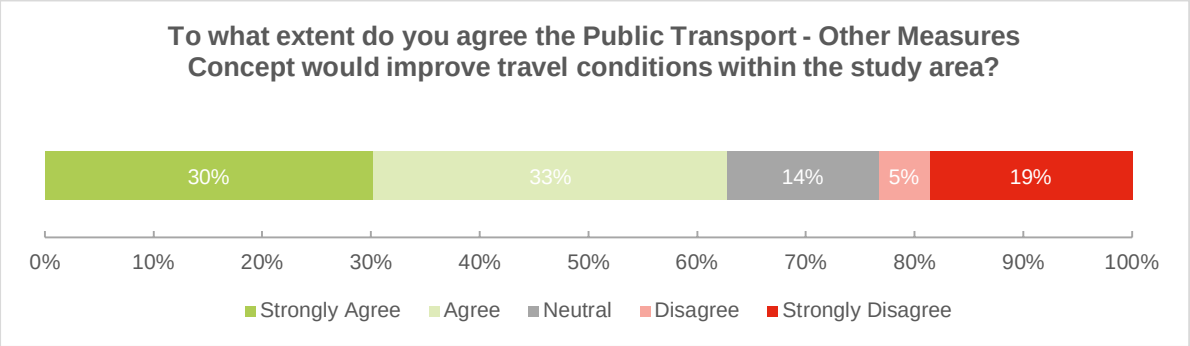

Figure 4.12: Views on Public Transport – Other Measures Concept

As shown, 63% in total agreed that this option concept would be beneficial, while 24% in total disagreed that this option concept would be beneficial for the corridor.

Figure 4.13 outlines the potential influence that implementation of the Public Transport – Other Measures concept could have on respondents' mode choice on the corridor.

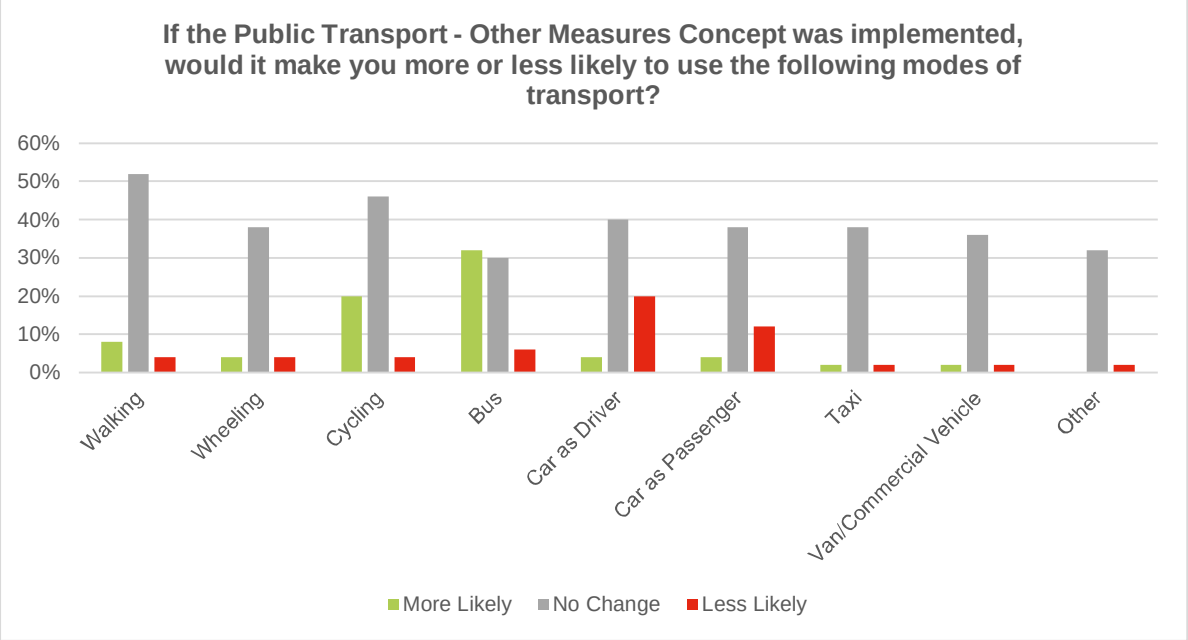

Figure 4.13: Public Transport Other Measures – Influence on Mode Choice

As shown, this option concept would encourage some uptake of public transport with 32% of respondents stating it would make them more likely to use the bus. 30% stated the option would have no impact on their bus use, and 20% said it would make them less likely to drive. 20% of respondents also stated the option would make them more likely to cycle.

