

Executive Summary

Wellington Road Multi-Modal Corridor Study STAG Part 1 Appraisal

Overview

AECOM has been commissioned by Aberdeen City Council to undertake a STAG Part 1 appraisal to define and assess options for improving strategic transport connections and active travel along the Wellington Road Corridor.

This study has been undertaken in line with Scottish Transport Appraisal Guidance (STAG) and builds upon a previous Pre-Appraisal study¹ undertaken in 2014-2015 which generated a long list of preliminary options consistent with the aims and objectives of a previous 'locking in the benefits' study of the Aberdeen Western Peripheral Route (AWPR).

This study reaffirms the principal problems, issues, opportunities and constraints associated with the Wellington Road Corridor identified at the Pre-Appraisal stage. These have been further validated through an extensive engagement exercise involving stakeholders and the public.

Building on the updated evidence base, the study considers a series of options and packages for assessment within the STAG Part 1 assessment framework. Based on the initial appraisal findings, a shortlist of improvement options is recommended for more detailed assessment at future STAG Part 2 stage.

The Wellington Road Corridor

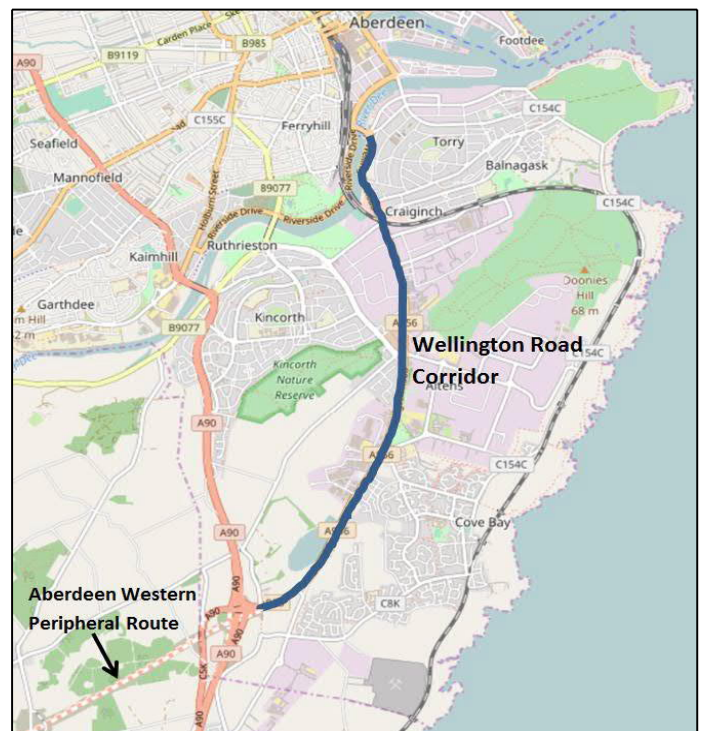
The A956 Wellington Road is a strategic corridor which links Aberdeen City centre and the wider southern extents of Aberdeen City to the A90 (South) trunk road. The corridor stretches for approximately three miles from the Charleston Interchange at the A90 (South) junction to the Queen Elizabeth Bridge, which crosses the River Dee close to Aberdeen City centre.

Problems & Opportunities

Based on a review of traffic and socio-economic trends in the study area, the local policy context, and the results from a wide-ranging public and stakeholder engagement programme, a list of problems, issues, opportunities and constraints for the study corridor has been consolidated.

Problems:

- Traffic congestion across the route, particularly during peak periods impacting on journey time reliability.
- The corridor is generally regarded as unfriendly for walking and cycling with a lack of segregation between motorised and non-motorised users.
- High levels of right-turning traffic have a negative effect on through traffic.
- Severance of communities and difficulties crossing Wellington Road for non-motorised users.
- Lack of public transport access into Altens Industrial Estate.
- Lane access issues for buses due to traffic congestion and queued back traffic.



Wellington Road Corridor – Study Area

¹ Wellington Road Pre-Appraisal Study Final Report, Nestrans 2015. Available at http://www.nestrans.org.uk/wp-content/uploads/2017/02/2015_01_21_WR_Multimodal_Corridor_Study_Final_Report.pdf

Opportunities:

- Opportunities to 'lock in' the sustainable travel benefits afforded by the AWPR, particularly in the northern section of the Corridor (based on previous transport modelling).
- Opportunities to rationalise access from side roads onto the main route, particularly where right turn manoeuvres are involved.
- Wider proposals including improvements at South College Street and Bridge of Dee, as well as the proposed Park & Ride on the A90 north of Portlethen could strengthen the case for introducing greater priority for sustainable travel modes on the corridor.
- Previous work has examined the potential of dualling the section of carriageway next to the former Craiginches Prison site, which would provide additional capacity and remove a current pinch-point on the network.

