# SEA ENVIRONMENTAL REPORT – COVER NOTE

## PART 1

**To:** SEA.gateway@scotland.gsi.gov.uk

## PART 2

An Environmental Report is attached for:

Aberdeen Local Transport Strategy (LTS) Refresh 2016-2021

The Responsible Authority is:

Aberdeen City Council

## PART 3

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## PART 4

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# NON-TECHNICAL SUMMARY

## Introduction

In accordance with the Environmental Assessment (Scotland) Act 2005, Aberdeen City Council is carrying out a Strategic Environmental Assessment (SEA) of the refresh of the Aberdeen Local Transport Strategy (LTS) and its accompanying Action and Delivery Plan.

SEA is a systematic method for considering the likely environmental effects of Plans, Programmes and Strategies (PPS). It aims to:

- Integrate environmental factors into PPS preparation and decision-making;
- Improve PPS and enhance environmental protection;
- Increase public participation in decision-making; and
- Facilitate openness and transparency of decision-making.

The key stages of the SEA process are:

- **Screening** – Determining whether the PPS is likely to have significant environmental effects and whether SEA is required;
- **Scoping** – Deciding on the scope and level of detail to be included in the Environmental Report and the period for consultation;
- **Environmental Report** – Publishing and consulting upon an Environmental Report relating to the plan and its anticipated environmental effects;
- **Adoption** – Providing information on the adopted plan, including how consultation outcomes have been taken into account, and identifying a monitoring framework; and
- **Monitoring** – Monitoring significant environmental effects and taking appropriate remedial action for any unforeseen effects.

This document therefore forms the Environmental Report for the Aberdeen Local Transport Strategy. The purpose of the Report is to:

- provide information on the LTS; and
- identify, describe and evaluate the likely significant effects of the LTS and its reasonable alternatives.

The Report takes into account responses received by the consultation authorities - Historic Scotland, SEPA (Scottish Environment Protection Agency) and SNH (Scottish Natural Heritage) – during the Scoping stage of the SEA process and during consultation on the draft Environmental Report, and provides an objective account of the anticipated environmental effects of implementing the LTS.

## Purpose of the LTS

The refreshed LTS covers the period 2016-2021 and sets a vision, aims, desired outcomes and objectives for transport in Aberdeen.

The vision is to develop *A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment*.

This vision is supported by 5 aims:

1. *A transport system that enables the efficient movement of people and goods.*

2. *A safe and more secure transport system.*
3. *A cleaner, greener transport system.*
4. *An integrated, accessible and socially inclusive transport system.*
5. *A transport system that facilitates healthy and sustainable living.*

In terms of outcomes, in five years Aberdeen's transport system will have:

1. *Increased modal share for public transport and active travel;*
2. *Reduced the need to travel and reduced dependence on the private car;*
3. *Improved journey time reliability for all modes;*
4. *Improved road safety within the City;*
5. *Improved air quality and the environment; and*
6. *Improved accessibility to transport for all.*

Objectives have been set for various topics and modes of transport and these are grouped under five headings:

- Support
    - Strategic Rail Network
    - Shipping and Ferry Services
    - Air Services
    - Freight
    - Trunk Road Network
    - Aberdeen Western Peripheral Route
- Maintenance:
    - Road Carriageway and Footway Maintenance
    - Lighting
    - Structures
    - Flooding
    - Winter Maintenance
    - Contingency Planning and Utilities
- Management:
    - Car Parking
    - Community and Demand Responsive Transport
    - Taxis and Private Hire Cars
    - Coaches
    - Traffic Management and Road Safety
    - Enforcement
    - Air Quality
    - Noise
- Sustainable Development and Travel:
    - Land Use Planning
    - Travel Plans
    - Car Sharing
    - Car Clubs
    - Ultra Low Emission Vehicles
    - Travel Information and Awareness
    - School Travel and Young People
    - Climate Change Mitigation and Adaptation

    - Biodiversity and the Green Space Network
- Improvements:
    - Walking
    - Cycling
    - Bus
    - Rapid Transit
    - Powered Two Wheelers
    - Road Improvements
    - Intelligent Transport Systems (ITS)
    - Public Realm and the Sustainable Urban Mobility Plan (SUMP).

The actions that the Council and partners will pursue in order to meet these objectives are identified in a separate Action and Delivery Plan.

The objectives and actions complement the overall vision, aims and desired outcomes of the LTS. The Environmental Report therefore assesses the vision and each of the aims, and objectives (with supporting actions) identified in the LTS against the SEA topics (biodiversity, air, climactic factors, soil, water, landscape, population, human health, cultural heritage and material assets) in order to identify the likely significant effects of implementing the proposed Strategy.

**Environmental Context**

There are a number of environmental problems facing Aberdeen at present. A thorough review of the available environmental data has helped identify the baseline within which the LTS is being developed. Key points to note from this review are:

- Carbon dioxide ($CO_2$) emissions are fluctuating despite the Scottish Government's reduction targets. Transport remains a significant contributor to these;
- Aberdeen consumes more resources per person than any other Scottish city. Again, transport is a significant contributor to this;
- There is a need for the transport network to become more resilient to, and able to adapt to the effects of, climate change;
- Areas of Aberdeen suffer from poor air quality. Three Air Quality Management Areas (AQMAs) have been declared (see Appendix C), where regular exceedances of the annual mean limit value for nitrogen dioxide ($NO_2$) and particulate matter (PM10) occur. While buses and HGVs contribute most to $NO_2$ emissions, cars and taxis contribute most to PM10;
- There are fourteen Noise Management Areas (NMAs) in the City resulting from road traffic noise and two candidate NMAs resulting from railway noise (see Appendix C);
- Water quality in Aberdeen is generally good, although river quality is rated 'moderate' or 'poor';
- Aberdeen has a broad network of sites important for biodiversity, cultural heritage and landscape which should be protected and, where possible, enhanced;
- Life expectancy is increasing. An ageing population raises implications for ensuring that mobility and accessibility can be maintained into old age;
- The population of the City and the wider region is increasing, putting pressure on an already congested transport network;

- Car ownership is increasing, exacerbating pressure on the network and contributing to poor health in terms of pollution, air quality, noise and inactivity;
- Public road lengths have remained static in recent years despite the growing population and rising car ownership, thus contributing to congestion; and
- There have been limited improvements in public transport infrastructure, in terms of new railway stations, Park and Ride sites and interchanges, etc. although this is forecast to change over the life of this LTS.

The LTS must therefore recognise and aim to remedy existing environmental concerns that are caused by transport or which transport could play a part in remedying. These include:

- Impacts on biodiversity in terms of habitat fragmentation and land take from transport, and pollution, noise and other disturbances resulting from transport operations;
- High volumes of road traffic leading to poor air quality, and thus impacting on the health of humans and other species and causing damage to buildings;
- Fluctuating carbon dioxide emissions, contributing to climate change;
- Impacts on soil and water in terms of pollution and contamination;
- Reduced visual amenity of the landscape;
- An increasing and ageing population, with rising car ownership;
- Increasing recognition of the ill-effects of environmental noise;
- A lack of physical activity amongst the populace;
- Loss of, or limited access to, areas of open and green space; and
- Pressure on cultural heritage sites from development, traffic, parking demand and transport infrastructure.

Without implementation of the LTS it is anticipated that many of these environmental problems will remain or potentially worsen, particularly:

- Loss of biodiversity resulting from habitat fragmentation, land take and pollution;
- Poor air quality resulting from road traffic;
- Increasing $CO_2$ and greenhouse gas emissions, further contributing to climate change;
- Transport infrastructure that is not resilient and adaptive to climate change;
- Water and soil pollution resulting from new infrastructure and increased traffic;
- Negative impacts on the landscape and the setting of attractive and important buildings and sites;
- Poor health resulting from inactivity and pollution; and
- A lack of facilities to enable sustainable transport.

It is anticipated that implementation of the LTS can contribute to addressing many of these concerns. At the very least, care should be taken to ensure that the LTS does not contribute to a worsening of conditions.

## Assessment of environmental effects

For the purposes of the environmental assessment, two scenarios were considered – a 'preferred strategy' scenario (with a refreshed LTS in place) and a 'without LTS' scenario. The assessment revealed that the scenario with a refreshed LTS in place performed considerably better than a scenario with no LTS in place. In the latter scenario, with the Council not looking to tackle the problems arising from transport in a coherent and co-

ordinated way through the implementation of a LTS, current problems attributable to transport (economic, social and environmental) are likely to worsen. On the other hand, the adoption and implementation of an updated LTS, identifying new projects and interventions to be taken forward, supported by ambitious objectives and aspirations, and forming a strong policy context for transport and the environment going into the future, will result in a cleaner, greener transport system, with safety and accessibility benefits for all, and where the negative impacts on the economy and the environment are significantly reduced.

The key points to be noted from the assessment are provided in the table below:

| SEA Topic | Comments |
|---|---|
| **Biodiversity** | Implementation of the LTS will have largely positive impacts on biodiversity, although some impacts may be negative and result in disbenefits.<br><br>In terms of positive impacts, the LTS primarily seeks a reduction in road traffic and an increase in the use of sustainable modes of transport. This should have multiple benefits for biodiversity, namely:<br>• Reduced land take from transport by reducing the need for construction of large-scale transport facilities such as roads and bridges to cope with growing demand for motorised transport. This will reduce the likelihood of damage and disruption to protected/vulnerable habitats and species;<br>• A reduction in environmental pollution, noise and artificial light which can negatively impact upon vulnerable species;<br>• Reduced run-off from roads into soil and watercourses.<br><br>Other potentially positive impacts include:<br>• Protection to habitats and species afforded by maintenance and flood prevention schemes; and<br>• Benefits to nocturnal species through a reduction in street lighting, especially overnight.<br><br>In addition, a specific biodiversity objective seeks to minimise the impact of transport by committing the Council to protecting, restoring or enhancing habitats and species during implementation of transport schemes, avoiding severance of habitats, and creating new habitats where necessary and appropriate.<br><br>Those impacts identified as potentially negative and which will require mitigation, are:<br>• Disruption to aquatic species from an increase in shipping and harbour activity;<br>• Short-term disruption (in terms of additional noise and pollution) resulting from road maintenance works, including winter maintenance; and<br>• Possible disruption to species and their habitats through an increase in cycle routes and cycling through areas of natural beauty and greenspace. |

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| **Air** | Implementation of the LTS will have largely positive impacts on air quality, although some impacts are potentially negative and could lead to disbenefits.<br><br>Road transport is currently the main contributor to poor air quality in Aberdeen. The LTS seeks to address this by reducing the need to travel, reducing reliance on the private car, reducing road traffic in favour of cleaner modes of transport and reducing congestion. For journeys where the motor car is the preferred mode of transport, the Strategy seeks to promote car sharing, the use of Car Clubs and the use of low emission vehicles, all of which will serve to reduce the impact of transport on air quality. The Strategy also states that mitigation measures will be required for any transport schemes that could negatively impact upon air quality.<br><br>Those impacts identified as potentially negative for air quality and which will require mitigation, are:<br>• An increase in shipping and subsequent traffic around the Harbour, currently within an AQMA;<br>• Congestion and traffic displacement resulting from road improvement and maintenance schemes;<br>• Reducing vehicle speeds which can cause an increase in certain emissions;<br>• An increase in car usage resulting from reduced street lighting discouraging walking and cycling during hours of darkness; and<br>• An increase in motorcycle use which could lead to an increase in certain harmful emissions. |
| **Climatic Factors** | Implementation of the LTS will, on the whole, have a long-term positive impact on climatic factors, although some impacts may potentially be negative.<br><br>Transport emissions, particularly $CO_2$, are a significant contributor to climate change. The LTS seeks to reduce the need to travel, to reduce reliance on the private car, to reduce road traffic in favour of cleaner modes of transport, to reduce congestion and to encourage more responsible vehicle use (car sharing, Car Clubs, low emission vehicles). Should the Strategy be successful in achieving these aspirations, climate-changing emissions would significantly reduce.<br><br>In addition, the LTS contains a specific objective on climate change adaptation and mitigation, which looks to reduce emissions and to develop climate-resilient infrastructure. Use of low carbon technologies for street lighting will also play a part in reducing emissions.<br><br>Those impacts identified as potentially negative and which will require mitigation, are:<br>• An increase in shipping and activity around the harbour which could increase emissions;<br>• Congestion and traffic displacement resulting from road improvement and maintenance schemes;<br>• Reducing vehicle speeds which can cause an increase in certain emissions; and<br>• An increase in car usage resulting from reduced street lighting |

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| | discouraging walking and cycling during hours of darkness. |
| **Soil** | Although the majority of LTS objectives have a neutral impact on soil, some positive and negative impacts are anticipated. In terms of the positives, there will be long-term benefits relating to reduced land take resulting from the LTS's support for brownfield development and the promotion of non-car modes of transport which should reduce the need for large-scale transport schemes (particularly new roads). Reduced run-off from roads to soil is also anticipated to result from improved road maintenance and improved flood defences. There is also a commitment to incorporate SUDS in any new road or road improvement schemes. Measures to improve air quality in the LTS will also positively impact on soil, through reducing the impacts of air pollution. Potentially negative impacts relate to the risk of soil contamination from transport improvement and maintenance schemes, which should be overcome by mitigation. |
| **Water** | Although the majority of LTS objectives have a neutral impact on water, some positive and negative impacts are anticipated. In terms of the positives, a decrease in motorised traffic would reduce the need for new transport facilities. Improved and better-maintained roads can likewise reduce run-off. There is also a commitment to incorporate SUDS in any new road or road improvement schemes. In terms of negative impacts, it is recognised that maintenance, improvement and flood prevention schemes could result in the release of pollutants into watercourses during construction, although this can be overcome by careful mitigation. In addition, increases in shipping and water freight to and from Aberdeen could lead to an increase in water pollution. |
| **Landscape** | The impact on the landscape of implementation of the LTS is mixed, although more positive than negative impacts are anticipated.<br><br>The LTS's primary aspiration is to discourage private car use and encourage and facilitate the use of alternative modes. The main long-term positive anticipated from this is a reduced need for construction of new roads and bridges which may otherwise be inevitable with continually increasing car usage and which could lead to an unsightly urban landscape. A reduction in traffic, coupled with urban realm improvements, including reducing the impact of parking, and the implementation of SUDS would contribute towards a more aesthetically pleasing landscape, less troubled by the presence of vehicles and congestion. Improvements in street lighting can also contribute to improving the landscape setting, while road maintenance and flood prevention schemes serve to offer protection to the landscape.<br><br>In terms of potentially negative impacts, these include:<br>• Flood defences detracting from areas of natural beauty; and<br>• An increase in unsightly traffic management and speed reduction features leading to a cluttered urban environment.<br>There may also be some more short-term negative impacts on the landscape arising from maintenance works leading to an unsightly environment, although such activities are obviously temporary. |
| **Population** | The impact of the LTS on the population is anticipated to be mostly positive, although some potentially negative impacts have been identified. |

