

# A90/A96 HAUDAGAIN IMPROVEMENT

DMRB Stage 3 Environmental Statement

## Non-Technical Summary

June 2015



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# Non-Technical Summary

## PREFACE

This document is the Non-Technical Summary (NTS) of the Environmental Statement (ES) for the A90/A96 Haudagain Improvement project. Copies of the ES and the draft Road Orders are available to view during normal office hours at the following location:

### Transport Scotland

Major Transport Infrastructure Projects (MTRIPS)  
Buchanan House  
58 Port Dundas Street  
Glasgow  
G4 0HF

Telephone: 0141 272 7100

08.30 to 17.00 Monday to Thursday  
08.30 to 16.30 Friday

The ES (including this NTS) and draft Road Orders may also be viewed online at

<http://www.transportscotland.gov.uk/project/a90a96-haudagain-improvement>.

A bound paper copy of the ES may be purchased at a cost of £215 or in DVD format at a cost of £10 by writing to Transport Scotland at the address on Page 1 of this NTS. Copies of this NTS are available free of charge from the same address.

Any person wishing to make representation to the ES should write to Transport Scotland at the address on Page 1 of this NTS. Formal representations are invited within six weeks of the advertised date of publication of the ES.



Proposed A90/A96 Haudagain Improvement

# INTRODUCTION

## Background

This document is the Non-Technical Summary (NTS) of the Environmental Statement (ES) for the A90/A96 Haudagain Improvement project. The project is being taken forward by Transport Scotland (TS), an agency of the Scottish Government.

The Haudagain Roundabout is located in the north-west of Aberdeen. The roundabout serves both the A90 and A96 Trunk Roads which enable access into and around Aberdeen from the north and north-west. The junction has significant queues, especially during peak periods, with delays on all approach arms.

The A90/A96 Haudagain Improvement project (referred to as 'the proposed scheme') includes approximately 500m of new dual carriageway link road, three new signal-controlled junctions to connect existing roads to the new link road, a detention basin to store and treat surface water run-off, new footpaths and shared footway/cycleways. The proposed scheme is illustrated on Figure 1.

It is anticipated that construction will start following completion of the Aberdeen Western Peripheral Route (AWPR) in late 2017 and be completed within 2 years.



## Environmental Impact Assessment

An Environmental Impact Assessment (EIA) of the proposed scheme is required under European and UK legislation. The ES reports the findings of the EIA work carried out on the proposed scheme.

The purpose of EIA is to investigate the likely effect of the proposed scheme on the biological, physical and historical environment, as well as on members of the public and on current or planned future use of the

environment. This NTS presents the key issues identified in the ES, including beneficial and adverse impacts considered to be of particular importance.

The EIA process provides a valuable opportunity to reduce potential environmental impacts through design refinement. The EIA process has included consultation, environmental surveys and technical assessments. The information gathered has informed decision-making throughout the design process, providing opportunity to address potentially significant impacts where practicable, for example by refinement of route alignment or by the incorporation of measures to avoid or reduce potential adverse impacts.

## Need for the Scheme

The Haudagain Roundabout is currently operating over its capacity leading to congestion and unreliable journey times. This has caused significant queueing and delays to traffic on approach roads including the A96(T) Auchmill Road and A90(T) North Anderson Drive. The proposed scheme seeks to improve this situation.

The need for the scheme is reflected in local planning policy. The Aberdeen City Council (ACC) Strategic Infrastructure Plan (SIP) (2013) notes that the north of Aberdeen currently suffers from serious congestion problems and indicates that the situation will become worse as future development is implemented. Middlefield is identified in the SIP as a regeneration priority alongside the works associated with the Haudagain Improvement scheme.

The Scottish Government has committed to improvements to Haudagain Roundabout following completion of the AWPR.

## Scheme Objectives

The objectives developed for the proposed scheme are as follows:

- to reduce congestion and unreliability by improving and sustaining base year 2004 journey times for commercial and public transport traffic until 2033;
- measures must minimise the risk of transport related accidents especially for vulnerable users in the vicinity of the junction to improve on 2002 – 2006 casualty levels;
- to make socially-inclusive and healthy transport modes more attractive to use, including cycling,

walking and public transport measures to be promoted in all measures;

- to minimise traffic induced severance on communities by ensuring measures do not have a significant detrimental impact on 2004 walk time accessibility; and
- to contribute to ACC's regeneration aims by complementing the development of the Logie/ Manor area of Middlefield.