A number of additional comments were provided regarding the Public Transport – Other Measures concept. Common themes included:

- Support for bikes on buses (14%, n=7);
- Opposition towards a Park and Ride (P&R) site (14% n=7); and
- Support for new connections and bus services (10%, n=5).

Overall, there was strong support and opposition towards certain options contained within this concept. Generally, there was support for facilitating bikes on buses as this would open the corridor up for additional recreation and leisure opportunities. However, there was opposition to a new P&R site near Banchory given low usage at other P&R sites in Aberdeen. Additionally, several comments focused on the lack of direct public transport connections between the study corridor and Westhill, Dyce, the University of Aberdeen and Aberdeen Royal Infirmary.

4.3.9 Views on Neighbourhoods and Placemaking

Figure 4.14 outlines respondents' views on the Neighbourhoods & Placemaking concept.

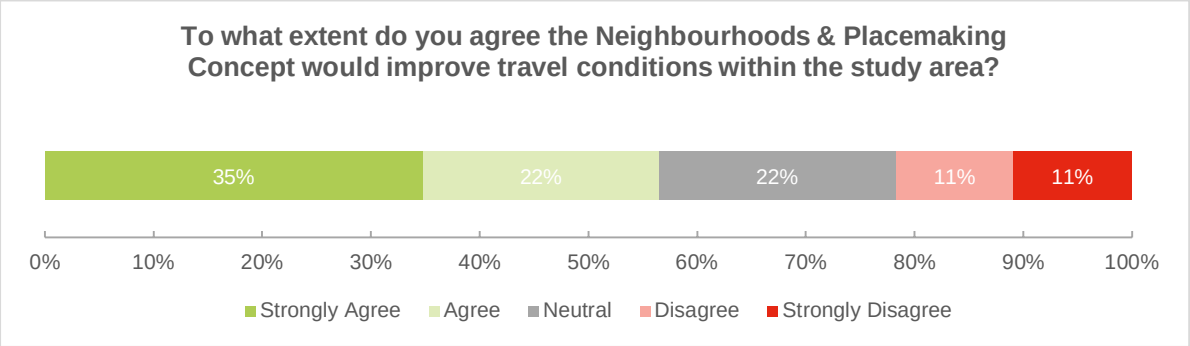

Figure 4.14: Views on Neighbourhoods & Placemaking Concept

As shown, 57% in total agreed that this option concept would be beneficial, while 22% in total disagreed that this option concept would be beneficial for the corridor.

Figure 4.15 outlines the potential influence that implementation of the Neighbourhoods & Placemaking concept could have on respondents' mode choice on the corridor.