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| | In terms of the economy, long-term benefits will result from reduced congestion and improved journey time reliability. Benefits will also accrue from City Centre regeneration proposals (including an improved transport environment) and the more efficient use of car parking spaces at key destinations.<br><br>In terms of accessibility and social inclusion, the LTS will bring long-term benefits by raising awareness of, and facilitating travel by, walking, cycling, public transport, community and social transport, car sharing and car clubs to ensure that all people can access the destinations and services they need, and that transport is convenient, safe and inexpensive. Responsible management of blue badge parking spaces will also improve accessibility for those with disabilities.<br><br>Potentially negative impacts identified are:<br>• Delays and congestion resulting from improvement and maintenance schemes, albeit these are short- short term; and<br>• Social exclusion resulting from reduced levels of street lighting which could discourage some people, especially the more vulnerable members of society, from travelling during the hours of darkness. |
| **Human Health** | The impact of the LTS on health is anticipated to be mostly positive, although some potentially negative impacts have been identified.<br><br>Long-term positive impacts will result from the Strategy's aspirations to encourage more walking and cycling and to reduce car use which will facilitate an increase in physical activity, improve air quality and reduce noise, thus improving the health and wellbeing of the population. Improving access to the outdoors and to healthcare facilities has obvious health benefits, whilst reduced traffic, reduced speeds, road and bridge maintenance activities, accident and flood prevention schemes and a more secure night-time environment will improve the safety of the travelling public, reducing the number of transport-related accidents and injuries and reducing incidences of assault and abuse. Road maintenance can also reduce noise, with resulting mental health benefits.<br><br>Potentially negative impacts, identified, which will require mitigation, are:<br>• A decline in air quality around the Harbour area resulting from increased shipping;<br>• An increase in road accidents and poor perceptions of safety as a result of reduced levels of street lighting;<br>• An increase in congestion during road maintenance works and the displacement of traffic to alternative streets, with road safety and health implications; and<br>• A decline in air quality resulting from increased motorcycle use. |
| **Cultural Heritage** | The impact of the LTS on cultural heritage is anticipated to be mostly positive, although some potentially negative impacts have been identified.<br><br>In terms of positive impacts, these largely relate to the traffic reduction aspirations outlined in the LTS and are therefore long-term impacts. Less traffic around historically and/or culturally important sites will improve the setting of such sites, ensuring views are not blighted by parked cars, traffic |

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| | or congestion, and will reduce emissions and pollution around such sites, which are known to cause deterioration and damage to ancient buildings and monuments. Noise will also reduce, allowing people to better enjoy the experience of being in and around important buildings and sites. The setting of such sites may also be enhanced by improvements to street lighting, while valuable assets will be protected by an increase in flood defences. Accessibility improvements will also have long-term benefits in allowing more people to reach and enjoy such sites.<br><br>In terms of possible negative impacts, these relate, in the short term, to an unsightly environment around such sites as a result of transport improvement and maintenance activities, albeit this is a temporary situation. In the longer term, an increase in traffic management features in certain areas, for example conservation areas, could undermine the distinctiveness of such sites, while an intensification of maintenance activities around such sites could increase vibrations, potentially leading to damage. |
| **Material Assets** | Implementation of the LTS is anticipated to have an overwhelmingly positive impact on material assets. This is largely because the Strategy outlines a range of improvements and additions to the City's transport network which will benefit members of the travelling public and contribute to the development of a fit-for-purpose, safe and clean 21st Century transport system. |

## Mitigation

The assessment therefore revealed a number of potentially negative impacts resulting from implementation of the LTS. In order to minimise the effects of these, a series of mitigation measures have been identified.

| SEA topic | Proposed Mitigation Measures |
|---|---|
| **Biodiversity** | The conservation status of protected species will continue to be monitored and corrective action applied should implementation of any actions arising from the LTS be seen to be putting this in jeopardy. Any proposals within areas known to host protected or vulnerable species and habitats will be required to demonstrate how disruption to these will be minimised and to investigate ways of enhancing biodiversity as part of scheme implementation. All materials used during construction and maintenance activities will be expected to meet strict environmental standards and every effort will be made to minimise the risk of pollution and contamination resulting from such activities. Maintenance and improvement works will be completed in as timely a manner as possible to ensure that noise and disruption are kept to a minimum. |

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| **Air Quality** | The Council will monitor the air quality impacts of schemes and apply remedial or corrective action should impacts prove unacceptable. Air quality will continue to be a material consideration in the planning process for any projects requiring planning permission. Any projects that could potentially lead to deterioration in air quality will be subject to an Air Quality Assessment and will be required to fully mitigate their impact before being allowed to proceed. It is anticipated that the impact of any schemes that negatively impact upon air quality will be at least partly offset by efforts elsewhere to reduce traffic volumes, promote sustainable travel, improve traffic flow and improve the environmental performance of vehicles. Maintenance and improvement works will be completed in as timely a manner as possible to ensure that congestion and air quality impacts are kept to a minimum and that diversionary signage guides drivers to appropriate alternative routes. |
| **Climatic Factors** | It is hoped that the impacts of any projects or schemes that have the potential to increase climate-changing emissions are offset by measures to reduce emissions, ultimately resulting in no net increase. For example: any emissions rising from an increase in shipping should be offset by a reduction in road freight, and speed reduction measures that have the potential to increase emissions should be offset by the creation of a more welcoming pedestrian and cycle environment that encourages more active travel at the expense of car travel. Maintenance and improvement works are largely unavoidable but their impact will be short-term and minimised be ensuring works are completed in as timely a manner as possible and that diversionary signage guides drivers to appropriate alternative routes. |
| **Soil** | During maintenance and improvement works, strict risk management procedures will be put in place to minimise the risk of soil pollution. |
| **Water** | The impact of any LTS activities on water quality will be monitored and corrective or remedial action applied if it is found that any activities are having an unacceptable impact. During maintenance and improvement works, strict risk management procedures will be put in place in order to minimise the risk of water pollution. |
| **Landscape** | Any transport projects or features that have the potential to negatively impact upon the landscape will be kept to a minimum and sited sensitively so as to complement and integrate with the landscape rather than detract from it. Maintenance and improvement works that create an unattractive landscape will be undertaken in as timely a manner as possible. |
| **Population** | Schemes that have the potential to negatively impact upon any groups will be undertaken on a pilot basis, their effects carefully monitored, and corrective action applied if needed before full implementation takes place. Schemes that have a significant negative impact will not be taken forward. Improvement and maintenance works with the potential to cause disruption to the travelling public will be completed in as timely a manner as possible and diversionary signage used to guide travellers to alternative routes. |

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| **Human Health** | Any projects or schemes with potentially undesirable health and safety implications will be implemented on a trial basis and their effects carefully monitored and assessed. Those with an unacceptable impact will not be taken forward for full implementation. Improvement and maintenance works will be completed in as timely a manner as possible in order to minimise noise and emissions. |
| **Cultural Heritage** | Any transport projects or features that have the potential to negatively impact upon sites of cultural and/or historical interest will be kept to a minimum and sited sensitively so as not to detract from, or hinder access to, such sites. |

No negative impacts on Material Assets are anticipated, therefore no mitigation measures are proposed for this topic.

## Monitoring

Monitoring will be undertaken of a number of indicators to assess:

- Whether the LTS is having the desired effects in terms of minimising transport's impact on the environment;
- Whether any unintended consequences of implementation of the LTS have arisen that require to be addressed; and
- Whether any other social or environmental changes are taking place that the LTS may have to address or respond to, either now or in the future.

A monitoring exercise will be undertaken annually and the results reported and published on the Council's website. Indicators used for monitoring the Strategy are anticipated to include:

- Usual method of travel to work amongst employed adults;
- Usual method of travel to school amongst pupils in full-time education;
- Use of local bus and train services;
- Frequency of walking and cycling;
- Cycling levels on key corridors;
- Frequency of driving;
- Households with cars available for private use;
- Traffic levels in Aberdeen;
- Traffic congestion in Aberdeen;
- Petrol and diesel consumption of road vehicles;
- Carbon dioxide emissions from road transport;
- Air quality data ($NO_2$ and PM10);
- Number and condition of Noise Management Areas;
- Water quality;
- Condition of qualifying features of River Dee Special Area of Conservation (SAC);
- Conservation status of protected species;
- Quality and availability of public open space;
- Road casualties;
- Public road lengths;
- Cycleway lengths;
- Public transport infrastructure and assets;
- Number of Car Club vehicles available to the public;
- Number of electric vehicle charge points available to members of the public;

- Life expectancy at birth;
- Established population; and
- Population and household projections

If the LTS is not performing as anticipated, the Council will immediately review the policies contained within it and identify those that require relaxing or strengthening.

# 1 INTRODUCTION

## 1.1 The Environmental Report

The Environmental Assessment (Scotland) Act 2005 requires the preparation of a Strategic Environmental Assessment (SEA) for a wide range of plans, programmes and strategies (PPS). The objectives of the Act are to:

- Provide a high level of protection for the environment;
- Integrate environmental considerations into the preparation and adoption of plans;
- Promote sustainable development; and
- Increase public participation in environmental decision-making.

The key stages of the SEA process are:

- **Screening** – Determining whether the PPS is likely to have significant environmental effects and whether SEA is required;
- **Scoping** – Deciding on the scope and level of detail to be included in the Environmental Report and determining the required consultation period;
- **Environmental Report** – Publishing and consulting upon an Environmental Report on the plan and its anticipated environmental effects;
- **Adoption** – Providing information on the adopted plan, including how consultation outcomes have been taken into account, and identifying a monitoring framework; and
- **Monitoring** – Monitoring significant environmental effects and taking appropriate remedial action for any unforeseen significant environmental effects.

This document comprises the Environmental Report for the Aberdeen Local Transport Strategy (LTS) and its accompanying Action and Delivery Plan, in accordance with Section 5(3) of the Environmental Assessment (Scotland) Act. It takes into account the responses received by the consultation authorities - Historic Scotland, SEPA (Scottish Environment Protection Agency) and SNH (Scottish Natural Heritage) – during Scoping and consultation on the draft Environmental Report, and provides an objective account of the anticipated environmental effects of the implementation of the LTS

## 1.2 The Aberdeen Local Transport Strategy (LTS)

Key facts relating to the LTS are set out in Table 1.1 below:

**Table 1.1: Key facts relating to the LTS**

| | |
|---|---|
| **Name of Responsible Authority** | Aberdeen City Council |
| **Title of PPS** | Aberdeen Local Transport Strategy Refresh 2016-2021 |
| **What prompted the PPS (e.g. legislative, regulatory or administrative provision)** | The previous Strategy had reached the end of its anticipated lifespan. |
| **Subject (e.g. transport)** | Transport |
| **Period covered by PPS** | 2016-2021 |
| **Frequency of updates** | 5 years |
| **Area covered by PPS** | Aberdeen City |
| **Purpose and/or objectives of PPS** | To set a vision, aims and outcomes for transportation in Aberdeen, and a series of objective and actions for achieving these. |
| **Contact point** | Transport Strategy and Programmes<br>Aberdeen City Council<br>Business Hub 4, Ground Floor North<br>Marischal College<br>Broad Street<br>Aberdeen AB10 1AB<br>(01224) 523327 |

A Local Transport Strategy, as prepared by a local authority, is expected to conform both to Scotland's National Transport Strategy (2006) and the relevant Regional Transport Strategy (in this case the Nestrans Regional Transport Strategy for North East Scotland 2013 Refresh) and should identify policies and actions to be delivered and implemented locally to meet the shared vision for transport in Scotland and the region, as articulated in the respective national and regional documents.

In turn, the LTS will inform and influence subsequent local strategies and action plans to be delivered by Aberdeen City Council and its partners, such as an Active Travel Action Plan, Road Safety Action Plan, Bus Information Strategy, Ultra Low Emission Vehicle Action Plan, Air Quality Action Plan and Noise Action Plan.

The LTS has a vision to develop *A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment*.

This vision is supported by 5 aims:

1. *A transport system that enables the efficient movement of people and goods.*
2. *A safe and more secure transport system.*
3. *A cleaner, greener transport system.*
4. *An integrated, accessible and socially inclusive transport system.*
5. *A transport system that facilitates healthy and sustainable living.*

In terms of outcomes, in five years Aberdeen's transport system will have:

1. *Increased modal share for public transport and active travel;*

2. *Reduced the need to travel and reduced dependence on the private car;*
3. *Improved journey time reliability for all modes;*
4. *Improved road safety within the City;*
5. *Improved air quality and the environment; and*
6. *Improved accessibility to transport for all.*

Objectives have been set for various topics and modes of transport and these are grouped under five headings:

- Support
    - Strategic Rail Network
    - Shipping and Ferry Services
    - Air Services
    - Freight
    - Trunk Road Network
    - Aberdeen Western Peripheral Route
- Maintenance:
    - Road Carriageway and Footway Maintenance
    - Lighting
    - Structures
    - Flooding
    - Winter Maintenance
    - Contingency Planning and Utilities
- Management:
    - Car Parking
    - Community and Demand Responsive Transport
    - Taxis and Private Hire Cars
    - Coaches
    - Traffic Management and Road Safety
    - Enforcement
    - Air Quality
    - Noise
- Sustainable Development and Travel:
    - Land Use Planning
    - Travel Plans
    - Car Sharing
    - Car Clubs
    - Ultra Low Emission Vehicles
    - Travel Information and Awareness
    - School Travel and Young People
    - Climate Change Mitigation and Adaptation
    - Biodiversity and the Green Space Network
- Improvements:
    - Walking
    - Cycling
    - Bus
    - Rapid Transit
    - Powered Two Wheelers

- Road Improvements
- Intelligent Transport Systems (ITS)
- Public Realm and the Sustainable Urban Mobility Plan (SUMP).

The actions that the Council and partners will pursue in order to meet these objectives are identified in a separate Action and Delivery Plan.

The vision of the LTS and each of the aims, objectives and anticipated actions are therefore assessed in this Environmental Report in order to identify the likely environmental impacts of implementing the Strategy.

### 1.3 SEA Activities to Date

Table 1.2 summarises the actions taken to date in the SEA process in the development of this Environmental Report.