- Option 4: signal-controlled crossroads;
- Option 5: new dual carriageway link road; and
- Option 13: signalised roundabout.

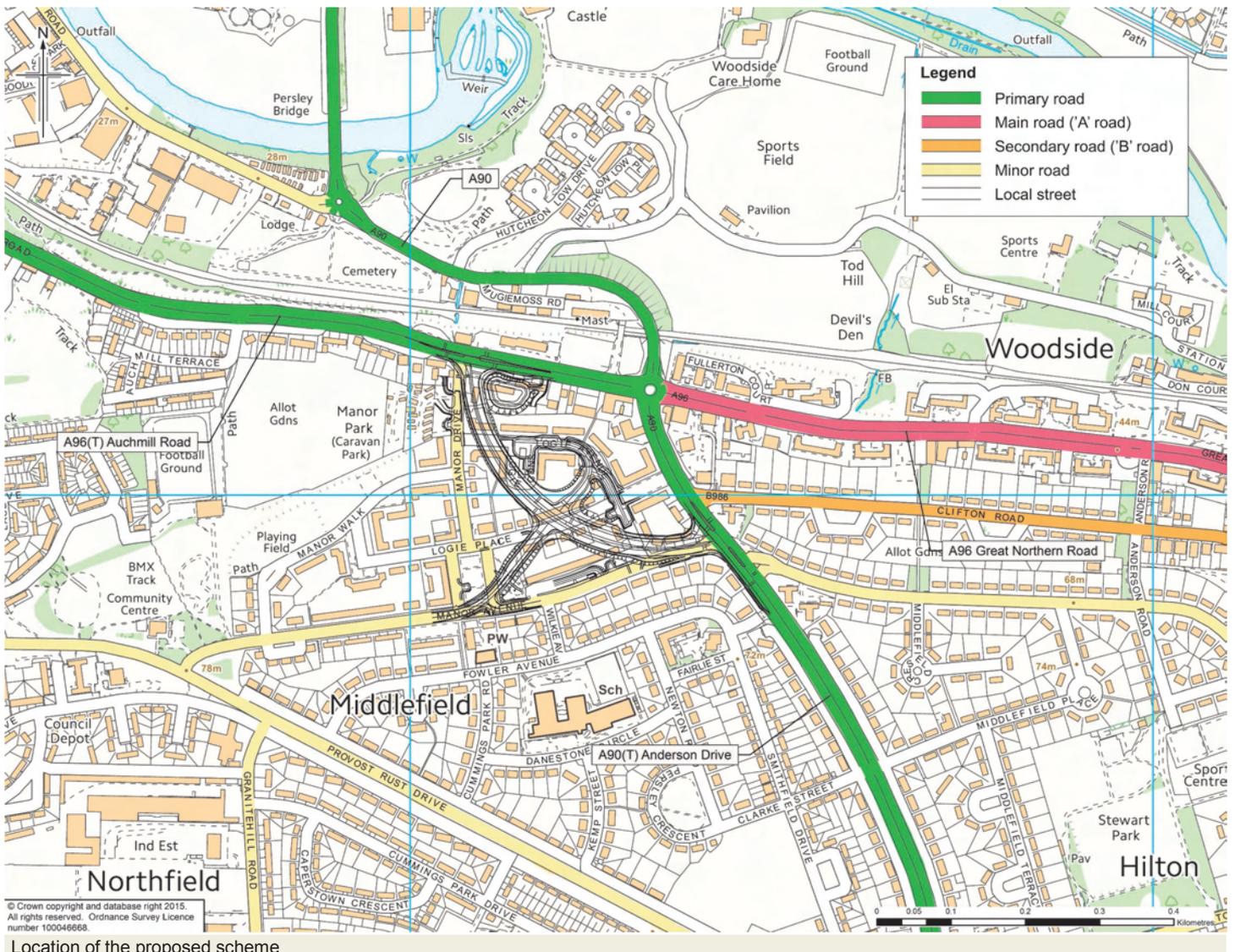
The detailed assessment for each option was undertaken in three parts: an engineering assessment, a traffic and economic assessment and an environmental assessment. Option 5 was selected as the preferred option based on both the outcomes of the assessment and performance against the scheme objectives. Option 5 was presented as the preferred option at public exhibitions held at the Lord Provost Henry E Rae Community Centre in Middlefield on the 24th and 25th April 2014.