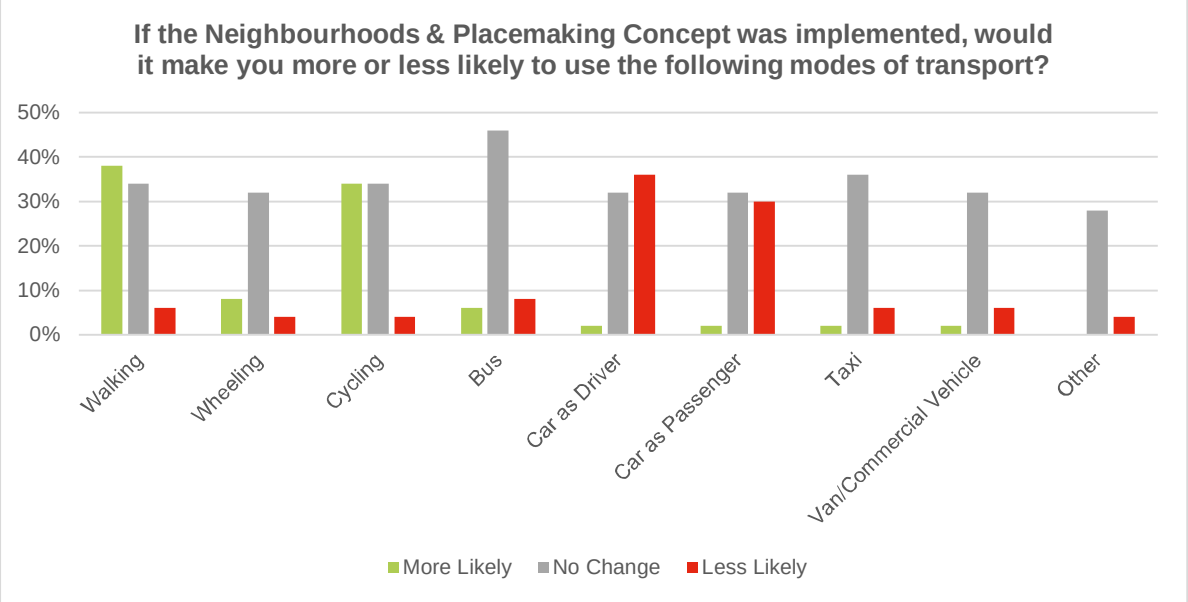

Figure 4.15: Neighbourhoods & Placemaking – Influence on Mode Choice

As shown, this option could have a positive impact on mode choice with 38% and 34% of respondents respectively stating they would walk and cycle more if the option concept was implemented. Furthermore, this option concept would be one of the most effective at encouraging less car use with 36% of respondents stating they would drive less and 30% would use a car as a passenger less as a result of the implementation of this option concept.

A number of additional comments were provided regarding the Neighbourhoods & Placemaking concept. Common themes included:

- Lack of support for the concept (18%, n=9);
- Option concept could encourage active travel and regenerate communities (6%, n=3); and
- Communities were thought to need better facilities for the option concept to work (6% n=3).

Overall, most comments on this concept were from those who disagreed with its implementation with concerns that restricting car movements could impact on business footfall, create a false sense of security for pedestrians and significantly change the character of the communities involved. Other comments were more supportive, suggesting the concept could help encourage more active travel journeys, particularly among children and help to regenerate communities. Although there were a few concerns raised about the maintenance of features such as plantings and surfacing, some comments also queried why the concept had not been considered in communities such as Milltimber or Drumoak.

4.3.10 Views on Other Measures

Figure 4.16 outlines respondents' views on the Other Measures concept.

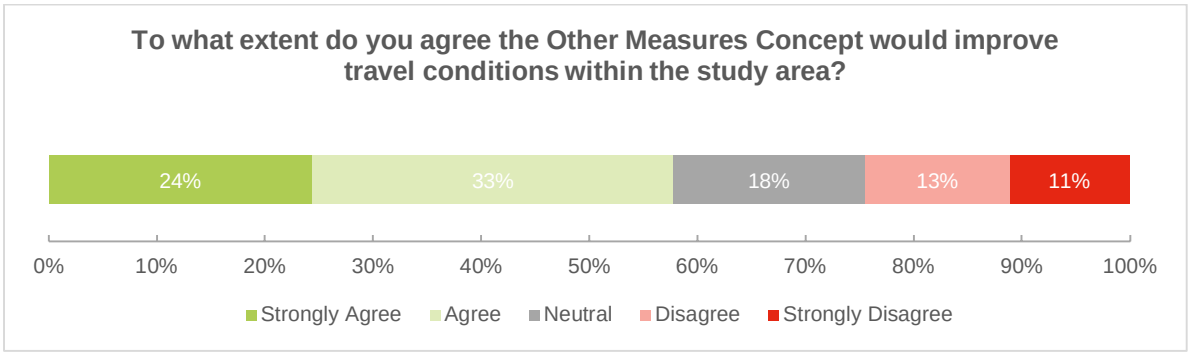

Figure 4.16: Views on Other Measures Concept

As shown, 57% in total agreed that this option concept would be beneficial, while 24% in total disagreed that this option concept would be beneficial to the corridor.