**Table 1.2: SEA Activities to Date**

| SEA Action/Activity | Date | Notes |
|---|---|---|
| Screening of the Aberdeen LTS refresh. | April - June 2014 | Responses received from all consultation authorities confirming the requirement for SEA. |
| Determinations made confirming requirement for SEA | September 2014 | |
| Scoping of the LTS Refresh, including consultation periods and level of detail to be included in environmental report | September – November 2014 | Responses received from all consultation authorities. |
| Environmental baseline established | September 2014 – January 2015 | Updated using suggestions from consultation authorities and internal discussions. Based on the suggested methodology in the Scoping Report. |
| Outline and objectives of the PPS | | |
| Relationship with other PPS and environmental protection objectives | | |
| Environmental problems identified | | |
| Assessment of future of area without PPS | | |
| Alternatives considered | | |
| Environmental assessment methods established | | |
| Selection of PPS alternatives to be included in environmental assessment | | |
| Identification of environmental problems that may persist after implementation and measures envisaged to prevent, reduce and offset any significant adverse effects | | |
| Monitoring methods proposed | | |
| Preparation and Consultation on the LTS and Environmental Report. | February – March 2015. | Responses received from all consultation authorities and a range of interested |

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| | | stakeholders and members of the public. |
| Finalisation of the LTS | April – December 2015 | More streamlined document developed, with Actions moved into separate Action and Delivery Plan. |
| Preparation of the Final Environmental Report | November 2015 – January 2016 | Updated to take consultation responses into account and to reflect final LTS content and structure. |

Comments received from the Consultation Authorities on the draft Environmental Report are reproduced in Table 1.3 below, along with some information on how these comments have been taken into account in the development of the final Environmental Report.

**Table 1.3: Comments received on the Environmental Report**

| Consultation Authority | Comment | ACC Response |
|---|---|---|
| **Historic Scotland** | We are content to agree with the findings presented as they relate to the historic environment. | Noted. |
| **Scottish Environment Protection Agency (SEPA)** | While different from that outlined at the scoping stage we consider the approach taken to assessing objectives and related actions together to be very sensible. | Noted. |
| | Objective 1 – We suggest that improvements to the rail network may impact negatively on localised areas of water environment through short term pollution risks from construction works and long term increased in rail traffic could increase run off from these areas. As a result overall effects on water could be mixed. | While the Council recognises the potential impacts of rail improvements, these improvements are being taken forward by the Scottish Government rather than the local authority. Any increase in the volume or frequency of rail services is the responsibility of the Train Operating Companies. Improvements to the rail network and rail services have not therefore been subject to SEA as part of the LTS as these proposals were generated neither by the LTS nor by Aberdeen City Council. The LTS aims to assess the impact of the Council's interventions, not those promoted by external parties over whom the Council has limited control. As regards rail, the Council operates very much in a supporting capacity and would look to work with those promoting rail improvement schemes to ensure environmental impacts are minimised. |
| | Objective 2 - Objective 4 notes the potential impact of harbour traffic on air quality and the climate resulting from "emissions from ships themselves and via traffic accessing the harbour". If Objective 2 is anticipated to have an effect on harbour traffic then we would suggest that the overall effect on air quality is not likely | While the Council recognises the potential impact of the Harbour improvements, these are promoted by Aberdeen Harbour Board and supported by the Scottish Government, with the Harbour designated a national development in National Planning Framework 3 |

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| | to be nil and further consideration should be given to investigating the potential air and climate impacts of this objective. | (NPF3). Proposals have not been generated by this LTS or by Aberdeen City Council therefore have not been subject to SEA as part of the LTS. The LTS aims to assess the impact of the Council's interventions, not those promoted by external parties over whom the Council has limited control. As regards Aberdeen Harbour, the Council operates very much in a supporting capacity and would look to work with those promoting improvement schemes to ensure environmental impacts are minimised. The impact of shipping in Objective 4 has been assessed because, in that instance, the LTS suggests that the Council would be actively promoting shipping rather than passively supporting. |
| | Objective 3 - We agree that improvements to airport surface access should help reduce reliance on cars for access and therefore should help reduce emissions to air that affect air quality and the climate. However the Objective specifically supports the future growth and extension of the airport and therefore the air quality and climate factor impacts of an increase in air traffic should also have been considered as part of the assessment. We ask that this issue be specifically addressed in the Post Adoption Statement. | While the Council recognises the potential impacts of an increase in air travel, airport improvements are identified as a national development in NPF3, while the airport is owned and operated by AGS Airports Ltd. Plans for growth and expansion are therefore promoted by the Scottish Government and AGS Airports Ltd. rather than ACC and no proposals for change are generated by the LTS. As regards the Airport, the Council operates very much in a supporting capacity and would look to work with those promoting improvement schemes to ensure environmental impacts are minimised. |
| | Objective 4 - We agree that an increase in shipping would have the potential to increase sea water pollution however a corresponding decrease in HGV traffic could have positive impacts for the freshwater environment by reducing road runoff. As a result we suggest that the overall assessment against the water objection may be mixed. | The assessment has been updated to reflect this. |
| | Objective 7 - We would suggest that improving road conditions may include the improvement and upgrade of surface water drainage systems which could have a positive impact on water quality. | The assessment has been updated to reflect this. |
| | Objective 9 - We agree that this objective is likely to have mixed effects against the water objective. New structures will also potentially cause short term negative impacts during construction. | The assessment has been updated to reflect this. |
| | Objective 15 - We note that the alternative option here has minimal impact, i.e. nil score, on air and climate. If cleaner and greener vehicles lead to a reduction in emissions, we suggest that the alternative, where the potential to | The assessment has been updated to reflect this. |

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| | increase ultra and low emission vehicles is not explored, could be considered to result in a negative impact on air quality and climate factors. | |
| | Objective 21 - We note that the objective currently has no anticipated impact on air quality and climate under both the preferred and alternative options. If measures are implemented to tackle noise from transport, particularly road traffic, then it may be reasonable to assume that there will be an impact on emissions to air. It may not be uncommon for areas where there is poor air quality to correspond with areas where noise pollution is an issue. Measures to address one may affect the other. | The assessment has been updated to reflect this. |
| | Objective 26 - We suggest that the promotion of car-clubs could reduce private car ownership thereby reducing road runoff, and as a result may positively impacting on the water environment in the long term. | The assessment has been updated to reflect this. |
| | We agreed that cumulatively the Strategy is likely to have significant positive effects against the air and climatic factors SEA objectives, but it is also likely to have some negative effects. | Noted. |
| | We highlight that in addition to $CO_2$, black carbon emissions from transportation also have a significant impact on the climate. Black carbon, a particulate pollutant, also has negative impact on human health. Emissions from transport, such as NOx, can serve as precursors to the formation of ground level ozone, which has a negative impact on the climate, as well as on human health and vegetation. | These pollutants have been added to the monitoring framework. |
| | In relation to the comments we made in section 1.3 above we note that it is acknowledged in Table 5.1 that supporting the growth and extension of the airport could conflict with carbon reduction targets. | While the Council recognise the environmental impacts of air travel, the impact of any changes to the Airport has since been largely removed from the assessment in recognition of the fact that this is not a Council project and is not proposed by or generated by this LTS. |
| | We suggest that in addition to monitoring data for PM10 and $NO_2$, monitoring data for other pollutants could also be considered if available, such as: PM2.5, oxides of nitrogen ($NO_x$), carbon monoxide (CO), Black Carbon (BC), ground level ozone. Air quality data sources could include Aberdeen City Council's own monitoring network and Defra's Automatic Urban and Rural Network (AURN). | Noted. These pollutants have been added to the monitoring framework. |
| **Scottish Natural Heritage (SNH)** | **Section 3 - Assessment Framework – Table 3.1**<br>Biodiversity – suggest the first bullet point in the second column is amended to read "cause DISTURBANCE or damage to any | Tables have been updated accordingly. |

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| | habitat or species" as opposed to "cause disruption or..."<br>Landscape – suggest the third bullet point in the second column is amended to read "reduce the AMOUNT or QUALITY of public open space."<br>Health – again the bullet point could be amended to read "improve access to and QUALITY of open space." | |
| | Section 5 – Mitigation – Table 5.1<br>Air Quality – is the impact of increasing growth and extension to the airport best considered in individual planning applications or at a more strategic level with regard to the Council's own carbon reduction targets?<br>Water – runoff from existing transport infrastructure can contribute to poor water quality. Potential "retro-fitting" of SUDS could be investigated. The vision behind the regional scale SUDS projects currently being developed could also be included. | Consideration of the impact of any changes to the Airport has since been largely removed from the assessment in recognition of the fact that this is not a Council project and is not proposed by or generated by this LTS.<br>The Council recognises the benefits that retro-fitting of SUDS can bring. A strengthened commitment to SUDS will be incorporated in the Action and Delivery Plan. |
| | Section 6 – Monitoring – Table 6.1<br>Suggest that the condition of notified features on the 4 SSSIs within the City be included in the targets. This data is available from the SNH website under the SNHi feature. | The table has been amended accordingly. |
| | Appendix B – Baseline data<br>Special Areas of Conservation (SACs) - Include the Moray Firth SAC as bottlenose dolphins from this population frequently use the waters off the Harbour and Aberdeen Bay for foraging.<br>European Protected Species (EPS) – Include cetaceans in the list.<br>Other Protected Species – red squirrel, badger, pine marten and water vole. | The table has been amended accordingly. |
| **Aberdeen City Council Environmental Policy Team** | Page 5: Environmental Context - No mention of adaptation, resilience, the SEAP, mini-stern etc. | The need for adaptation and resilience has been added to the environmental context section.<br>The SEAP and mini-Stern were not raised during the Scoping process for this SEA, and the Transportation team is not aware of either of these yet being adopted/approved or being subject to their own SEAs. |
| | Page 6: Environmental Concerns - Bullet point – impact on biodiversity also from habitat fragmentation. | References have been updated. |
| | Page 6: Environmental Problems - No mention of climate change adaptation and need to build a resilient and adaptive transport infrastructure. | References have been updated. |
| | Page 7: Biodiversity - Mentions a reduction in land take from implementation of sustainable travel. But new transport infrastructure is covered in the LTS including the AWPR. | No significant pieces of transport infrastructure are proposed in the LTS. The AWPR is already under construction and has not been proposed by or generated by this LTS. |

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| | Page 7: Biodiversity - There are more negative impacts than those identified including loss of habitat, long term water pollution from surface water runoff, separation of habitats by transport corridors resulting in isolated pockets. There are probably more. | The LTS itself does not propose any new transport schemes that are anticipated to lead to habitat loss/disruption or water pollution. The impact of any individual schemes emanating from the Action and Delivery Plan will be considered on a scheme-by-scheme basis as necessary. |
| | Page 7: Biodiversity - Likely to be more environmental impacts:<br>Fragmented habitats/ changes to habitats<br>Increased run off / drainage systems etc. | The LTS itself does not propose any new transport schemes that are anticipated to fragment habitats or increase run-off. The impact of any individual schemes emanating from the Action and Delivery Plan will be considered on a scheme-by-scheme basis as necessary. |
| | Page 8: Air quality issues displaced from one area to another. | Although it is agreed that displacing traffic from one area to another is not an effective solution to air quality problems in the long term, the displacements referenced in the report should remove traffic from the AQMA, an area of particularly poor air quality, which could be a desirable solution in the short term. |
| | Page 8: Increasing road infrastructure could lead to increased volume of traffic and having a resultant effect on emissions levels. | The LTS does not propose an increase in road infrastructure other than very localised pinch-point improvements to reduce congestion which should reduce emissions. |
| | Page 8: Climate change - No adaptation measures listed as impacts such as:<br>- Flooding restricting staff/ vehicle access<br>- Increased run off from transport infrastructure/ soil sealing and increased runoff from transport surfaces entering watercourses more frequently - diffuse pollutants from urban sources can damage river beds.<br>- Flooding to transport infrastructure.<br>- Path erosion from increased rainfall<br>- Drainage system unable to cope with heavy rainfall/ capacity/ insufficient drain clearance<br>- Road traffic delays / disruptions/ road closures<br>- Heat impact on road surfaces | Noted. While not necessarily the place of the LTS to go into this level of detail on climate change adaptation, it is agreed that this is an increasingly important topic for transport. The Transportation team is therefore keen to work with the Environment team on the development on a Climate Change Adaptation and Mitigation Plan, either contributing to a Council-wide document or developing a transport-specific Action Plan as part of a suite of individual Action Plans anticipated to follow the adoption of the LTS. |
| | Page 9: Soil - Reduced traffic won't reduce runoff. There is likely to be increased run off due to the impacts of climate change on existing road structures. | References to reduced traffic reducing run-off have been removed. |
| | Page 9: Water – as above. | References to reduced traffic reducing run-off have been removed. |

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| | Page 9: Soil - No mention of soil being lost to other purposes; due to land take. Reference could be made in this section to SUDS. | It is not anticipated that implementation of the LTS will result in a loss of soil as the LTS does not propose any new road infrastructure. References to SUDS will be increased and strengthened in subsequent Action Plans. |
| | Page 9: Water - Less traffic will not reduce runoff – less impervious surfaces will. This statement needs to read accurately. No mention of SUDS in this section. | References to reduced traffic reducing run-off have been removed. References to SUDS will be increased and strengthened in subsequent Action Plans. |
| | Page 9: Landscape - There will be impacts on the landscape that haven't been mentioned including SUDS and what happens with road verges | No new roads are being proposed as part of this LTS. The impact of SUDS has been noted. |
| | Page 11: What about enhancing biodiversity – new planting etc. alongside new infrastructure/ paths etc. to blend with landscape character.<br>No mitigation for habitat fragmentation. | While the Council recognises the benefits of these, these would not appear to be effective mitigation solutions to any of the potential impacts identified in the LTS. No schemes likely to result in habitat fragmentation are being proposed by the LTS. |
| | Page 11: Biodiversity - No mention of native planting on verges, use of flora that attracts species, use of flora to reduce surface water runoff, use of materials that don't have an impact on international biodiversity e.g. wood from FSC sources etc. | The LTS does not promote new road construction. While the Council recognises the benefits of these, these would not appear to be effective mitigation solutions to any of the potential impacts identified in the LTS. |
| | Page 12: Climatic factors - Adaptation and mitigation is not mentioned. | This section lists possible mitigation measures for those projects identified in the LTS that have the potential to increase carbon emissions. |
| | Appendix A – No mention of SEAP, Adaptation Plan and additional comments in accompanying bullets on resilience and mitigation measures. | The SEAP and Adaptation Plan are not yet adopted documents. |
| | Page 12: Climatic factors - No mention of who would undertake these studies. Should we be adopting schemes that have the potential to increase emissions? This goes against national legislation. | This section has been amended to reflect that the LTS aims for no net increase in carbon emissions arising from any scheme, other than a short-term increase in emissions from maintenance schemes which are likely to be unavoidable. |

# 2 ENVIRONMENTAL CONTEXT

## 2.1 Relationship with other PPS and environmental protection objectives

There are a number of plans, programmes, strategies and environmental protection objectives at international, national, regional and local level that have been addressed (either directly or indirectly) in the refreshed LTS, or their objectives reflected in the Strategy and the aspirations set for the future of transport in Aberdeen. These are listed in Table 2.1 below, with a more detailed analysis of the implications of each of these on

the LTS included in Appendix A, along with an identification of any constraints and/or targets that these impose.