Issues:

- Wellington Road is an important freight corridor with a high volume of HGVs, and this will continue in the future. The AWPR may result in increased HGV traffic on the corridor associated with vehicles accessing the existing harbour and the new Bay of Nigg development.
- Concerns have been raised about the use of Wellington Road as a walking route to school for the new Loirston Academy.
- Journey times are forecast to reduce on the northern section of Welling Road once the AWPR opens, but are forecast to increase on the southern section.
- High volumes of traffic on side roads is considered a key contributor to congestion.
- There is growing demand in the future from key areas such as Loirston.

Constraints:

- There are a number of environmental constraints, most notably the Wellington Road Air Quality Management Area.
- Plentiful car parking for employment areas makes it more challenging to promote modal shift.
- Constraints on traffic flow posed by the operation of the bus lane at the northern end of the corridor. Road narrowing past the former Craiginches Prison site also acts as a pinch-point, constraining traffic flow.
- Geography poses engineering challenges and carriageway space is limited in some parts of the Corridor, therefore most on road cycling is not segregated from vehicular traffic.
- There is lack of connectivity/integration between local bus services and industrial estates.

Public and Stakeholder Engagement

To inform the identification of problems and opportunities on Wellington Road, an extensive engagement exercise with stakeholders and the public was undertaken in 2017. An overview of engagement approaches used is set out below.

Engagement Approach	Detail
Stakeholder Workshop	Workshop held with key officers from Nestrans, relevant ACC departments (Transport Strategy, Traffic Management, Road Projects and ITS) and Aberdeenshire Council (Transportation department), with briefing notes circulated in advance to aid discussion.
Face to Face Meetings	Meetings with key stakeholders to obtain detailed input to the study. Meetings held with Aberdeen Harbour, bus operators (First and Stagecoach), the Local Authority Bus Operator Forum (LABOF), Nestrans (Freight), the Shell Bike User Group and Aberdeen Cycle Forum. Briefing notes circulated in advance to aid discussion.
Community Council Engagement	Attendance at Cove & Altens, Kincorth and Leggart, Nigg and Torry Community Council meetings, providing a direct opportunity for groups representing local residents in the study area to have their say. Briefing notes circulated in advance to aid discussion.
Stakeholder	Emails/letters sent to over 30 individuals and organisations. Groups targeted included

Engagement Approach	Detail
Correspondence	officers within ACC and Aberdeenshire Councils, Transport Scotland, business bodies, freight groups, active travel stakeholders, emergency services, statutory bodies and vulnerable groups. Briefing notes circulated to engage and aid stakeholder response.
Business Engagement	Contact made, via the Aberdeen and Grampian Chamber of Commerce (AGCC), with AGCC members located on Wellington Road and who use the corridor on a regular basis, with comments made direct to AECOM.
Online Survey	Online survey carried out between 3 rd April and 7 th May 2017 targeting members of the public who live and work on the corridor. The survey was promoted widely in the press and social media channels, with hard copy surveys also available at key locations along the Wellington Road corridor. Approximately 200 responses were received in total.
Public Exhibition	Public exhibition held at the Aberdeen Altens Hotel on 29 th November 2017 to validate the emerging appraisal findings. The session comprised an open, evening drop-in session for members of the public. Attendees were also invited to complete a feedback survey on the day. Following the event, a three-week window was opened to allow further feedback on the exhibition materials hosted by ACC on Citizen Space, including an electronic version of the feedback form to encourage additional responses from those stakeholders unable to attend the event.

A separate Consultation Report has been produced and provides full details of the findings from the public and stakeholder activities undertaken on this study.

Transport Planning Objectives

Based on the identified problems and opportunities and informed through the consultation programme, the following Transport Planning Objectives (TPOs) have been developed for the study.

Transport Planning Objective
TPO1 – Provide greater priority to sustainable modes of transport on the Corridor and facilitate locking in of the benefits of the AWPR
TPO2 – Facilitate efficient movement of freight on the Corridor.
TPO3 – Reduce and manage traffic demands at key pinch points on the Corridor, taking cognisance of the framework provided by the Roads Hierarchy.
TPO4 – Improve accessibility to employment and education areas on the Corridor.
TPO5 – Promote a Corridor which is safe for all users.
TPO6 – Promote a transport corridor which supports air quality improvement strategies and improves public health.