Figure 4.17 outlines the potential influence that implementation of the Other Measures concept could have on respondents' mode choice on the corridor.

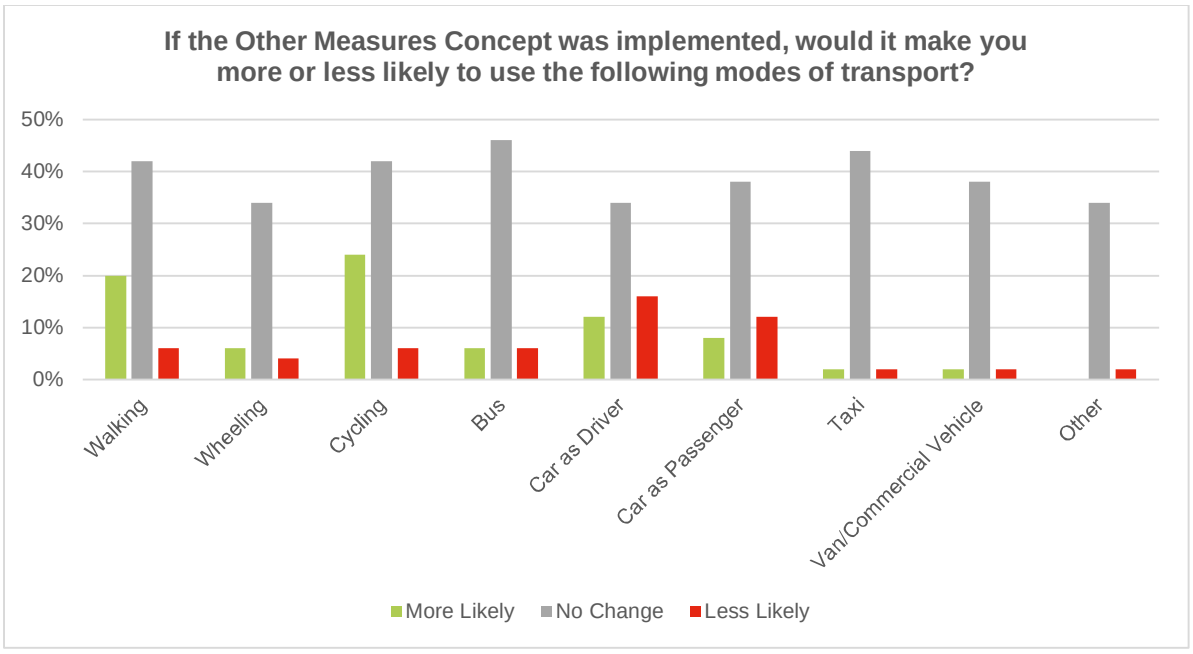

Figure 4.17: Other Measures – Influence on Mode Choice

Overall, this option concept would encourage sustainable mode choice with 20% of respondents stating that they would walk more as a result of the concept and 24% stating that they would cycle more. However, 42% of respondents said it would make no change to their use of either mode. Furthermore, the option concept would make 16% of respondents less likely to drive, while 12% said they would be more likely to drive as a result of the implementation of the option concept.

A number of additional comments were provided regarding the Other Measures concept. Common themes included:

- Opposition to any further speed limit reduction on the route (18%, n=9);
- Support for speed limit reductions, particularly in villages (14%, n=7);
- Support for implementation of link road between Inchgarth Road and the A93 (14%, n=7) and opposition to this intervention (10%, n=5); and
- Concerns about impacts of any parking reviews (6%, n=3).