**Table 2.1: Plans, programmes, strategies and environmental protection objectives relevant to the LTS**

| | **International Level** |
|---|---|
| 1 | Habitats Directive |
| 2 | Birds Directive |
| 3 | European Biodiversity Framework |
| 4 | Kyoto Protocol |
| 5 | UN Framework Convention on Climate Change |
| 6 | Paris Agreement |
| 7 | EU White Paper, Roadmap to a single European transport area – towards a competitive and resource efficient transport system |
| 8 | EU Ambient Air Quality Directive |
| 9 | UNECE Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone |
| 10 | National Emission Ceilings Directive |
| 11 | European emissions standards for vehicles |
| 12 | Environmental Noise Directive |
| | **National Level** |
| 1 | National Transport Strategy |
| 2 | Scottish Planning Policy |
| 3 | National Planning Framework 3 |
| 4 | Designing Streets |
| 5 | National Roads Development Guide |
| 6 | Cycling Action Plan for Scotland |
| 7 | National Walking Strategy: Let's Get Scotland Walking |
| 8 | Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles |
| 9 | Scotland's Road Safety Framework to 2020 |
| 10 | Strategic Transport Projects Review |
| 11 | Infrastructure Investment Plan |
| 12 | Wildlife and Countryside Act 1981 (as amended) |
| 13 | The Nature Conservation (Scotland) Act 2004 |
| 14 | Scotland's Biodiversity Strategy:  It's in Your Hands |
| 15 | The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)<br>The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 |
| 16 | Water Environment and Water Services (Scotland) Act 2003 |
| 17 | Water Environment (Controlled Activities) (Scotland) Regulations 2005 |
| 18 | SEPA, Groundwater Protection Policy for Scotland: Environmental Policy |
| 19 | The Scottish Soil Framework |
| 20 | Climate Change (Scotland) Act 2009 |
| 21 | Climate Change Delivery Plan |
| 22 | UK Air Quality Strategy 2007 |
| 23 | Air Quality (Scotland) Regulations |
| 24 | The Air Quality Standards (Scotland) Regulations 2010 |
| 25 | Local Air Quality Management (Part IV of the Environment Act 1995) |
| 26 | National Emissions Ceilings Regulations (UK) |

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| 27 | Road Traffic (Vehicle Emissions) (Fixed penalty) (Scotland) Regulations 2003 |
| 28 | The Public Service Vehicles (Traffic Regulation Conditions) Amendment (Scotland) Regulations 2008 |
| 29 | Let's Make Scotland More Active: A Strategy for Physical Activity |
| 30 | Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight |
| 31 | The Government Economic Strategy |
| 32 | Scotland's Cities: Delivering for Scotland |
| 33 | The Scottish Historic Environment Policies |
| 34 | The Planning (Listed Buildings and Conservation Areas) Act 1997 |
| | **Regional Level** |
| 1 | Nestrans Regional Transport Strategy |
| 2 | Nestrans Bus Action Plan |
| 3 | Nestrans Rail Action Plan |
| 4 | Nestrans Freight Action Plan |
| 5 | Nestrans Active Travel Action Plan |
| 6 | Aberdeen City and Shire Regional Parking Strategy |
| 7 | Aberdeen City, Aberdeenshire and Moray Road Safety Plan |
| 8 | Health and Transport Action Plan |
| 9 | Aberdeen City and Shire Strategic Development Plan |
| 10 | Building on Success: The Economic Action Plan for Aberdeen City and Shire |
| 11 | North East of Scotland Local Biodiversity Action Plan |
| 12 | Forest and Woodland Strategy for Aberdeenshire and Aberdeen |
| 13 | River Dee Catchment Management Plan |
| | **Local Level** |
| 1 | Aberdeen Local Development Plan |
| 2 | Aberdeen Local Development Plan Supplementary Guidance on Transport and Accessibility |
| 3 | Strategic Infrastructure Plan |
| 4 | Aberdeen Cycling Strategy |
| 5 | Aberdeen Core Paths Plan |
| 6 | Aberdeen Air Quality Action Plan |
| 7 | Aberdeen Local Development Plan Supplementary Guidance on Air Quality |
| 8 | Aberdeen Agglomeration Noise Action Plan |
| 9 | Local Climate Impacts Profile Report (LCLIP) for Aberdeen |
| 10 | Fit for the Future: A Sport and Physical Activity Strategy for Aberdeen City |
| 11 | Single Outcome Agreement |
| 12 | Aberdeen Futures – Aberdeen Community Plan |
| 13 | Aberdeen – The Smarter City |
| 14 | City Centre Masterplan and Sustainable Urban Mobility Plan |
| 15 | Aberdeen City Nature Conservation Strategy |

Following analysis of these various plans, policies, strategies and environmental protection objectives, it is clear that the LTS should:

- Contribute to sustainable development, including the development of a low carbon economy;
- Suggest ways that the transport network should become more resilient to and able to adapt to the effects of climate change;
- Seek to develop a safe and secure, efficient and integrated transport system;
- Encourage measures that reduce the need to travel;

- Ensure that conditions are in place to allow a widespread uptake of active and sustainable modes of transport, including walking, cycling, public transport, car sharing and the adoption of cleaner fuel vehicles, and promote the use of such modes to the people of Aberdeen;
- Look to improve journey times and connectivity to, from and within the City by all modes of transport;
- Improve the accessibility of the transport system, ensuring users benefit from a range of transport modes appropriate to their needs;
- Ensure that transport is affordable and does not contribute to social exclusion;
- Minimise the impact of transport on biodiversity, particularly on European-protected sites and species;
- Seek to minimise the environmental impact of transport in terms of reducing carbon and greenhouse gas emissions;
- Seek to improve air quality in Aberdeen;
- Ensure transport does not contribute to a further deterioration in noise quality in protected areas;
- Seek to minimise the impacts of transport on the historic environment;
- Enable the efficient movement of freight throughout the City and encourage its transfer from road to rail and sea; and
- Participate in the development of a rejuvenated City Centre.

## 2.2 Relevant aspects of the current state of the environment

Schedule 3 of the Environmental Assessment (Scotland) Act 2005 requires the Environmental Report to include a description of *the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the Plan or Programme* and *the environmental characteristics of areas likely to be significantly affected*. The provision of this information allows a description of the relevant environmental context within which the LTS will operate and the constraints and targets that this context imposes on the PPS. The detailed analysis of the baseline data is presented in Appendix B.

Key points to note are:

- There is the potential for habitat fragmentation resulting from transport schemes;
- Carbon dioxide ($CO_2$) emissions are fluctuating year on year despite the Scottish Government's reduction targets. Transport remains a significant contributor to these;
- Aberdeen consumes more resources per person than any other Scottish city. Again, transport is a significant contributor to this;
- There is a need for the transport network to become more resilient to, and able to adapt to the effects of, climate change;
- Areas of Aberdeen suffer from poor air quality. Three Air Quality Management Areas (AQMAs) have been declared (see Appendix C), where regular exceedances of the annual mean limit value for nitrogen dioxide ($NO_2$) and particulate matter (PM10) occur. While buses and HGVs contribute most to $NO_2$ emissions, cars and taxis contribute most to PM10;
- There are currently fourteen Noise Management Areas (NMAs) in the City resulting from road traffic noise and two Candidate NMAs resulting from railway noise (see Appendix C);
- Water quality in Aberdeen is generally good, although river quality is 'moderate' or 'poor';

- Aberdeen has a large network of sites important for biodiversity, cultural heritage and landscape which must be protected and, where possible, enhanced;
- Life expectancy is increasing. An ageing population raises implications for maintaining mobility and accessibility into old age;
- The population of the City (and wider region) is increasing, putting pressure on an already congested transport network;
- Car ownership is increasing, exacerbating pressure on the network and contributing to poor health in terms of pollution, air quality, noise and inactivity;
- Public road lengths have remained static in recent years despite the growing population and rising car ownership, thus contributing to congestion; and
- There have been limited improvements to public transport infrastructure, in terms of new railway stations, Park and Ride sites and interchanges, etc. although this is forecast to change over the life of this LTS.

This therefore forms the context and baseline within which the Aberdeen LTS is being refreshed.

In gathering environmental baseline data, a number of problems were experienced:

- In certain cases, data suffers from a lag before becoming available. 2007 figures, for example, are the latest available for some indicators;
- In some cases, data has only been found for one or two years;
- In some cases speculative conclusions are drawn, for example *development may put pressure on protected sites* which may not necessarily be borne out by experience;
- Some data consists of projections (such as populations and household numbers) which may prove to be over-/under-estimations; and
- While public road lengths are easily recordable, it is not so easy to measure the lengths of the pedestrian and cycle network.

Nevertheless, the data gives a useful indication of trends in most cases and provides a solid foundation on which to base future monitoring, which will improve as more up-to-date information becomes available.

## 2.3 Characteristics of areas likely to be significantly affected

The analysis of the baseline information suggests that the strategy is likely to have more significant effects on certain areas than others. This is due to the sensitivity of those areas in terms of international, national and local designation such as the River Dee and Moray Firth Special Areas of Conservation (SACs), the AQMAs in the City and the recently-adopted NMAs. Although other areas may not be designated, the effects on those sites from the LTS could be cumulative. Information on these areas, including maps, is provided in Appendix C.

## 2.4 Environmental problems, likely evolution of the environment without the LTS and the possible role of the LTS in addressing this

The Environmental Report is required to identify the environmental issues, trends or problems in Aberdeen City, the likely evolution of the environment without the LTS, and the potential role of the LTS in addressing these. Environmental problems were identified through discussions with relevant officers, analysis of baseline data and pervious SEAs. This information is summarised in Table 2.2.

## Table 2.2: Environmental problems, evolution without LTS and possible role for LTS

| Environmental Topic | Issues/Trends/Environmental Problems | Likely Evolution without LTS | Possible role of LTS |
|---|---|---|---|
| **Biodiversity** | Transport development involves land take, which can contribute to disturbance and fragmentation of habitats and result in pressure on, and even the loss of, vulnerable habitats and species.<br><br>The presence of people and vehicles can create noise and artificial light, disturbing wildlife.<br><br>Transport is a major contributor to air pollution, particularly oxides of nitrogen ($NO_X$), which can disturb or even lead to the loss of biodiversity of both land- and water-based ecosystems.<br><br>Transport can contribute towards long-term water pollution through surface water run-off. | If the LTS is not implemented and demand for motorised travel increases, there will likely be a requirement for new and significant transport infrastructure to cope with this demand. Construction of such infrastructure could put pressure on biodiversity, including the loss and fragmentation of habitats. Continued increases in traffic, and the pollution, noise and artificial light resulting from this, could continue to disturb sensitive species, potentially resulting in irreversible damage and loss. | The LTS must limit the negative effects of transport on biodiversity, by:<br><br>• Reducing land take from transport, thus reducing the likelihood of damage to or disturbance/severance of habitats and species;<br><br>• Reducing road traffic and therefore the impact of traffic on biodiversity in terms of air and water pollution, noise, and light; and<br><br>• Investigating methods of reducing surface water run-off. |
| **Air Quality** | Three AQMAs have been declared in the City, largely as a result of high volumes of road traffic (see Appendix C). Exceedances of the annual mean limit for $NO_2$ and PM10 continue to be regularly exceeded at these locations.<br><br>As well as impacting on human health (and even contributing towards premature death in some cases), air pollution, particularly $NO_X$, can disturb, or even lead to the loss of, biodiversity of both land- and water-based ecosystems.<br><br>Environmental pollution can cause irreversible damage to buildings, especially old buildings which may be of | If the LTS is not implemented, it is likely that demand for, and use of, motorised forms of transport will increase as the City grows and develops, while opportunities to encourage modal shift to walking, cycling and public transport will be lost. Increasing car traffic will lead to a further deterioration of air quality and the potential implementation of more AQMAs. Continued breaches of European air quality limits could see fines being imposed on the UK, which may filter down to the City Council itself. Deteriorating air quality could also:<br>• Continue to negatively impact on human health, leading to increases in respiratory illnesses and potentially an increase in the number of premature deaths attributable to unclean air; | The LTS must identify measures to reduce transport's contribution to poor air quality, including<br><br>• Reducing the need to travel;<br><br>• Reducing car dependency, through influencing land use planning policies and making it easier, safer and more pleasant to walk, cycle and use public transport for everyday journeys; and<br><br>• Encouraging responsible vehicle use through promoting and enabling the use of cleaner fuels and technologies. |

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| | cultural/historical interest. | • Continue to negatively impact on biodiversity, potentially leading to irreversible damage and the loss of some species and their habitats; and<br>• Cause irreversible damage to buildings and sites of historical and/or cultural importance. | |
| **Climatic Factors** | $CO_2$ emissions in Aberdeen continue to fluctuate, despite the Scottish Government's reduction targets. Transport is a significant contributor to these.<br><br>There is an increased need to ensure that the City is able to adapt to the impacts of climate change, and that any new transport infrastructure is resilient and adaptive. | If the LTS is not implemented, it is likely that demand for, and use of, motorised forms of transport will increase as the City grows and develops, while opportunities to encourage modal shift to walking, cycling and public transport will be lost. Increasing car traffic will increase $CO_2$ and other greenhouse gas emissions and energy consumption, thus contributing towards climate change.<br><br>If the LTS is not implemented, and the need for the transport system to be adaptive and resilient to climate change is not addressed, there is a risk that new infrastructure will be vulnerable to the effects of extreme weather events. The implications of this include: the transport system failing to operate effectively for the duration of such incidents, increased maintenance costs for repairs to damaged infrastructure, and reduced lifespan of transport infrastructure. | The LTS must identify measures to reduce transport's contribution to climate change, including<br>• Reducing the need to travel;<br>• Reducing car dependency, through influencing land use planning policies and making it easier, safer and more pleasant to walk, cycle and use public transport for everyday journeys; and<br>• Encouraging responsible vehicle use through promoting and enabling the use of cleaner fuels and technologies.<br>While it is not the place of the LTS to specify design and construction materials, it nevertheless must seek to ensure that transport infrastructure is resilient to the impacts of climate change by encouraging the use of resilient materials. |
| **Soil** | Transport development has the potential to cause:<br>• a decline in soil quantity;<br>• an increase in sealed surfaces, thus increasing flood risk;<br>• soil contamination (direct or indirect) through, for instance, increased air pollutants and run-off of contaminated water; and<br>• the loss of prime agricultural land. | If the LTS is not implemented and demand for motorised transport increases, it may be necessary to construct new large-scale transport facilities, such as roads and bridges, to cope with increasing demand. Construction and use of such facilities could lead to land contamination and soil erosion. Pressure for the development of new transport facilities could also lead to the loss of any prime agricultural land remaining in the City. Increasing air pollution from traffic will also continue to negatively impact on soil. | The LTS can reduce the negative impacts of transport on soil by reducing the need for development of large-scale transport facilities which could contribute towards a decline in soil quality and the loss of prime agricultural land, by reducing the volume of air pollutants and requiring SUDS to accompany all new transport schemes. It can do this by seeking to reduce the need to travel and reduce car dependency through the facilitation and promotion of active and sustainable modes of transport. |
| **Water** | Although water quality is generally good in | If the LTS is not implemented and demand for | The LTS must contribute towards improving water |