## Alternatives Considered

As part of earlier work undertaken by ACC, 41 options were identified through consultation with stakeholders and the public. A further eight options were developed as part of further work undertaken. All 49 options were then assessed as part of a sifting process which considered operational performance, compliance with the scheme objectives, environmental impact, engineering complexity and cost. The following options were identified as satisfying all of the criteria and were therefore taken forward for a more detailed assessment:

## The Proposed Scheme

The proposed scheme is shown on Figure 2 and consists of a new dual carriageway link road. Signal-controlled T-junctions are proposed at the western and eastern extents of the new dual carriageway link road



where it connects to the A96 and A90 respectively. A signal-controlled crossroad is also proposed at the approximate midpoint of the new dual carriageway link road to provide local access to Logie Avenue to the north and to Manor Avenue to the south.

In addition, the following ACC side roads require reconfiguration as part of the proposed scheme:

- Manor Avenue to be realigned to tie-in to the new dual carriageway link road;
- Manor Drive to be stopped up at its northern extent;
- Logie Avenue to be realigned to tie-in to the new dual carriageway link road;
- Logie Place to be stopped up at its eastern extent;
- Logie Terrace to be stopped up at its southern extent; and
- Manor Terrace to be stopped up.

Other proposed features of the scheme include shared footway/cycleways, energy efficient street lighting and a detention basin which stores and treats drainage from the proposed roads.

## Overview of the Environmental Impact Assessment Process

The EIA has been undertaken as an integral part of the design process, informing decisions on the proposals as they were developed. Environmental constraints and issues were identified and incorporated into the decision-making process throughout. Information gathered through the extensive surveys undertaken for the proposed scheme was used in the assessment.

The aims of the EIA are to:

- gather information about the environment, identify environmental constraints and opportunities which may influence, or be affected by the proposed scheme;
- identify and assess potential environmental impacts;
- identify and incorporate measures into the proposed scheme design and operation to avoid, reduce or offset adverse impacts, and where possible enhance beneficial impacts; and
- assess the residual impacts of the proposed scheme i.e. those impacts remaining after

measures are implemented to avoid or reduce potential impacts.

Impacts were assessed by comparing the existing situation (the baseline conditions) to the conditions that would occur with the proposed scheme in place.



The River Don, north of the proposed scheme

## Consultation and Scoping

As part of the design development and assessment process a comprehensive consultation exercise was carried out with approximately 30 groups of consultees including ACC, Middlefield Area Residents Action Group and the Scottish Environment Protection Agency. Public exhibitions were held in April 2014 as part of a programme of ongoing public engagement and consultation. These were attended by over 250 people.

The purpose of the consultation was to:

- ensure that statutory consultees, other bodies with a particular interest in the environment and members of the public were informed of the proposals and provided with an opportunity to comment;
- collate baseline information regarding existing environmental site conditions;
- obtain input to the identification of potential impacts and the development of appropriate mitigation;
- inform the scope of the assessments being undertaken; and
- seek consultee input to the proposed scheme design.

The project team has worked closely with all the key stakeholders to develop a proposed scheme that aims to reduce the overall environmental impact through

Careful design. Stakeholder feedback was reviewed by the project team and incorporated into the design and assessment process where appropriate.

## IMPACTS OF THE PROPOSALS

### Community and Private Assets

The study area for the assessment contains land used for residential, commercial, community, development and recreational purposes including open space.

The general location of the proposed scheme and the wider Middlefield area, is designated as residential however, the ACC Local Development Plan safeguards some of this area for the Haudagain Roundabout improvement. The implementation of the proposed scheme would enable the progression of regeneration proposals for the Middlefield area as outlined in the Aberdeen Local Development Plan.

The proposed scheme would result in some significant adverse impacts to Community and Private Assets. These include the demolition or acquisition of 134 residential properties and 5 properties associated with 3 community facilities (Middlefield Community Project Office and Nursery, Logie Neighbourhood Services and Logie Health Clinic). The proposed scheme would also result in the loss of garden ground from several properties along Logie Avenue, Manor Avenue and North Anderson Drive. Additional impacts result from changes to the access routes to/from properties and parking provisions.