Overall, comments were mixed regarding the component options of this concept. Many felt speed limits are already set at appropriate levels or levels which are too low for the nature of the route. Others were supportive of this proposal and suggested stronger enforcement of speed limits may be needed to be fully effective. For the

proposed link road between Inchgarth Road and the A93, over half the comments were supportive stating it would be useful in enhancing access to Garthdee from the study corridor, however others were concerned about induced demand, increased traffic volumes on Inchgarth Road and questioned the rationale behind building new roads. The parking review proposal received a mostly negative response with some concerned about impact on business footfall and effects on residential streets if charges are imposed, though there was one response in favour of reducing parking provision on the corridor.

4.3.11 Priorities

Respondents were asked to rank the different option concepts based on which they thought should be prioritised for future consideration. The result of the aggregate ranking is:

1. Active Travel – Strategic Route;
2. Active Travel – Other Measures;
3. Active Travel – School Route;
4. Public Transport – Priority Interventions;
5. Neighbourhoods & Placemaking;
6. Public Transport – Other Measures; and
7. Other Measures.

Respondents considered that active travel packages would bring the greatest transport benefits to the corridor. While Public Transport – Other Measures ranked low, there did appear to be support for improved connectivity between the study area and key destinations, with alternative routing of services an option in this package.

4.3.12 Views on Consultation Process

Table 4.1 outlines how respondents found out about the consultation process.

Table 4.1: Means of Finding the A93 Multi-Modal Study Consultation

Source	Number	Percentage
Social Media	18	39%
Word of Mouth	6	13%
Community Councils	5	11%
Other	3	7%
Local Media/Newspaper	3	7%
Public Drop-In Event	3	7%
Active Travel Clubs/Groups	3	7%
Council Website	3	7%
Elected Representative	2	4%

Figure 4.18 outlines respondents' opinions on the ease of completing different aspects of the consultation process.

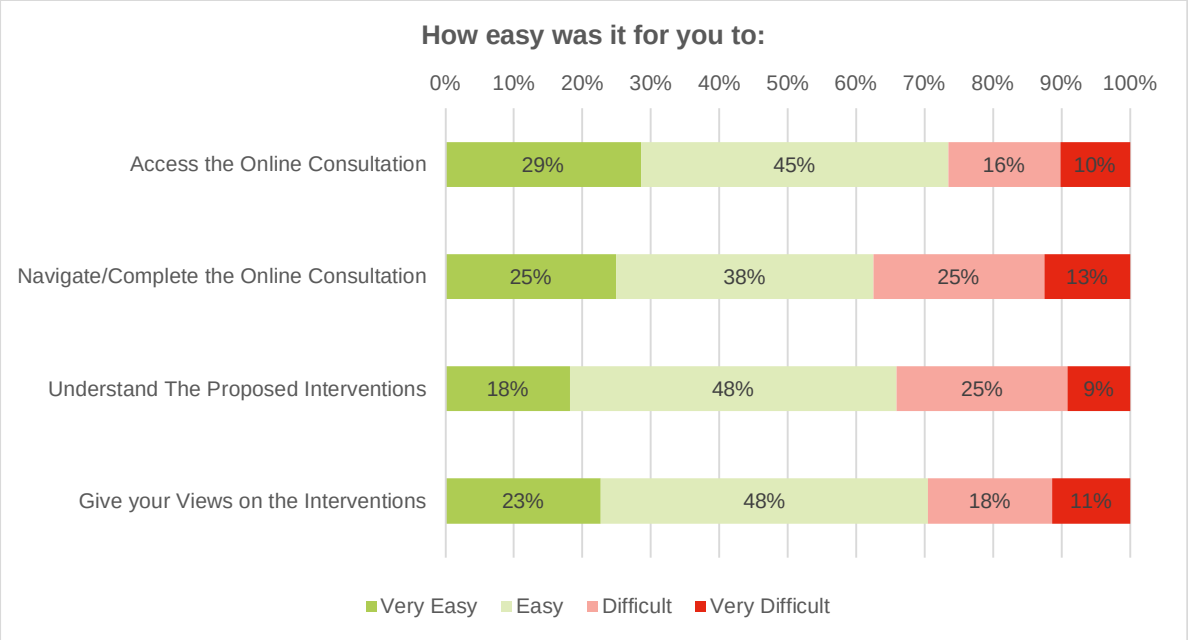

Figure 4.18: Views on the Consultation Process

As shown, respondents generally found it easy to access the consultation (74% in total) and give views on the different option concepts (71% in total). However, a greater proportion of respondents found navigating/completing the online consultation and understanding the proposed interventions more difficult.