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| | Aberdeen, river water quality is currently classed as 'moderate' or 'poor'.<br><br>Run-off from roads and new transport infrastructure can negatively affect water or hydrological regimes. | motorised transport increases, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with demand, potentially leading to the pollution of nearby watercourses. | quality by ensuring that measures are in place to reduce and prevent run-off from transport schemes, and by reducing the requirement for new large-scale transport facilities. The latter will be achieved through reducing the need to travel and reducing car dependency and by the facilitation and promotion of sustainable transport modes. |
| **Landscape** | Inappropriate transport development can reduce visual amenity. | If the LTS is not implemented, it is likely that demand for motorised travel will increase and this will necessitate the construction of new transport facilities, such as roads and bridges, throughout the City which could significantly damage the landscape character of Aberdeen. | The LTS should protect the landscape from the development of unsightly transport infrastructure. |
| **Population** | The population of Aberdeen and the surrounding region is increasing, thus putting an ever more onerous burden on a transport network.<br><br>An ageing population raises implications for mobility and accessibility. | If the LTS is not implemented, as the population grows demand for transport could outstrip supply, leading to overcrowding of our roads and public transport facilities. If improvements are not made to walking, cycling and public transport facilities, it is likely that most of this demand will be for road transport, leading to increased congestion and pollution. | The LTS should ensure that the transport network can cope with an increase in population, primarily through the development of a fit-for-purpose transport system that increases opportunities for walking, cycling and public transport use. This will ensure that increases in population are not matched with a commensurate increase in car travel, thus exacerbating congestion, pollution and noise.<br><br>The LTS must take account of the needs of an elderly population, ensuring that people can remain mobile into old age and able to access the services and facilities they need. |
| **Human Health** | Pollution and poor air quality resulting from transport can reduce life expectancy, causing or exacerbating a number of respiratory conditions such as asthma.<br><br>Transport noise is a serious problem, potentially leading to mental health conditions resulting from stress and sleep disturbance. A number of NMAs are identified in the Aberdeen Agglomeration Noise Action Plan (see Appendix C), where significant road and rail traffic noise affects areas of high population density.<br><br>A transport system that favours sedentary | If the LTS is not implemented and a significant switch to healthy and active modes of transport, such as walking and cycling, is not achieved, various health conditions, such as obesity and other complaints arising from inactivity ,will continue to affect the population, while respiratory conditions resulting from pollution and poor air quality will also rise. Land take for new transport infrastructure to cope with demand for road traffic could see the loss of areas of open space, or the severing of access to such areas, reducing opportunities for physical activity and the mental wellbeing this can engender. | The LTS must reduce transport-related pollution and emissions and reduce transport's contribution to noise, especially in noise-sensitive areas. This should be done through measures to reduce the need to travel, and to reduce car travel in particular, while promoting and facilitating the use of cleaner and quieter modes.<br><br>The LTS must improve conditions for pedestrians and cyclists to increase the number of journeys undertaken by active transport modes, and ensure that transport development does not reduce opportunities for active travel and outdoor recreation. |

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| | over active forms of transport reduces opportunities for physical activity, which can lead to an increase in obesity and other life-threatening conditions including cancer and type 2 diabetes.<br><br>Land take from transport development can reduce open space provision or reduce/sever access to open space which can have health implications in reducing opportunities for physical activity. | | |
| **Cultural Heritage** | Transport development contributes to land take which has the potential to put development pressure on (including loss of or damage to) known and undiscovered historical/heritage sites or features.<br><br>Traffic increases and car parking in and around conservation areas can undermine the distinctive character of such areas.<br><br>Street clutter, including inappropriate signing and materials, can cause negative visual impacts on areas noted for their beauty or distinctiveness.<br><br>Air pollution and vibrations resulting from transport activities can cause deterioration of buildings and monuments. | If the LTS is not implemented and demand for road transport and parking continues to increase, this may put development pressure on areas of historic and/or archaeological interest, and undermine the setting and character of conservation areas. Poor air quality and vibrations resulting from increased motor traffic will continue to affect historical buildings/monuments, potentially leading to irreparable damage. | The LTS must protect the historic environment from transport development by reducing the need for construction of large-scale facilities.<br><br>The LTS must seek to reduce the impact of transport on protected areas through measures to reduce road traffic and street clutter. |
| **Material Assets** | Aberdeen is characterised by high car ownership and usage resulting in problems of congestion and pollution.<br><br>There are currently a number of deficiencies in Aberdeen's transport network, resulting in a transport system operating below its capabilities. This leads to congested roads, roads in need of maintenance, a limited cycle network, and a limited public transport and bus lane | Without the LTS it is likely that a range of sustainable transport facilities (including walking and cycling routes, cycle parking, public transport hubs) will not be delivered, thus jeopardising Aberdeen's vision of a 21st century transport system that meets the needs of all those living in, working in and visiting the City. | The LTS must contribute to the development of a 21st Century transport system, in particular improving opportunities for travel by sustainable modes of transport and reducing reliance on the private car. Measures should include:<br><br>• Improving and increasing pedestrian and cycle infrastructure;<br><br>• Improving and increasing public transport infrastructure; and |

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| | network. | | • Encouraging responsible vehicle use, including car sharing and membership of Car Clubs. |

# 2 ASSESSMENT FRAMEWORK

## 3.1 Alternatives and Options

Two reasonable alternatives were considered for the purposes of the assessment:

- Do Maximum (the 'with LTS' scenario, which is the preferred option); and
- Business as usual (the 'without LTS' scenario).

This is a useful exercise in highlighting the impacts that the adoption and implementation of an updated LTS will have in comparison to the existing situation.

## 3.2 Scoping in/out SEA issues

During the Scoping stage of the SEA, Aberdeen City Council judged that all SEA topics should remain 'scoped in' as transport has the potential to impact upon all of these. The Consultation Authorities welcomed and agreed with this approach.

## 3.3 Assessment Framework

To assist in the assessment process objectives were identified for each SEA topic, along with questions to be considered when seeking to reach a conclusion on the environmental impact of each strand of the Strategy. These objectives and questions were identified through an analysis of the environmental problems, baseline data and other relevant plans, programmers and environmental protection objectives, and finalised through consultation with the relevant authorities. The full assessment framework is presented in Table 3.1.

**Table 3.1: Assessment Framework**

| SEA Topic | Objective | Will the Vision/Aim/Objective/Action… |
|---|---|---|
| **Biodiversity** | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any species or habitat?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC.<br><br>Have any adverse impacts on any nationally or locally designated site? |
| **Air Quality** | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? |
| **Climactic Factors** | To reduce the cause and effects of climate change.<br><br>To limit or reduce the | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies? |

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| | emissions of greenhouse gases. | Reduce the need to travel, especially by motorised forms of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? |
| **Soil** | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? |
| **Water** | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. |
| **Landscape** | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? |
| **Population** | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? |
| **Health** | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure. | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality? |

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| | To retain and improve quality, quantity and connectivity of publicly accessible open space | Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? |
| **Cultural Heritage** | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Physically impact on any historic buildings/sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? |
| **Material Assets** | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? |

# 4 ASSESSMENT OF ENVIRONMENTAL EFFECTS

## 4.1 Assessment Summary

The vision, aims, objectives and anticipated actions developed as part of the LTS refresh have therefore been assessed against the SEA objectives and accompanying questions in order to predict whether the impacts of these will be positive, negative, uncertain, mixed or neutral. Also considered were the reversibility or irreversibility of impacts, risks, and duration of impacts (permanent, temporary, long-term, short-term and medium-term).

The objectives set for the preferred strategy were also assessed against the 'without LTS' scenario to compare the difference between the proposed and current approaches.

The assessment does differ from the framework outlined in the Scoping Report. Firstly, when undertaking the assessments, it was judged too onerous and time consuming to separate objectives and actions and assess each of these separately (the Consultative Draft LTS contained more than 200 actions, for example, in addition to 5 aims and almost

37 objectives). Each objective has therefore been assessed along with the actions anticipated to accompany it, thus considering the impact of proposals for each topic or mode as a whole. Although this differs from the approach outlined in the Scoping Report, it has not affected the integrity of the process. Assessments of the objectives and accompanying actions are robust and detailed, while also resulting in an assessment of a more manageable length.

Similarly, the outcomes have not been subject to assessment as was proposed in the Scoping Report. When commencing the assessment, it soon became clear that the presence or otherwise of a desired outcome would ultimately have no impact on any of the SEA objectives as these merely articulate aspirations that the Council would like to see. By contrast, a vision, aims and objectives suggest a clear direction for the Council's future policies and actions, and these could result in environmental changes, therefore were more appropriate for assessment.

Much of the assessments are speculative as, in many cases, it is hard to predict the potential impacts of some interventions in advance and whether or not aspirations will be fully achieved. What have therefore been assessed are the likely impacts of achieving the aims and objectives of the Local Transport Strategy. Regarding potential negative impacts, even when the risks are relatively minor, they have been noted and mitigation measures proposed in the following section. This hopefully ensures that the assessment is as robust as possible and addresses all potentially negative impacts.

Full assessment tables are included in Appendix D.

### 4.2 Cumulative Effect Assessment

Paragraph 6 of Schedule 3, of the Environmental Assessment (Scotland) Act 2005 requires that a cumulative effect assessment is undertaken. Such an assessment has therefore been undertaken against each of the SEA topics. The detailed assessment is presented in Appendix E.

The key points of the cumulative assessment are:

- Largely positive impacts on biodiversity resulting from measures to reduce traffic and hence land take and environmental pollution resulting from transport;
- Largely positive impacts on air quality and climactic factors resulting from measures to reduce the need to travel by car and to promote and facilitate the use of cleaner and more sustainable modes of transport;
- A largely neutral impact on soil and water, with some minor positive and negative impacts anticipated;
- A largely positive impact on the landscape in the long-term through reduced traffic and congestion, protection of the landscape, and reduced need for transport construction;
- A largely positive impact on the population resulting from reduced traffic and congestion and improved accessibility through the facilitation and promotion of non-car modes of transport;
- A largely positive impact on human health, through improving air quality, reducing the likelihood of road accidents and encouraging physical activity through walking and cycling;

- A largely positive impact on cultural heritage through reduced atmospheric pollution and improved accessibility of key buildings and sites; and
- A positive impact on material assets by outlining a range of improvements to the City's transport network which will benefit members of the travelling public and contribute to the development of a fit-for-purpose, safe and clean 21st Century transport system.

The Assessment therefore anticipates that the environmental impact of implementation of the refreshed Aberdeen Local Transport Strategy will be largely positive, in contrast to the 'without LTS' scenario which predicted the continued degradation of almost all environmental conditions represented in SEA, although some elements of the preferred option are anticipated to have negative impacts and will require mitigation and monitoring.

Positive impacts are predominantly permanent and long-term. Some of the negative impacts noted are short-term, others are more long-term and will require more thorough mitigation. Proposed mitigation measures are detailed in section 5.

No impacts have been judged as irreversible so, if the Strategy does not perform as anticipated and an unforeseen impact occurs, it will be possible in most instances to apply corrective action and reverse undesirable trends.

### 4.3 Compatibility Assessment

In order to ensure consistency of and compatibility between the aims and objectives of the LTS, a compatibility assessment was undertaken, the results of which comprise Appendix F. This concluded that the aims are compatible with one another and are unlikely to result in conflict. However, when assessing the objectives, it became clear that Objective 8 (Lighting) is potentially incompatible with certain other objectives, largely because the objective is anticipated to contain an action to consider *lower lighting levels or reduced operating hours of lighting in low priority areas*. The impact of such a measures on road safety (Objective 17) and levels of walking, cycling and bus use (Objective 30, 31 and 32) during the hours of darkness are uncertain, but it could be that such an action leads to an increase in road accidents and fewer people feeling comfortable walking, cycling and using public transport during the hours of darkness. This must therefore be reflected in the mitigation stage of the assessment.

## 5 MITIGATION

The SEA Directive requires that, through mitigation measures, recommendations are made to prevent, reduce or compensate for any negative effects of implementing the PPS. Table 5.1 sets out the potential environmental problems remaining or arising from implementation of the LTS and summarises proposed measures for the prevention, reduction or offsetting of significant adverse effects.