Option Sifting and Development Process

The preliminary long options list developed at the Pre-Appraisal stage was further reviewed and refined to identify a shorter list of options for appraisal at STAG Part 1.

In order to sift this list into a more manageable list for the STAG 1 appraisal, further option development and sifting work was carried out focused on a review of option feasibility and deliverability, alongside a compatibility assessment of the alternative options. This was supported by an on-site audit of existing corridor infrastructure. As a result, some options were sifted out and/or packaged with other options. Options for all modes were considered; active travel, freight and road-based.

Option Appraisal

On the back of the option sifting and development process, eight retained options were taken forward for assessment in line with the requirements of STAG Part 1. Options were appraised against:

- The TPOs developed for the study;
- The five STAG criteria (Environment, Safety, Economy, Integration and Accessibility and Social Inclusion); and
- Implementability (Technical feasibility, Operational feasibility, Affordability and Public Acceptability).

A Do-Minimum scenario for the Wellington Road MMCS study area was developed, used as the basis for comparing the performance of the improvement options assessed. In line with STAG, the Do-Minimum scenario comprised all schemes and proposals under construction or for which statutory powers exist and funding is available. A summary of the performance of the improvement options against the Do-Minimum is provided below.

- **Option 1: Strategic Cycle Improvements**

Part 1 appraisal identified that the delivery of strategic cycle improvements has the potential to support several of the study TPOs offering benefits in terms of enhancing sustainable travel opportunities (consistent with the principle of “locking in” the benefits of the AWPR and prioritising active travel), improving safety for all users of the corridor and supporting air quality and public health objectives. While no significant implementability issues were identified in terms of providing off-road dual use cycleways, certain sections of the corridor may require carriageway space to be reduced or reconfigured to accommodate segregated cycle lanes, which would be the preferred approach given the composition of traffic on the route, including high HGV volumes. Generally, stakeholder consultation highlighted a desire for improved cycling conditions on the Wellington Road Corridor with exclusive use lanes considered to be more attractive relative to dual use paths. Concerns would be expected, however, from drivers should segregation require a reduction of carriageway space for road vehicles.

- **Option 2: Shared Bus / HGV Priority Lane**

The provision of a shared bus / HGV priority lane to provide greater priority for public transport and freight has been considered at two alternative levels: Alternative i) considers introduction of a shared lane between Queen Elizabeth Bridge and Souterhead Roundabout (in both directions) while Alternative ii) considers a reduced scale intervention of allowing HGVs to access existing Wellington Road bus lane. Both alternatives would support the Roads Hierarchy to some extent by prioritising active and sustainable travel (public transport). Options are considered to improve the efficiency of movement for both public transport and freight, with accompanying economic and accessibility benefits. However, in the case of providing a shared lane along the whole corridor, there are concerns that this could potentially exacerbate existing problems experienced at key pinch points associated with negative impacts on overall traffic flows due to the allocation of lanes exclusively for public transport and freight. There are also concerns about the safety of cyclists sharing space with HGVs. In terms of implementability, with the exception of the section of single-carriageway road adjacent to the former HM Craiginches Prison site (which would require to be dualled), it is considered to be technically feasible to form a shared bus and freight lane in both directions. This would however result in a reduction of general traffic space to one lane in either direction. The consultation exercise identified support for this option from bus operators and freight industry bodies, however limited support for this option emerged from the public consultation.

- **Option 3: Souterhead Roundabout Improvements + More/Better Crossings at Souterhead Roundabout**

The removal of Souterhead Roundabout to provide a fully signalised junction, including realignment works and provision of crossing points to aid the movement of non-motorised users at the junction supports a number of the TPOs identified in this study. This intervention would be expected to improve traffic flows through this key junction which currently experiences congestion, most notably at peak times. Upgrading this junction will complement the Roads Hierarchy by facilitating the movement of traffic to and from the major AWPR junction at Charleston. The Part 1 appraisal identified a number of other potential benefits including enhanced opportunities for active travel modes on the corridor and improved safety for non-motorised users, improved accessibility to the new Lochside Academy for school pupils, and potentially some positive impacts on local air quality if accompanied by improved traffic flows. There are no significant

implementability issues, however further option development would be required. This option was identified to perform positively against the public acceptability criteria, with the online survey revealing almost 40% of respondents indicated that Southerhead/Hareness improvements (collectively) was the most important option they would like to see introduced to address issues on the corridor.