No commercial properties are to be demolished or impacted by land take as a result of the proposed scheme, with businesses likely to experience temporary benefits as a result of construction workers' spend. The proposed scheme is not expected to impact the future viability of any businesses in the area.

Reductions in traffic flows are anticipated for A90(T) North Anderson Drive and A96(T) Auchmill Road existing pedestrian crossing points. Increased traffic is anticipated through Middlefield as a result of the link road component of the proposed scheme, however new pedestrian crossings will be provided to maintain access to community facilities in the area.

Six areas of open space would be significantly affected through land-take. The proposed scheme would include exchange land to mitigate the loss of open space.

### Geology, Contaminated Land and Groundwater

The assessment was undertaken through desk based review and was supplemented by information from intrusive ground investigation works conducted between November 2014 and January 2015.

The proposed scheme is underlain by several types of soil and other material, including sands, gravels, alluvium and glacial till. The solid geology (rock) of Aberdeen Pluton Granite underlies the study area and extends to 12 metres below ground level. No sites of geological value are present within the study area.

26 potential sources of contamination have been identified within the study area. These include the Denhead Gas Works and Persley Service Station. However, by taking into account proposed mitigation measures no significant adverse impacts have been identified.



Ground investigation works

### Road Drainage and the Water Environment

The assessment of road drainage and the water environment considers impacts associated with surface water hydrology, flood risk, water quality and drainage. There are three watercourses in the study area: the River Don and two of its small tributaries, Scatter Burn and Woodside Burn, which are extensively culverted within the heavily urbanised catchment. The River Don and its tributaries are classified as salmonid waters (i.e. containing salmon, brown trout and sea trout).



Virtual reality model rendering looking north west along new link road

A detention basin is proposed as part of the scheme. A detention basin is a pond which stores and treats drainage from the proposed roads during times of rainfall. This will help prevent flooding and improve water quality. Modelling of Scatter Burn and Woodside Burn was undertaken to ensure that there is no increased flood risk as a result of the scheme.

Following the implementation of proposed mitigation during construction and operation, no significant impacts on the water environment are predicted.

## Ecology and Nature Conservation

There are no ecologically sensitive sites within the study area. Grassland and amenity grassland comprise the majority of habitat types within the study area with smaller areas of woodland and semi-natural habitats also present.

Bats were identified as the main receptor to be potentially impacted as a result of the proposed scheme and detailed assessments were undertaken to determine their presence in the area. No bat roosts were confirmed within the surveyed buildings or trees and bat activity within the area was considered low.

It was therefore determined that there would be no significant residual impacts on the ecology and nature conservation of the area following successful

implementation of proposed mitigation measures.

## Landscape and Visual

An assessment has been made of the impacts of the proposed scheme on the surrounding urban landscape (townscape). Potential impacts include changes to the townscape pattern and character, and these impacts have been assessed for both the winter year of opening (when all new planting would be in place but not yet fully matured and effective) and during the summer 15 years after opening (when mitigation planting has become established).

The assessment has identified five distinct Urban Character Areas (UCAs) within the study area, three of which would experience direct physical impacts as a result of the proposed scheme. Of these UCAs, two would be affected by significant impacts. The North Middlefield UCA (between Manor Avenue and the A96 (T) Auchmill Road) would experience the greatest direct impact as the majority of the proposed scheme and all of the associated demolition would be located within it. Here the impact would be significant both in winter year of opening and summer, 15 years after opening. Although the physical impact of the proposed scheme on South Middlefield UCA (south of Manor Avenue) would be limited, the setting of this area would be significantly affected by changes to views in winter year of opening and summer 15 years after opening. None of the remaining three UCAs (Auchmill Road UCA, Great Northern Road UCA, and South Middlefield and

Hilton UCA) would experience significant impacts in either winter year of opening or summer after 15 years.

An assessment has been made of the degree of anticipated change that the proposed scheme would have upon people's views from receptors such as houses, footpaths and outdoor spaces. Built receptors including residential properties and places of work have been split into groups for the purposes of the assessment.

The proposed scheme would have a visual impact on a total of 43 built receptor groups (predominantly residential) and seven outdoor receptors (a public park and six stretches of existing road with associated footways). Of the built receptor groups, in the winter year of opening 18 would experience significant visual impacts. By summer 15 years after opening, 14 would experience significant impacts. Of the outdoor receptors, in the winter year of opening four would experience significant impacts, reducing to three in the summer 15 years after opening.