**Table 5.1: Proposed Mitigation Measures**

| SEA topic | Problem Identified | Proposed Mitigation Measures |
|---|---|---|
| **Biodiversity** | An increase in shipping could cause disruption to water-based species. | The conservation status of protected species will continue to be monitored and corrective action applied should this be seen to be in jeopardy. |
| | Roads maintenance work can result in short-term noise and pollution which can disrupt species. | Those undertaking works will be required to ensure that they are completed as quickly as possible, that noise and disruption are kept to a minimum and to make every effort to minimise the risk of pollution and any other adverse impacts resulting from such works. |
| | Winter maintenance treatments can have short-term negative effects in terms of salt run-off. | The Council will ensure that treatment materials used meet strict environmental standards and that every effort is made to minimise the risk of pollution resulting from works. |
| | An increase in cycle routes through areas of natural beauty and greenspace could disrupt species using such spaces and their habitats. | Any proposals within areas known for protected or vulnerable species and habitats will be required to demonstrate how disruption will be minimised and to investigate ways of enhancing biodiversity as part of scheme implementation. |
| **Air Quality** | An increase in shipping would increase harbour traffic (both sea and road) in an existing AQMA. | Some of this traffic may be displaced to the new Harbour development at Nigg Bay, away from the AQMA. The City Centre Masterplan recommends a series of measures to improve access to the City Centre for sustainable modes and to discourage unnecessary car travel. The Council will continue to work with partners in Nestrans and the Freight Forum to look at ways of minimising the environmental impact of freight traffic. |
| | Roads maintenance schemes | Those undertaking works will be |

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| | can lead to queuing (thus increasing emissions) and displacement of traffic into quieter areas, albeit temporarily. | required to ensure that works are completed in as timely a manner as possible. Diversionary signage will be used to guide road users to the most appropriate alternative routes. |
| | Reducing vehicle speeds can cause an increase in emissions. | It is hoped that any increase in emissions resulting will be offset by the creation of a safer travelling environment, encouraging more people to walk and cycle, especially in the City Centre, rather than travelling by car. |
| | An increase in motorcycling resulting from safety improvements could see an increase in harmful emissions. | |
| | A reduction in street lighting could potentially lead to fewer people walking and cycling in the evenings and an increase in car usage during these hours. | Any scheme of this nature will be undertaken on a pilot basis and the impacts monitored before full implementation takes place. Locations which experience high levels of walking and cycling will not be selected for piloting this scheme. |
| **Climatic Factors** | An increase in shipping and activity around the harbour could see an increase in emissions. | It is hoped that this can be offset by a reduction in road freight thus ensuring no net increase in carbon emissions. The Council will continue to work with partners at Nestrans and in the Freight Forum to look at ways of minimising the environmental impact of freight movements. |
| | Roads maintenance schemes can lead to queuing, thus increasing emissions. | Those undertaking works will be required to ensure that they are completed in as timely a manner as possible. Diversionary signage will be used to guide road users to the most appropriate alternative routes. |
| | Reducing vehicle speeds can cause an increase in emissions. | It is hoped that any increase in emissions resulting from reduced vehicle speeds will be offset by the creation of a safer travelling environment, encouraging more people to walk and cycle, especially in the City Centre, ultimately resulting in no net increase in emissions. |
| | A reduction in street lighting could potentially lead to fewer people walking and cycling in the evenings and an increase in car usage during these hours. | This will be partly offset by the reduced carbon emissions resulting from reduced lighting and the implementation of more efficient lighting. Any scheme of this nature will be undertaken on a pilot basis and the impacts monitored before |

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| | | full implementation takes place. Locations which experience high levels of walking and cycling will not be selected for piloting this scheme. |
| **Soil** | Risk of soil contamination resulting from road maintenance schemes. | Those undertaking works will be required to ensure that every effort is made to minimise the risk of pollution resulting from such works. |
| **Water** | An increase in the volume of freight transported by water could lead to an increase in water pollution. | This will continue to be monitored and corrective action applied if necessary. |
| | Road maintenance and improvement schemes and flood prevention schemes could result in the release of pollutants into watercourses during construction. | Those undertaking works will be required to ensure that every effort is made to minimise the risk of pollution resulting from such works. |
| | Winter maintenance activities could lead to run-off into watercourses. | The Council will ensure that treatment materials used meet strict environmental standards and that every effort is made to minimise the risk of pollution resulting from works. |
| | Runoff from existing transport infrastructure can contribute to poor water quality. | The Council will investigate retro-fitting of SUDS where appropriate. |
| **Landscape** | An increase in traffic management and/or speed reduction features can result in an unsightly environment. | The Council will ensure that signage and traffic management features are kept to a minimum and sensitively sited and use innovative design solutions where possible so that such features complement and integrate with the landscape rather than detracting from it. |
| | The presence of flood defences could detract from the landscape. | The Council will ensure that such features are kept to a minimum and sensitively sited and use innovative design solutions where possible so that such features complement and integrate with the landscape rather than detracting from it. |
| | Maintenance works, including winter maintenance activities can lead to an unsightly landscape, albeit temporarily. | Those undertaking such works will be required to do so in as speedy and efficient a manner as possible. |
| **Population** | Proposals to reduce levels of street lighting could discourage vulnerable members of society from travelling during evenings | Any scheme of this nature will be undertaken on a pilot basis and the impacts on the public monitored before full implementation takes |

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| | and late at nights which could have negative social inclusion implications. | place. Schemes will not be implemented in busy areas where walking, cycling and public transport use are common during the hours of darkness. |
| | Road improvement and maintenance schemes can lead to delays and congestion. | Those undertaking works will be required to ensure that they are completed in as timely a manner as possible. Diversionary signage will be used to guide road users to the alternative routes |
| **Health** | Road improvement and maintenance schemes can increase noise. | Those undertaking necessary works will be required to ensure that works are completed as quickly as possible and that noise and disruption is kept to a minimum. |
| | Road accidents could increase should street lighting be limited in certain areas. | Any scheme of this nature will be undertaken on a pilot basis and the impacts on the travelling public, particularly in terms of safety (for all users) monitored before full implementation takes place. |
| | A reduction in street lighting could see a reduction in walking and cycling during the hours of darkness. | Any scheme of this nature will be undertaken on a pilot basis and the impacts on walking and cycling levels monitored before full implementation takes place. Locations where high levels on walking and cycling are typical will not be selected for piloting this scheme. |
| **Cultural Heritage** | An increase in traffic management features can result in an unsightly environment. | The Council will ensure that signage and traffic management features are kept to a minimum, are sensitively sited and use innovative design solutions where possible so that such features complement and integrate with the landscape rather than detracting from it, especially in conservation areas and around areas, buildings and structures of cultural or historical importance. |
| | Sites of cultural and/or historical importance may suffer from unsightly surroundings and vibrations as a result of transport improvement and maintenance activities. | Every effort will be made during such activities to preserve the setting of, and maintain access to, such sites. Those undertaking the works will be required to do so as speedily as possible in order to minimise disruption. |

It is hoped, therefore, that any potential negative impacts of implementation of the LTS can be successfully mitigated or offset by the means outlined above.

## 6 MONITORING

Following adoption of the LTS and the Action and Delivery Plan and as implementation commences, Aberdeen City Council will monitor the significant environmental effects of implementation. A monitoring exercise will be undertaken annually and the results reported and published on the Council's website.

Monitoring of a number of indicators will help the Council assess:

- Whether the LTS is having the desired effects in terms of minimising transport's impact on the environment;
- Whether any unintended consequences of implementation of the LTS have arisen that will require to be addressed; and
- Whether any other social or environmental changes are taking place that the LTS may have to address or respond to, either now or in the future.

If the LTS is not performing as anticipated, the Council will review the policies contained within it, take remedial action and identify those policies that may require relaxing or strengthening.

The monitoring framework is outlined in Table 6.1.

**Table 6.1: Proposed Monitoring Framework**

| What is being monitored? | Data source, frequency of monitoring | Summary of proposed remedial action (if information is available) |
|---|---|---|
| Usual method of travel to work amongst employed adults | Scottish Household Survey (biennial) | If indicators are not moving in the right direction, efforts to encourage mode share and to increase in the use of sustainable transport modes and cleaner vehicles will be reviewed and, if necessary, intensified. |
| Usual method of travel to school amongst pupils in full-time education | Hands Up School Travel Survey (annual) | |
| Use of local bus and train services | Scottish Household Survey (biennial) | |
| Frequency of walking and cycling | Scottish Household Survey (biennial) | |
| Cycling levels on key corridors | Aberdeen City Council and Aberdeen Cycle Forum manual counts (annual)<br>Date from automatic cycle counters once implemented (frequent intervals) | |

| | | |
|---|---|---|
| Frequency of driving | Scottish Household Survey (biennial) | |
| Households with cars available for private use | Scottish Household Survey (biennial) / Scottish Transport Statistics (annual) | |
| Traffic levels in Aberdeen | Scottish Transport Statistics (annual) | |
| Traffic congestion within Aberdeen | Scottish Transport Statistics (annual) | |
| Petrol and diesel consumption of road vehicles | Scottish Transport Statistics (annual) | |
| | | |
| Air quality data ($NO_2$, PM10, PM2.5, oxides of nitrogen (Nox), Carbon Monoxide (CO), Black Carbon (BC) and ground level ozone. | ACC / DEFRA Urban and Rural Network | |
| Number and condition of Noise Management Areas | ACC | |
| Water Quality | SEPA | If the condition of any of these features worsens as a result of transportation impacts or interventions, the Council will undertake measures to reverse the impact and to investigate ways of making these policies more sustainable in terms of environmental impact. |
| Condition of qualifying features of River Dee SAC | SNH | |
| Conservation status of protected species | SNH | |
| Condition of notified features of SSIs. | SNH | |
| Quality and availability of public open space | ACC (annual) | |
| Road casualties | Road Casualties Scotland (annual) | If numbers are not moving in the right direction, the Council will review its road safety policies and strategy. |
| Public road lengths | Scottish Transport Statistics (annual) | The Council would expect the volume of assets to increase over the lifetime of the LTS. If this is found not to be the case to the extent envisaged, the Council will review its policies and funding decisions. |
| Cycleway length | ACC | |
| Public transport infrastructure and assets | ACC | |
| Number of Car Club vehicles available to the public | ACC | |
| Number of electric vehicle charge points available to members of the public | ACC | |
| Life expectancy at birth | National Record of Scotland (biannual) | This data will be monitored to assess their impacts on current and future transport policy. No targets are set by this Strategy so no remedial action is required. |
| Established population | National Record of Scotland (annual) | |
| Population and household projections | General Register Office for Scotland (5 years) | |

## Appendix A: Links to other PPS & Environmental Protection Objectives

| | Name of PPS / Environmental Protection Objective | Requirements of the PPS | How it affects or is affected by LTS in terms of SEA issues |
|---|---|---|---|
| | **INTERNATIONAL** | | |
| 1 | Habitats Directive | Promotes the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, including robust protection for those habitats and species of European importance. | Care must be taken to ensure that any projects proposed or promoted by the LTS do not have a negative impact on habitats or species and that opportunities for enhancement are taken advantage of where appropriate. |
| 2 | Birds Directive | Promotes the protection of wild birds and their habitats. | |
| 3 | European Biodiversity Framework | Promotes the conservation and sustainable use of biological diversity. | |
| 4 | Kyoto Protocol | Sets binding obligations on industrialised countries to reduce emissions of greenhouse gases. | The LTS must ensure that the policies and projects it promotes aim to reduce greenhouse gas emissions and do not contribute to, or hasten the acceleration of, climate change. |
| 5 | UN Framework Convention on Climate Change | Sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognises that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. | |
| 6 | Paris Agreement | Signatories (including the UK) agree to:<br>• Keep the rise in global temperatures well below 2.0C and endeavour to limit them even more to 1.5C;<br>• Limit the amount of greenhouse gases emitted by human activity to the same level that trees, soil and oceans can absorb naturally, beginning between 2050 and 2100;<br>• Review each country's contribution to cutting emissions every five years; and<br>• Richer countries to help poorer nations by providing 'climate finance' to adapt to climate change and switch to renewable energy. | |
| 7 | EU White Paper: Roadmap to a single European transport area | Presents the European Commission's vision for the future of the EU transport system and sets the policy for the next | The LTS must recognise and reflect the EU's emphasis on carbon reduction and clean transport, as well as the |

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| | – towards a competitive and resource efficient transport system | decade, identifying four vision statements:<br>• Growing transport and supporting mobility while reaching a 60% emissions reduction target;<br>• An efficient core network for multimodal intercity travel;<br>• A global level playing field for long-distance travel and inter-continental freight; and<br>• Clean urban transport and commuting. | policies set out for rail, air and sea travel which include completion of a single European sky, revision of airport slot regulation, innovation, technology and safety. |
| 8 | EU Ambient Air Quality Directive | Sets legally binding limits for concentrations in outdoor air of major pollutants that impact upon public health such as particulates (PM10 and PM2.5) and nitrogen dioxide ($NO_2$). | As emissions of these pollutants in urban areas are largely the result of transport, the LTS must address this and identify ways of reducing transport's contribution to poor air quality, including traffic reduction measures and the promotion and facilitation of non-polluting modes of transport. |
| 9 | UNECE Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone | Sets emissions ceilings for 2010 for four pollutants – sulphur, oxides of nitrogen ($NO_X$), Volatile Organic Compounds (VOCs) and ammonia – and sets limit values for specific emissions sources (including cars and lorries) and requires best available techniques to be used to keep emissions down. The protocol was amended in 2012 to include national emission reduction commitments to be achieved in 2020 and beyond. | Transport is a significant contributor to $NO_X$ emissions in particular, therefore the LTS should look to implement measures to reduce transport's contribution to such emissions. |
| 10 | National Emission Ceilings Directive | Seeks to reduce emissions of those pollutants (sulphur dioxide, oxides of nitrogen, VOCs and ammonia) that cause acidification, eutrophication and ground-level ozone in order to protect the environment and human health. Revised in 2013 as part of the European Clean Air Package. As well as setting new ceilings for the four established pollutants, the revision addresses the primary emissions of PM2.5. | Transport is a significant contributor to $NO_X$ and PM emissions, therefore the LTS should look to implement measures to reduce transport's contribution to such emissions. |
| 11 | European emissions standards for vehicles | Define acceptable limits for exhaust emissions of new vehicles sold in EU member states. $NO_X$, total hydrocarbon (THC), non-methane hydrocarbons (NMH), carbon monoxide (CO) and PM regulated for most vehicle types with different standards applying for each. | The LTS should encourage all vehicles operating in the City (private cars, vans, taxis, buses and freight vehicles) to have the highest possible Euro rating. |
| 12 | Environmental Noise Directive | Sets out actions to avoid, prevent or reduce the harmful effects of noise, and aims at providing a basis for developing measures to reduce noise emitted by major sources, including | The LTS must recognise transport's contribution to noise and seek to address this through developmental decisions and the promotion of quiet modes of transport. |

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| | | road, rail and air traffic. | |
| | **NATIONAL** | | |
| 1 | National Transport Strategy | Sets the Scottish Government's long-term vision for transport, establishing 3 strategic outcomes to deliver to 2025:<br>• Improve journey times and connections between our cities and towns and our global markets to tackle congestion and provide access to key markets;<br>• Reduce emissions to tackle climate change and improve local air quality; and<br>• Improve quality, accessibility and affordability of transport to give people the choice of public transport and real alternatives to the car. | The LTS must conform to the NTS and outline local policies and actions to contribute to the delivery of the national vision. The LTS must reflect in particular the 3 strategic outcomes of the NTS. |
| 2 | Scottish Planning Policy | Identifies how land use planning matters should be addressed and sets out national policies for the planning system and the development and use of land. Establishes 4 outcomes, all of which transport will play a role in achieving:<br>• A successful, sustainable place;<br>• A low carbon place;<br>• A natural, resilient place; and<br>• A more connected place.<br>In terms of transport, the planning system should support development which:<br>• optimises the use of existing infrastructure;<br>• reduces the need to travel;<br>• provides safe and convenient opportunities for walking and cycling for both active travel and recreation, and facilitate travel by public transport;<br>• enables the integration of transport modes; and<br>• facilitates freight movement by rail or water.<br>Also emphasises the promotion of sustainable transport and active travel with the development of active travel networks, inclusion of electric vehicles and implementation of maximum parking standards. | The LTS should be complementary and consistent with SPP, supporting the emphasis on reducing the need to travel and affording opportunities for sustainable transport and active travel. |
| 3 | National Planning Framework 3 | Sets out the Scottish Government's development priorities for the next 20-30 years, identifying 14 national developments which support the development strategy, 3 of which are | The LTS must reflect the Government's commitment to, and support the delivery of, these national developments. There may be a requirement for officers to assist in the |