- Option 4: Hareness Roundabout Improvements + More/Better Crossings at Hareness Roundabout

Option 4 involves the reconfiguration of Hareness Roundabout (removal of roundabout) to include full signalisation, junction realignment and provision of crossing points to aid the movement of non-motorised users at the junction. Similar to Option 3, this option has the potential to support several of the TPOs for this study, including improving traffic flows through this key junction which currently experiences congestion. Upgrading this junction will complement the Roads Hierarchy by facilitating the movement of traffic to and from the major AWPR junction at Charleston and the Bay of Nigg Harbour development. The option would also have beneficial impacts in terms of enhancing sustainable travel opportunities and improving safety by providing more and better crossing points at Hareness Roundabout. There are no significant implementability issues, however further option development would be required. Similar to Option 3, results from the consultation exercise indicated high levels of support for measures to address pinch points on the corridor and this option, therefore, performs positively against the public acceptability criteria.

- Option 5: Additional capacity between Southerhead and Hareness Roundabouts

This option, which involves the provision of additional capacity between Southerhead and Hareness emerged from a previous concept considered by ACC and has been introduced for consideration since the Pre-Appraisal study. The initial appraisal has assessed two alternatives; Alternative i) involves an additional road lane between Charleston Road North and Hareness Roundabout (northbound) with Alternative ii) based on the option above plus the introduction of an additional road lane between Hareness Roundabout and Southerhead Roundabout (southbound). Both variants have the potential to support a number of the TPOs for this study particularly associated with increased accessibility through improving traffic flows between key interchanges on the corridor, although careful consideration would be required to ensure increased road capacity leading to the roundabout junctions does not lead to greater queuing at the junctions themselves. Providing additional road capacity could also contravene the ethos of 'locking in the benefits', although if the additional capacity was restricted to sustainable modes, beneficial impacts could be anticipated. No significant technical or engineering challenges have been identified for this option and it performs strongly against public acceptability criteria, with 47% of online survey respondents ranking additional road capacity as the most important option to take forward to deliver improvements on the corridor.

- Option 6: Upgrade to dual carriageway at former HM Craiginches Prison Site

This option involves upgrading the current single carriageway section of Wellington Road to provide a higher capacity route by removing this current pinch-point on the network and supporting wider programmed improvements across the city. For the purposes of appraisal, this option assumes that the additional capacity between Craig Place and Polwarth Road would be available to use by all road users. Initial appraisal suggests this intervention performs positively against a number of the TPOs for this study. This option would improve traffic flow at this key pinch point on the network, supporting increased accessibility and the efficiency of movements, including freight movements. At this initial stage of assessment, no significant technical or engineering challenges associated with the provision of the additional lane have been identified however it would be recommended that further option development is undertaken at the next stage of the STAG process. Consultation revealed this option performed strongly in terms of public acceptability, with 47% of survey respondents ranking additional road capacity as the most important option to delivering improvements on the corridor, however some user groups would expect to see additional capacity assigned for sustainable modes specifically.

- Option 7: Wellington Road Bus Quality Package

The Bus Quality Package comprises an extension of the existing bus lane south prior to the signals at Balnagask road, a new southbound bus lane from the existing bus lay-by north of Grampian Place to the signalised Balnagask / Wellington Road junction (based on allocation of additional road capacity next to the former Craiginches prison site) and complementary bus service and infrastructure enhancements. Initial appraisal findings suggest this option supports

many of the study TPOs. This option provides greater priority to public transport, thus improving journey times and increasing the attractiveness of this mode of travel, consistent with the aims of locking in the benefits of the AWPR. In terms of traffic flow, there would be clear benefits to public transport users, allowing buses to bypass current pinch points on the network and improving accessibility by bus to the city centre and employment/education areas in the south of the corridor. Furthermore, this option could have positive impacts on air quality in the study area if supported by mode shift towards public transport. This option would result in a reduction of general traffic space in some areas of the corridor and aspects of the Bus Quality Package would require coordination with bus operators. However, the provision of greater bus priority along Wellington Road was not identified as a key option by public consultees (albeit bus users were under-represented in the profile of respondents in the online public consultation), though the elements within this option were generally supported by public transport stakeholders.