Landscape mitigation measures proposed to reduce landscape and visual impacts and help integrate the proposed scheme into the urban setting are illustrated on Figure 3.

## Cultural Heritage

Cultural heritage sites within the study area include archaeological remains, historic buildings and historic landscape types. The assessment identified 22 archaeological remains, 11 historic buildings, and nine historic landscape types, mainly dating from the post-medieval period onwards. Potential impacts on these cultural heritage assets include changes to the surroundings and views of historic buildings and historic landscape types, or the requirement to remove existing features during construction (such as remains of previous settlements).

After mitigation is in place no significant residual impacts are predicted on any cultural heritage assets.

## Air Quality

The existing air quality throughout the area is characterised by the existing emissions from road traffic. Air quality modelling has been undertaken to determine potential for changes to air quality as a result of the proposed scheme, and any related effects on local communities. The assessment used air quality monitoring and modelling to consider the following pollutants emitted from vehicles: nitrogen oxides, nitrogen dioxide and fine particulate matter.

ACC has declared three Air Quality Management Areas (i.e. areas where air quality thresholds are being exceeded or would be exceeded in the near future). Of these, one is located within the study area, Anderson Drive/Haudagain Roundabout AQMA, which is declared for nitrogen dioxide (NO<sub>2</sub>).

The local air quality assessment considered 26 representative sensitive receptors. Modelling was used to predict pollutant concentrations at the year of proposed scheme opening (2018). A regional air quality assessment was also undertaken for the year of opening (2018) and the design year, 15 years after opening (2033). Potential for air quality effects during construction was also considered.

With the implementation of appropriate dust control measures, the construction phase of the proposed scheme is not predicted to cause any significant impacts. The air quality assessment also concluded that there are no significant adverse impacts predicted during operation.

## Noise and Vibration

The proposed scheme passes through an urban area, where the noise environment is currently largely dominated by road traffic on the existing A90, A96 and connecting side roads. The impacts from the scheme include both increases and decreases in noise levels at sensitive receptors. These noise changes are associated primarily with a receptor's proximity to the new link road, the bypassed Haudagain roundabout and proximity to existing roads seeing changes in traffic flow. There are also changes in the numbers of people likely to be bothered by airborne vibration, as the response to this is related to the noise levels.

The use of screening to reduce noise, where practicable, has been considered based on a combination of:

- the change in noise level with the scheme in place.
- The predicted noise level with the scheme in place.
- The extent to which noise barriers could be successfully integrated into the urban setting in combination with the landscape mitigation proposals.

Three noise barriers are proposed as part of the scheme to mitigate for potential noise increases.



Baseline noise monitoring

A noise assessment was undertaken for the short term (year of opening 2018) and the long term (design year 2033).

Key findings of the short-term assessment are:

- more sensitive receptors experiencing perceptible noise increases than would experience perceptible decreases.
- 105 more dwellings would experience Major adverse noise impact during daytime.
- 89 more dwellings would experience Moderate adverse noise impact during daytime.

Key findings of the long-term (2033) assessment comparing the situation with the proposed scheme and mitigation in place, to the without scheme (Do Minimum) situation are:

- a reduction in the number of noise sensitive receptors, including dwellings, experiencing perceptible daytime noise impacts in the long-term with the proposed scheme in place.
- 40 more dwellings would experience Major adverse noise impact during daytime in the long-term, largely due to their proximity to the proposed scheme.
- 207 fewer dwellings would experience Moderate adverse noise impact. Without the scheme in place the A96 Great Northern Road and the A90 (T) North Anderson Drive would become heavily congested, resulting in an increase in traffic flows along local roads in the Woodside area (including

Clifton Road, Hilton Drive and Hilton Ave) and increased noise levels at nearby properties.

- a similar number of dwellings would be affected by noise impact at night-time in the long-term both with and without the scheme.
- some construction works would take place in the vicinity of sensitive receptors, particularly Logie Avenue, Logie Place and Manor Avenue. Significant temporary noise and vibration effects are likely at these locations and mitigation measures will need to be taken to reduce these.