A number of additional comments were provided regarding how future consultations could be improved. Common points of feedback are summarised in **Table 4.2**.

Table 4.2: Feedback on Consultation

Feedback Point	Number of Responses
Difficult to use platform for viewing consultation materials and completing questionnaire	11
Better promotion of the consultation including letter drops and more social media posts	4
More detail on options concepts – too high level	4
Include links within questionnaire to option concept boards	3
Repetitive questionnaire structure and too many options for mode change questions	3
Consultation Maps not clear – difficult to orientate	1

In addition, throughout the consultation responses there were a number of general comments left around a variety of aspects relating to the consultation. These included:

- Consultation time period: date during the summer holiday period not suitable and response period not long enough. This was also highlighted in two email responses;
- Perception that business impact has not been considered; and
- Deeside Way improvements should be in scope.

5. Key Conclusions

Figure 5.1 provides a summary of respondents' views on the packages proposed.

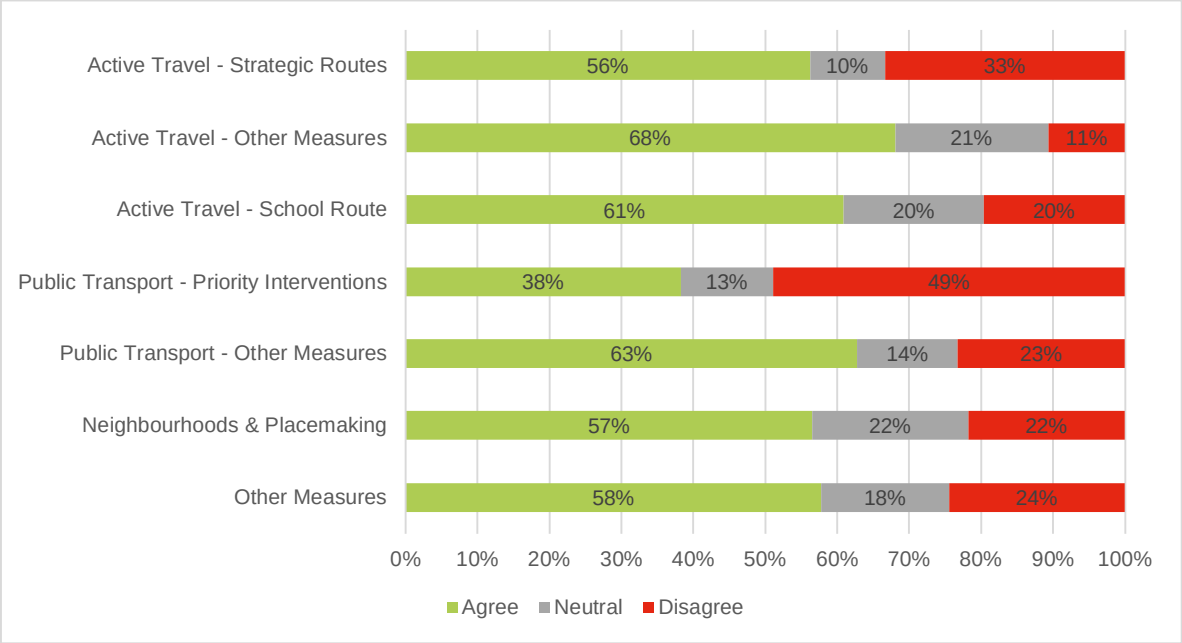

Figure 5.1: Views on Option Concepts

As shown, the Active Travel – Other Measures option concept received the greatest level of support in the consultation. This option concept includes proposals for better links to the Deeside Way, Park & Pedal facilities and improved cycle parking availability. There was general support for each of the other option concepts, although in the case of the Public Transport – Priority Interventions package, nearly half of respondents disagreed that the option concept would be beneficial for the A93 corridor. Possible reasons for low support included the perception that the option concept, which includes measures such as bus lanes and adaptive signals, will not address problems with bus services on the corridor and some believed that active travel should be prioritised for investment.