- Option 8: Wellington Road Corridor Right-turn / Traffic Signals Priorities Review Package

Option 8 involves the prohibition of right-turns to/from Wellington Road with review of existing signal arrangements to alleviate congestion and potential road safety issues (with specific consideration given to rationalisation of right turn manoeuvres at Abbotswell Road and Girdleness Road in particular). The initial appraisal identified that this option has the potential to support several of the study TPOs by improving traffic flows on the Wellington Road mainline and improving safety along the corridor by reducing the potential for vehicle conflicts associated with right-turn movements. However, it was identified that this option may adversely impact on accessibility to employment areas, and the efficiency of freight movements, by reducing the capability for vehicles to make cross-corridor movements. This in turn may negatively impact other junctions on the corridor e.g. Hareness Roundabout. There are no significant implementability issues associated with this option, albeit further consideration would need to be given to the impact of rerouting on other junctions, and the implications for bus routing if right turn movements at Girdleness Road were banned with it understood that some residential streets within Torry are unsuitable for large vehicles. Right-turn issues (e.g. impeding on traffic flows on Wellington Road itself) were cited across several consultation responses and discussions but, in terms of public acceptability, reducing/banning the number of right turn movements from/onto Wellington Road was not regarded as a high priority by respondents to the online survey.

Options Recommended for Further Assessment

Based on the initial appraisal of the options taken forward for assessment within the STAG Part 1 framework, it is recommended that each of the options are considered further at the STAG Part 2 stage, as summarised below.

Option/Option Alternative	Rationale for Selection
1 – Strategic Cycle Improvements	<ul style="list-style-type: none"> Option has the potential to support several of the TPOs for this study, and complements a number of elements of the STAG and Implementability criteria.
2 – Shared Bus / HGV Priority Lane	<ul style="list-style-type: none"> Both alternatives have the potential to support some of the TPOs for this study, and complement some elements of the STAG and Implementability criteria.
3 – Southerhead Roundabout Improvements + More/Better Crossings at Southerhead Roundabout	<ul style="list-style-type: none"> Option has the potential to support several of the TPOs for this study, and complements a number of elements of the STAG and Implementability criteria.
4 – Hareness Roundabout Improvements + More/Better Crossings at Hareness Roundabout	<ul style="list-style-type: none"> Option has the potential to support several of the TPOs for this study, and complements a number of elements of the STAG and Implementability criteria.
5 – Additional capacity between Southerhead and Hareness Roundabouts	<ul style="list-style-type: none"> Both alternatives have the potential to support several of the TPOs for this study, and complement a number of elements of the STAG and Implementability criteria.
6 – Upgrade to dual carriageway at former HM	<ul style="list-style-type: none"> Option has the potential to support several of the TPOs for this study, and complements a number of elements of the STAG and Implementability criteria.

Option/Option Alternative	Rationale for Selection
Craiginches Prison Site	<ul style="list-style-type: none"> • Provides opportunity to further appraise other potential uses of this additional capacity. The following options/scenarios recommended for further assessment assume the capacity necessary to implement them (afforded by Option 6) is in place: <ul style="list-style-type: none"> ▪ Option 1 (Strategic Cycle Improvements) – between South Esplanade West and Polwarth Road. ▪ Option 7 (Wellington Road Bus Quality Package) – Providing a new bus lane southbound to extend from the existing bus lay-by north of Grampian Place to the signalised Balnagask Road / Wellington Road junction.
7 – Wellington Road Bus Quality Package	<ul style="list-style-type: none"> • Option has the potential to support several of the TPOs for this study, and complements a number of elements of the STAG and Implementability criteria.
8 – Wellington Road Corridor Right-turn / Traffic Signals Priorities Review Package	<ul style="list-style-type: none"> • Option has the potential to support some of the TPOs for this study, and complements some elements of the STAG and Implementability criteria.

Next Steps

Going forward, it is recommended that further appraisal work is undertaken on the above options as the project moves forward to a STAG Part 2 (detailed) Appraisal stage. The following actions should be considered to facilitate this:

- Detailed transport modelling to quantify option impacts – At an early stage of the STAG Part 2 process, it is recommended that further option sifting is undertaken based on a more detailed understanding of the relative performance of the options using a modelling platform that reflects travel conditions on the post-AWPR network. Transport modelling will also assist in quantifying the scale of benefit of the interventions and their relative performance in terms of transport economic terms, which is central to appraisal at STAG Part 2 stage.
- Design / Engineering of interventions – Design work should be undertaken for those options involving alterations / additions to infrastructure on the Corridor. This will be necessary to better understand the potential impacts of options considered at STAG Part 2 stage
- Confirmation of proposals for land at former HM Craiginches Prison Site – As has been noted in this study, some options / option alternatives are predicated on the provision of additional road capacity at the former HM Craiginches Prison Site. The deliverability of additional capacity in this area would support further option appraisal work in terms of how this capacity could be utilised.
- Assessment of AWPR impacts – It is considered that there will be a need to understand how the AWPR affects Wellington Road when it opens in 2018. Cognisance of AWPR impacts will form part of setting the context for more detailed appraisal work on this corridor.