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| | | directly relevant to transport in Aberdeen: Aberdeen Harbour extension at Nigg Bay; strategic enhancements to Aberdeen International Airport; and a National Long Distance Cycling and Walking Network. | development of local elements of the National Long Distance Cycling and Walking Network. |
| 4 | Designing Streets | Encourages an improvement in the quality of urban street design, stressing that this should derive from an intelligent response to location rather than the rigid application of standards. An appropriate balance must be struck between the needs of different user groups, and traffic capacity will not always be the primary consideration in designing individual roads and road layout. | The LTS must recognise and reflect these guidance documents, encouraging all new and upgraded streets to conform to their principals. This guidance will also be essential in determining how the City's network of streets should be used when the AWPR is built. |
| 5 | National Roads Development Guide | Follows the principles introduced in Designing Streets with a change in policy from a standards-based approach to one where designers, planners and roads engineers collaborate to develop a design-led solution. | |
| 6 | Cycling Action Plan for Scotland | Sets a national vision for cycling and a target that 10% of all trips in Scotland will be by bicycle by 2020. | The LTS should share this aspiration and identify ways of meeting the target locally through a combination of measures to encourage and enabling more cycling in Aberdeen. |
| 7 | Let's Get Scotland Walking – The National Walking Strategy | Sets a national vision for walking, with 3 strategic aims:<br>• Create a culture of walking where everyone walks more often as part of their everyday travel and for recreation and well-being;<br>• Better quality walking environments with attractive, well designed and managed built and natural spaces for everyone; and<br>• Enable easy, convenient and safe independent mobility for everyone. | The LTS should share the vision of the National Walking Strategy and identify ways of achieving the aims locally through a combination of measures to encourage and enable more walking in Aberdeen. |
| 8 | Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles | Sets a vision that, by 2050, Scottish towns, cities and communities will be free from the damaging effects of petrol and diesel fuelled vehicles, building on the Government's existing commitment to the almost complete decarbonisation of road transport by 2050. Establishes an ambition that, from 2040, almost all new vehicles sold will be near zero emission at the tailpipe and that, by 2030, half of all fossil-fuelled vehicles will be phased out of urban environments. | The LTS must reflect this new emphasis on alternative-fuelled vehicles and demonstrate how Aberdeen can contribute to meeting the national vision and targets. |

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| 9 | Scotland's Road Safety Framework to 2020. | Sets a vision to reduce the injury rate and the number of people killed on Scotland's roads and the commitments required to achieve this. Sets casualty reduction targets. | A safe transport system is a key priority of the LTS. Aberdeen City Council is responsible for safety on the local network and has a statutory duty to provide a safe network (via road construction, accident investigation and analysis, traffic calming, setting speed limits and facilities for pedestrians and cyclists) and to deliver road safety education and provision of a safe network. |
| 10 | Strategic Transport Projects Review | Identifies interventions to be designed, developed or delivered in Scotland between 2012 and 2032. Relevant to Aberdeen are the AWPR, Haudagain roundabout improvements, Aberdeen to Inverness rail improvements and the A96 Park and Choose | The LTS must reflect and support these committed projects, identifying how the Council will take advantage of these schemes in meeting its vision for transport in the City. |
| 11 | Infrastructure Investment Plan | Provides an overview of the Scottish Government's plans for investment over the next decade, setting out the key requirements for each sector. For transport, the IIP builds on the projects identified in the STPR, as well as new longer term projects such as the dualling of the A96 from Aberdeen to Inverness, and reaffirms the need to improve rail infrastructure between Aberdeen and Inverness and between Aberdeen and the Central Belt. | |
| 12 | Wildlife and Countryside Act 1981 (as amended) | Gives protection to listed species from disturbance, injury, intentional destruction or sale. | Projects emanating from the LTS should ensure that listed species are protected at all times. |
| 13 | The Nature Conservation (Scotland) Act 2004 | Sets out a series of measures to conserve biodiversity and to protect and enhance the biological and geological natural heritage of Scotland. Places a general duty on all public bodies to further the conservation of biodiversity. | The LTS must seek to further the conservation of biodiversity and ensure that projects emanating from the Strategy do not have a negative impact on species or their habitats. |
| 14 | Scotland's Biodiversity Strategy: Its in Your Hands | Sets a vision for the future health of Scotland's biodiversity. | |
| 15 | The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)<br>The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 | Implement the Habitats and Birds Directive, providing for the:<br>• designation and protection of European sites (e.g. SACs);<br>• protection of European protected species from deliberate harm; and<br>• adaptation of planning and other controls for the protection of European sites. | The LTS must not adversely affect habitats and species protected under the Habitats and Birds Directives. An appropriate assessment will be required should the Strategy be judged likely to have a significant effect on a European site. |
| 16 | Water Environment and Water | Ensures that all human activity that can have a harmful impact | The LTS must not promote development that would have |

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| | Services (Scotland) Act 2003 | on water is controlled. | adverse impacts on the water environment or lead to authorities failing to ensure water bodies achieve good ecological status, as required in the Water Framework Directive by 2015. |
| 17 | Water Environment (Controlled Activities) (Scotland) Regulations 2005 | Implements the obligations of section 20 of the Water Environment and Water Services (Scotland) and the requirements of the Water Framework Directive (2000/60/EC).<br>Sets out the framework for protecting the water environment that integrates the control of pollution, abstractions, dams and engineering activities in the water environment. | |
| 18 | SEPA, Groundwater Protection Policy for Scotland: Environmental Policy | Seeks to protect groundwater quality by minimising the risks posed by point and diffuse sources of pollution and to maintain the groundwater resource by influencing the design of abstractions and developments, which could affect groundwater quantity. | |
| 19 | The Scottish Soil Framework (2009) | Promotes the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland. | The LTS must seek to protect soils from pollution. |
| 20 | Climate Change (Scotland) Act 2009 | Sets targets for a reduction in greenhouse gas emissions in Scotland of 42% by 2020 and 80% by 2050. One of the outcomes identified in the Act is the *Almost complete decarbonisation of road transport by 2050 with significant progress by 2030 through wholesale adoption of electric cars and vans, and significant decarbonisation of rail by 2050.* | While other sectors have seen a reduction in emissions since 1990, transport emissions (including international aviation and shipping) have continued to rise. Meeting the targets set out in the Act will therefore require a significant contribution from the transport sector, which currently accounts for about 26% of total Scottish carbon emissions. The LTS must therefore demonstrate how emissions from transport will reduce in the City during its lifespan. |
| 21 | Climate Change Delivery Plan | Sets out the high level measures required to meet the targets set out in the Act, a number of which affect the transport sector including:<br>• Improvements in energy efficiency of petrol and diesel vehicles and increasing uptake of hybrid and electric engines with supporting infrastructure;<br>• Smarter measures including reduced travel and modal shift to less carbon-intensive modes of transport such as public transport and active travel;<br>• Demand management including road space reallocation;<br>• Changes to the pattern of development to reduce the need | The LTS must demonstrate how these transport measures will be implemented locally in order to meet the targets of the act. |

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| | | to travel; and<br>• Sustainable bio-fuels. | |
| 22 | UK Air Quality Strategy (2007) | Seeks to render polluting emissions harmless. Sets objectives for protecting human health to be included in regulations for the purposes of Local Air Quality Management relating to concentrations of, amongst others, carbon monoxide, lead, nitrogen dioxide, ozone and particulates. | As the majority of Aberdeen's air quality problems are caused by transport, the LTS must seek to lessen transport's impact through the implementation of measures that will reduce motorised travel, particularly in the City Centre, and promote the uptake of cleaner, less harmful modes of transport. |
| 23 | Air Quality (Scotland) Regulations | Specify the pollutants that require assessment by local authorities in Scotland, the objectives that require to be achieved and expected compliance dates. | |
| 24 | The Air Quality Standards (Scotland) Regulations 2010 | Sets targets for maximum concentrations of various pollutants, including $NO_X$ and PM, in ambient air ambient and imposes requirements on Scottish Ministers to draw up air quality plans in relation to limit values and target values and short-term action plans in relation to alert thresholds. | The LTS must complement air quality plans and look to reduce the impact of transport on air quality, particularly reducing emissions on $NO_X$ and PM. |
| 25 | Local Air Quality Management (Part IV of the Environment Act 1995) | Guidance to assist local authorities with their local air quality management duties under Part IV of the Environment Act 1995. Includes guidance of the role of transport-related measures in improving air quality, such as road user charging, traffic regulation and Low Emission Zones. | The LTS should take cognisance of the guidelines and include measures to reduce the impact of transport on air quality. |
| 26 | National Emissions Ceilings Regulations (UK) | Transposes the European Emission Ceilings Directive into UK regulations. | Transport is a significant contributor to $NO_X$ and PM emissions, therefore the LTS should look to implement measures to reduce transport's contribution to such emissions. |
| 27 | Road Traffic (Vehicle Emissions) (Fixed penalty) (Scotland) Regulations 2003 | Enables local authorities to carry out emission testing of any vehicle within their boundary and to issue fixed penalty notices in respect of emissions offences committed in relation to such vehicles. | The LTS should support this process as a technique for tackling and reducing road transport emissions. |
| 28 | The Public Service Vehicles (Traffic Regulation Conditions) Amendment (Scotland) Regulations 2008 | Gives the Traffic Commissioner for Scotland the option to regulate bus emissions. | As buses are a significant contributor to emissions, this legislation allows for setting mandatory vehicle compliance standards for buses in Aberdeen. Aberdeen City Council prefers a voluntary approach to this, however, which is currently in place with the existing Voluntary Quality Partnership for Public Transport. |
| 29 | Let's Make Scotland More Active: A Strategy for Physical | Aims to increase the proportion of people in Scotland who are | Recognising that transport choices impact on physical |

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| | Activity | physically active. | activity levels, the LTS must seek to increase the number of journeys undertaken by walking and cycling (both as a means of travel and for recreation) at the expense of sedentary forms of transport. This will involve improving the local environment to make walking and cycling safer and more attractive, putting the right infrastructure in place to ensure those that want to walk and cycle can, and raising awareness of the benefits of active travel. |
| 30 | Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight | Sets the direction of national and local government decision-making to avoid the consequences of obesity and aims for the majority of people in Scotland to be in a normal weight range. One of the intervention categories identified is Energy Expenditure, with *increasing opportunities for the uptake of walking, cycling and physical activity in our daily lives and minimising sedentary behaviour* identified as a priority. | |
| 31 | The Government Economic Strategy | Identifies six priorities to accelerate economic recovery, drive sustainable economic growth and develop a more resilient and adaptable economy. Transition to a low carbon economy is an essential element within all of these. Recognises that an efficient transport system is key to enhancing productivity and delivering sustainable growth. | The LTS must reiterate the role that transport can play in stimulating economic growth and identify measures to contribute to the development of an efficient and low-carbon transport system. |
| 32 | Scotland's Cities: Delivering for Scotland | Sets a vision for *a Scotland where our cities and their regions power Scotland's economy for the benefit of all*. Recognises that good connectivity within and between cities and their regions is key and the importance of international connections via air and high speed rail. Specific reference is made to the importance of inter-urban connectivity across road and rail resulting in better travel choices and improved journey times, particularly a reduction in journey times between Aberdeen and Inverness and Aberdeen and the Central Belt. The importance of low carbon transport, utilising new technologies and intelligent transport systems, is also highlighted. | The LTS must set out priorities and actions for improving connectivity (including support for those elements the Council is not responsible for, such as air and rail connectivity) and for enabling the transition to a low carbon transport system in Aberdeen. |
| 33 | The Scottish Historic Environment Policies | Provides a framework for more detailed strategic and operational policies for managing the historic environment | The LTS should contribute to the management of the historic environment in a sustainable way which avoids adverse impacts as a result of new development. |
| 34 | The Planning (Listed Buildings and Conservation Areas) Act 1997 | Prescribes the approach to be taken in planning for listed buildings, conservation areas and designed landscapes and gardens. | The LTS should ensure that listed buildings, conservation areas and designed landscapes and gardens are not adversely affected by transport problems and transport projects. |
| | **REGIONAL** | | |
| 1 | Nestrans Regional Transport Strategy | Sets a vision for transport in the north east to 2025 with 4 strategic objectives: | The LTS should support the objectives of the RTS and identify how these will be achieved within Aberdeen City. |

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| | | • Economy: To enhance and exploit the north east's competitive economic advantages, and reduce the impacts of peripherality;<br>• Accessibility, Safety and Social Inclusion: To enhance choice, accessibility and safety of transport of all in the north east, particularly for disadvantaged and vulnerable members of society and those living in areas where transport options are limited;<br>• Environment: To conserve and enhance the north east's natural and built environment and heritage and reduce the effects of transport on climate, noise and air quality; and<br>• Spatial Planning: To support transport integration and a strong, vibrant and dynamic city centre and town centres across the north east. | RTS objectives provide the framework for the vision, aims and objectives developed for the LTS. |
| 2 | Nestrans Bus Action Plan | Presents a programme of actions to achieve the bus proposals set out in the RTS, including infrastructure, information and ticketing proposals. | The LTS must support the Bus Action Plan and look to implement, or further examine, those elements of the Plan that can be delivered in Aberdeen City. |
| 3 | Nestrans Rail Action Plan | Identifies and suggests measures to addresses current issues and problems associated with rail travel in the north east and to/from the north east. | The LTS must support implementation of the Rail Action Plan. |
| 4 | Nestrans Freight Action Plan | Sets out how Nestrans and its partners can assist in the delivery of more effective and efficient freight operations for the benefit of the north east of Scotland. | The LTS must support the Freight Action Plan and look to implement, or further examine, those elements of the Plan that can be delivered in Aberdeen City. |
| 5 | Nestrans Active Travel Action Plan | Sets out a vision of an environment in which walking and cycling are convenient, safe, comfortable, healthy and attractive travel choices for everyday journeys, and identifies a strategic network of active travel routes linking Aberdeen City and the main towns of Aberdeenshire to be developed. | The LTS must support the Active Travel Action Plan and look to implement, or further examine, those elements of the Plan that can be delivered in Aberdeen City. |
| 6 | Aberdeen City and Shire Regional Parking Strategy | Sets out a policy framework under which actions can be delivered at a local level to ensure the provision, management and control of parking in the region works towards and supports the wider objectives of the RTS and the LTSs of Aberdeen City and Aberdeenshire. | The Parking Strategy seeks to complement and support the objectives of the LTS, in terms of stimulating economic activity, ensuring access to services, managing demand and encouraging the use of more sustainable modes. |
| 7 | Aberdeen City, Aberdeenshire and Moray Road Safety Plan | Identifies strategies to assist in the monitoring of performance in reducing casualties. | The Plan supports the LTS's emphasis on road safety. Measures identified in the Plan for reducing road casualties may need to be reflected in the LTS. |