Figure 5.2 outlines the potential for modal shift associated with each of the option concepts. For walking, cycling and bus, the values represent the portion of respondents who stated each option concept would make them more likely to use those modes, while for car use the portion is those who stated the option would make them less likely to drive.

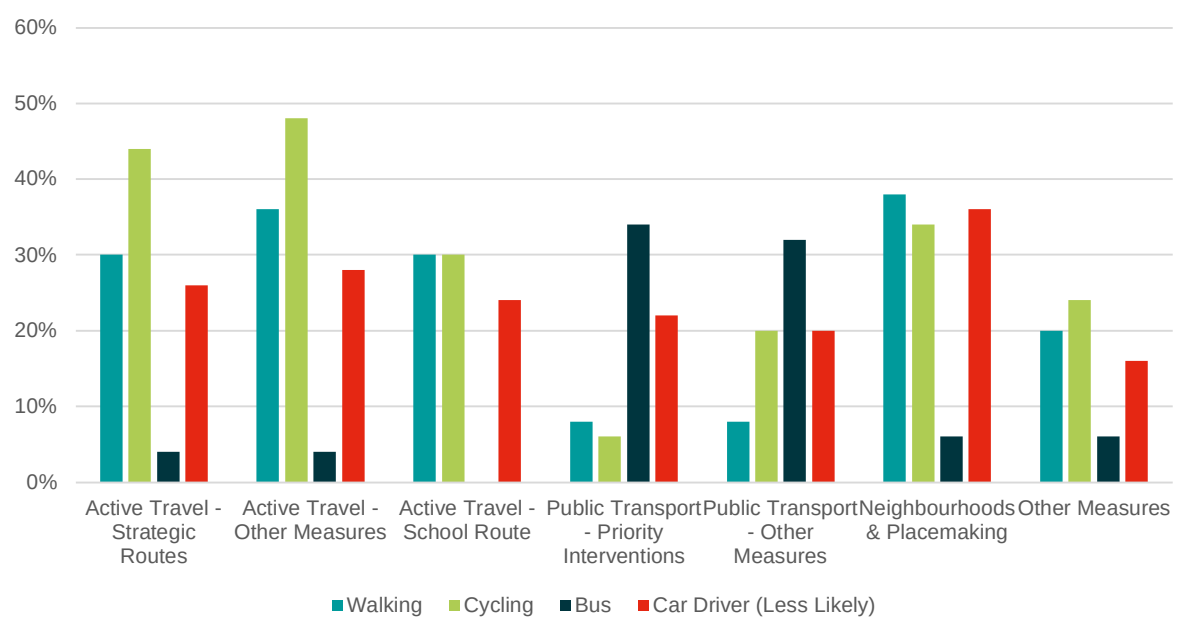

Figure 5.2: Potential for Modal Shift associated with Option Concepts

As shown, the largest uptake in walking is anticipated with the Neighbourhoods & Placemaking option concept (38%) and Active Travel – Other Measures concept (36%). The largest increase in cycling would be anticipated with the Active Travel – Other Measures concept (48%) with a shift towards cycling also anticipated with the Active Travel – Strategic Route concept (44%). The largest increase in bus use would be as a result of the two public transport option concepts, though the impact is not as significant as the active travel and placemaking option concepts have on potential active travel increase. Finally, the largest reduction in car use is expected to occur from the Neighbourhoods & Placemaking option concept, with 36% stating this would make them drive less.

5.1 Next Steps

The outcomes of this consultation will feed into the appraisal of each package in terms of public acceptability.

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