The assessment shows that there would be an overall neutral long-term noise impact with the scheme in place. This is due to the transference of traffic from smaller local roads onto the A96 and A90 reducing local traffic congestion.

The Noise Insulation (Scotland) Regulations 1975 set out criteria for the provision of secondary glazing to selected rooms in qualifying properties where noise increases above a threshold occur as a consequence of traffic levels associated with a road improvement scheme. Potential impacts, mitigation and residual impacts discussed within the Environmental Statement do not include the benefits of such secondary glazing, entitlement to which will be assessed as required by the legislation.

## Effects on All Travellers

This assessment considered the potential impacts of the proposed scheme on pedestrians, cyclists and equestrians (referred to as Non-Motorised Users (NMUs)) in terms of journey lengths and amenity. Impacts on vehicle travellers are also considered in terms of changes to driver stress.

Within the study area five core paths, one aspirational core path (i.e. proposed future route), National Cycle Route 1, and several other local footpath and cycle paths are present.

With the proposed scheme in place, beneficial impacts for NMUs were identified as a result of the provision of additional footpaths and shared footway/cycleways. These would maintain existing access and also provide safer access across the proposed scheme. Some adverse visual and noise impacts are predicted for NMUs using paths in the immediate vicinity of the proposed scheme, however, this would be offset by improvements to safety for NMUs passing through the study area. There would also be beneficial noise and air quality impacts predicted for a number of NMUs using paths in the immediate vicinity of the proposed scheme.

paths in the immediate vicinity of the proposed scheme.

Overall, journey lengths and the amenity value of paths would not be significantly affected with the proposed scheme in place. Access to outdoor areas would not be significantly affected as a result of the operation of the proposed scheme. Impact on users of public transport (i.e. bus users) in the study area would benefit due to an overall reduction in journey times.



Existing cycle and pedestrian provision on Auchmill Road

## Materials

The amount of material required for the proposed scheme has been estimated and the range of material wastes likely to be generated described. Potential impacts associated with the use of material resources and the management of waste during the construction of the proposed scheme were considered.

By applying key material and waste management principles, the impacts on natural resources and need for permanent disposal of wastes would be reduced. In particular, this would be achieved by re-using existing soils and infrastructure, considering the environmental impacts of products, and sourcing materials from local suppliers.

The potential for impacts on material resources or waste disposal facilities is principally related to the performance of the Contractor during completion of the construction works. Any surplus materials or waste sent off site could have a resultant impact on the available waste management infrastructure and depletion of resources. The risk of such impacts occurring would be managed and reduced through the development and application of several plans addressing different aspects of construction site management, such as a Construction Environmental Management Plan and a Site Waste Management Plan .

With the implementation of proposed mitigation no significant impacts affecting material resources or waste infrastructure are predicted. The construction of the proposed scheme is expected to give rise to small-scale, localised, impacts only.

## Policies and Plans

The principle of development of the proposed scheme is established and generally supported in national, regional and local planning policy including the ACC Local Development Plan, Aberdeen City and Shire Strategic Development Plan, and the Scottish Government's Infrastructure Investment Plan. The proposed scheme supports regional transport policy objectives as part of a wider strategy to assist in providing enhanced connectivity to deliver prosperity and connect communities across the region.

The assessment has identified where potential impacts associated with the proposed scheme could result in potential non-compliance with aspects of policy. The proposed measures to address potential impacts have been identified in the specialist assessment chapters of this ES (i.e. chapters 7-16). Taking this into account the proposed scheme is considered to be broadly compliant with national, regional and local planning policies.

## Cumulative Assessment

The cumulative assessment provides an overview of the combined impacts of the proposed scheme and also includes impacts from other proposed developments.

Potential for cumulative impacts due to the combined effect of a number of different environmental impacts of the proposed scheme on a single receptor/resource was assessed. No significant cumulative construction or operation impacts on ecological receptors are anticipated. Cumulative construction and operation impacts on several residential receptors, in close proximity to the proposed scheme, have been identified as a result of noise and visual impacts. In addition to cumulative noise and visual impacts, some receptors would also experience significant land-take and/or severance of vehicular access.

The combination of the proposed scheme and the AWPR scheme would be beneficial to traffic flows in the Haudagain area overall. The Third Don Crossing road scheme would also contribute beneficially to the area by re-routing traffic away from the existing Haudagain Roundabout.

Figure 1