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| 8 | Health and Transport Action Plan | Sets out 2 visions:<br>1. Transport and Public Health – *For people in Grampian to choose to travel by active modes,* and *For everyone in the region to live without unacceptable risk to heir health caused by the transport network or its use*.<br>2. Health and Social Care – *For everyone in the region to be able to access the health and social care they need*, and *For the environmental impacts of journeys to be minimised*. | The Plan support the LTS's aim of increasing the number of journeys undertaken in the City by walking and cycling and for the health implications of transport (particularly sedentary behaviour, harmful emissions and air quality) to reduce. The LTS must, in turn, reflect the Plan's aspirations for access to healthcare and investigate ways of addressing and improving existing problems. |
| 9 | Aberdeen City and Shire Strategic Development Plan | Presents a spatial strategy for the region, identifying three strategic growth areas which will comprise the main focus of future development, one of which is Aberdeen City. Proposes to significantly increase the region's population to 480,000 by 2030 and 500,000 by 2035. Requires more than 27,000 new homes in Aberdeen by 2030, and 196 hectares of employment land. | The LTS must address the scale of development anticipated for Aberdeen and the wider region and seek to implement measures to ensure the City can cope with the additional trips expected on the network between now and 2030. A key requirement of the LTS will be ensuring these trips can be accommodated sustainably, by improving opportunities for walking, cycling, public transport use, car club use, car sharing and the use of cleaner vehicles. |
| 10 | Building on Success: The Economic Action Plan for Aberdeen City and Shire | Sets a vision that, by 2025, Aberdeen City and Shire will be *recognised as one of the most robust and resilient economies in Europe*, and aims for a *strong economy* and *excellent quality of life*. In terms of transport, delivery of a fully integrated transport network is identified as a strategic priority. | The LTS must continue to seek to develop a fully integrated transport network for the City and for the wider region, in line with the area's economic aspirations. |
| 11 | North East of Scotland Local Biodiversity Action Plan | Ensures the protection and enhancement of biodiversity in the north east through the development of effective local working partnerships. Seeks to ensure that national targets for species and habitats, as specified in the UK Action Plan, are translated into effective local action. | The LTS must ensure that transport projects promote and protect biodiversity. |
| 12 | Forest and Woodland Strategy for Aberdeenshire and Aberdeen | Provides a framework for woodland development and management, including the protection of sensitive areas. | The LTS must support and not conflict with forest and woodland priorities (e.g. sustaining ancient woodlands, enhancing popular recreation areas, and linking wildlife corridors). |
| 13 | River Dee Catchment Management Plan | Records the current state of the Dee catchment, including water quality, the type and extent of habitats and species in the catchment, and important land management activities. Identifies key issues and potential solutions through a series of actions. | Transport policies should not conflict with the River Dee Catchment Management Plan |

| | LOCAL | | |
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| 1 | Aberdeen Local Development Plan | Presents a spatial strategy for the City in line with the Strategic Development Plan, and the policies by which development will be guided. | The planned growth in population and number of households will have a significant impact on the transport network as the number and pattern of trips increases and changes and this must be reflected in the LTS, along with measures to ensure that new trips on the network can be accommodated, and accommodated sustainably wherever possible. |
| 2 | Aberdeen Local Development Plan Supplementary Guidance on Transport and Accessibility | Sets out transport policies that applications for new developments will require to adhere to, including maximum parking standards, accessibility thresholds, and requirements for Transport Assessments and Travel Plans. | Transport policies are prepared in line with the aims and objectives of the LTS, particularly to encourage and enable travel by sustainable modes of transport. |
| 3 | Strategic Infrastructure Plan | Focuses on the development of the enabling infrastructure needed to realise the city's aspirations. Identifies the key planned projects to deliver the infrastructure to enable growth, identifies the main areas where there are deficiencies in relation to the city's needs and the actions to be taken to address the gaps in both the short and long term. Transport and Connectivity is seen as one of the main barriers to growth. In terms of transport, commitment to the following projects is re-emphasised or introduced: South College Street and Berryden Corridor improvements, Dyce Drive Link Road, Third Don Crossing, Access from the South and Cross-City transport connections. | The LTS must reflect the Council's renewed commitment to these projects and identify ways of supporting them and ensuring that the needs of non-motorised users are taken into account in the development of large-scale transport projects. |
| 4 | Aberdeen Cycling Strategy | Provides policy guidance, targets and information to assist Council officials, developers and employers in providing for cyclists, covering cycling as a means of travel to work and for leisure and recreation. Includes 5 objectives:<br>• To maximise the role of cycling as a transport mode, available for a wide range of purposes, particularly for short City journeys to work.<br>• To develop a safe, convenient, efficient and attractive transport infrastructure which encourages and facilitates cycling and which minimises reliance on, and discourages unnecessary use of, private cars.<br>• To increase cycling's role as a means of leisure, for tourism and recreation throughout the City and into | The LTS will set the context for the development of an Active Travel Action Plan Aberdeen, which must also reflect the Cycling Action Plan for Scotland vision and targets. |

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| | | Aberdeenshire.<br>• To ensure that policies to increase cycling and meet the needs of cyclists are fully integrated into the Structure Plan, Local Plan, Transportation Policy Documents, Road Safety Plan and in all complementary strategies.<br>• To set a framework of policies and delivery mechanisms designed to achieve the targets set within this document. | |
| 5 | Aberdeen Core Paths Plan | Provides a basic framework of routes sufficient for the purpose of giving the public reasonable access throughout their area, with a vision to *form a complete paths network throughout the City, encouraging healthy and sustainable access opportunities for all*. | The LTS must support and contribute towards the implementation of the Core Paths Plan by improving opportunities for walking and cycling. |
| 6 | Aberdeen Air Quality Action Plan | Recommends a range of initiatives to address air quality problems, focussing on increasing awareness, promoting sustainable transport, reducing the need to travel, improving traffic management and transport infrastructure, and proposals for a Low Emission Zone. | Transport is currently responsible for up to 90% of air quality problems on some corridors in Aberdeen and is one of the highest contributors to greenhouse gas emissions. The contribution of transport to air quality problems must therefore be recognised in the LTS and the LTS must identify a range of measures to address this, including progressing proposals for a Low Emission Zone. |
| 7 | Aberdeen Local Development Plan Supplementary Guidance on Air Quality | Identifies development proposals that will require an air quality assessment and provides guidance on the assessment process. | The LTS must support the process of air quality assessments for all developments (especially transport developments) that may impact upon air quality. |
| 8 | Aberdeen Agglomeration Noise Action Plan | Describes how obligations under the Environmental Noise Directive will be delivered locally. Identifies Noise Management Areas (NMAs) and Quiet Areas (QAs) which will be offered protection from deterioration in noise quality and an increase in noise from adjacent land uses or new development. | The LTS must recognise the increasing emphasis on noise pollution and that transport (road and rail) is responsible for unacceptable noise levels in all of Aberdeen's NMAs. The Strategy must therefore seek to limit transport noise in the City, primarily by continuing to promote the use of quiet (i.e. non-motorised) forms of transport. |
| 9 | Local Climate Impacts Profile Report (LCLIP) for Aberdeen. | Presents findings and recommendations following an investigation of how extreme weather affects Aberdeen and how the Council can be better prepared to manage extreme weather in the future. The report identifies that the area most affected from extreme weather and other climate related impacts was transport; damage to infrastructure such as roads, railways and networks occurred more frequently than any other impact in Aberdeen City from 2008-13. | This demonstrates that the transport network needs to become more resilient and the Council will need to adapt to cope with increasing changes to weather in the future. |

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| 10 | Fit for the Future: A Sport and Physical Activity Strategy for Aberdeen City | Defines the strategic direction for sport and physical activity in Aberdeen and identifies key areas of activity, including objectives to:<br>• Promote and increase opportunities for participation in sport and physical activity for everyone in Aberdeen; and<br>• Maximise the social, educational, health and economic benefits of sport and physical activity in Aberdeen. | The LTS must recognise the role that increased opportunities for, and encouragement of, active travel, both for transport and for recreation, can play in increasing levels of physical activity across the City. |
| 11 | Single Outcome Agreement | Identify the outcomes Aberdeen wants to achieve and how the Council will use their resources to deliver those outcomes. | Transport influences all but one of the fifteen national outcomes and as actions require to be reprioritised to deliver these outcomes, this needs to be reflected in the LTS, particularly in relation to investment in transport. |
| 12 | Aberdeen Futures – Aberdeen Community Plan | Sets out a vision for Aberdeen as an attractive, clean, healthy and safe place to live, a forward-looking city that recognises its heritage and its internationally recognised institutions and services. Seeks to promote a strong, positive image of Aberdeen both nationally and internationally. | The LTS must recognise the role that a modern, integrated transport system can play in achieving this vision and identify measures to work towards this. |
| 13 | Aberdeen – The Smarter City | Sets a vision for Aberdeen as an ambitious, achieving, smart City. One of the administration's high-level priorities is 'Smarter Mobility' with the following commitments outlined in the document: *We will develop, maintain and promote road, rail, ferry and air links from the city to the UK and the rest of the world. We will encourage cycling and walking*, and *We will provide and promote a sustainable transport system, including cycling, which reduces our carbon emissions, as well as to maximising digital connectivity*. The document also contains a commitment to improving the City Centre transport infrastructure, including Union Street pedestrianisation. | The LTS must reflect and prioritise the administration's ambitions for transport in the City. |
| 14 | City Centre Masterplan (CCMP) and Sustainable Urban Mobility Plan (SUMP). | The CCMP provides a visionary, integrated and coherent template for the sustainable development of the City Centre. The SUMP complements the Masterplan, identifying how the transport elements of the Masterplan can be delivered. With a focus on connectivity and movement (rather that traffic flow) these Plans contain ambitious proposals for improving the active travel and public transport environment in the City Centre. | The LTS must be consistent with and reflect emerging visions, aspirations and objectives for the City Centre, in terms of new transport infrastructure and the operation of the transport network. |
| 15 | Aberdeen City Nature Conservation Strategy | Aims to control and maintain natural habitats and associated wildlife. | The LTS must ensure that transport does not negatively impact upon biodiversity. |

## Appendix B: Baseline data, targets and trends affecting Aberdeen City

### Biodiversity

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
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| Special Areas of Conservation (SAC) | Aberdeen - 1 site (River Dee SAC) (155 hectares). Qualifying features include Otter, Atlantic Salmon and Freshwater Pearl Mussel.<br><br>Also of significance to Aberdeen is the Moray Firth SAC as bottlenose dolphins from this population frequently use the waters off Aberdeen Harbour and Aberdeen Bay for foraging. | Aberdeenshire - 8 sites (5545ha)<br><br>To maintain or improve the condition of qualifying features of the designated sites. | No trend. Planning policies have generally prohibited developments within international and national designations that may harm these sites, though indirect impacts are affecting some important wetland sites. | New development has the potential to put pressure on sites. The River Dee's designation as a Special Area of Conservation will have a knock-on effect on future development within the river's catchment. | SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp |
| Sites of Special Scientific Interest (SSSI) | Aberdeen - 4 SSSIs (47ha) | Aberdeenshire - 69 SSSIs (15,655ha)<br><br>The main targets to be achieved are the conservation and enhancement of designated sites, and permitting only those developments that will not adversely affect these designations directly and indirectly, unless the proposal will be of national benefit. | No trend. | New development has the potential to put pressure on sites.<br><br>Impact from leisure and recreation uses - improving access to designated sites could be damaging to some sites. | As above. |

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| Local Nature Conservation Sites | Aberdeen – 45 sites | Aberdeenshire: Sites of Interest to Natural Science sites - 79<br><br>Targets as above. | As above. | As above. | As above. |
| Local Nature Reserves | Aberdeen – 4 sites (126ha) | Aberdeenshire – 2 sites (28ha)<br><br>Targets as above. | As above. | As above. | As above. |
| Ancient Woodland | Aberdeen – 140 sites | Aberdeenshire – 2584 sites (45,000ha)<br><br>Targets as above. | As above. | As above. | As above. |
| Condition of qualifying features of River Dee SAC | Qualifying features and last assessed condition:<br>• Atlantic salmon – favourable maintained<br>• Otter – favourable maintained<br>• Freshwater pearl mussel- unfavourable no change | Improvement in conditions in the River Dee. | No changes in condition of qualifying features. | New development has the potential to put pressure on the River Dee SAC through habitat loss, recreational impact, water abstraction, pollution and disturbance. | SNH Website http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8357 |
| European Protected Species and Annex II species. | There are Common otter, Atlantic salmon, cetaceans and bats found in Aberdeen. | Target – to maintain populations and suitable habitats within the City. | No trend. | New development has the potential to put pressure on species and their habitats and can lead to disturbance and loss. Pollution, noise, light and increases in human activity resulting from transport can have negative implications on vulnerable species. | |
| Schedule I Species | There are a number of Schedule I species found in Aberdeen City. These include Merlin, Osprey, Red-throated diver, Barn owl, | Target – to maintain populations and suitable habitats within the City. | No trend. | New development has the potential to put pressure on species and their habitats and can lead to disturbance and loss. Pollution, noise, | |

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| | Peregrine falcon etc. | | | light and increases in human activity resulting from transport can have negative implications on vulnerable species. | |
| Other protected species | Red squirrel, badger, pine marten and water vole. | Target – to maintain populations and suitable habitats within the City. | No trend. | New development has the potential to put pressure on species and their habitats and can lead to disturbance and loss. Pollution, noise, light and increases in human activity resulting from transport can have negative implications on vulnerable species. | |

All Local Nature Conservation Sites in Aberdeen are listed in the table below:

| Site | Designation |
|---|---|
| Aberdeen-Inverness and Kittybrewster Railway Line | LNCS |
| Allan Park Pond | LNCS |
| Baads Moss | LNCS |
| Balgownie-Blackdog Links | LNCS |
| Balnagask to Cove | SSSI, LNCS |
| Bucksburn | LNCS |
| Corby Loch | SSSI, LNCS |
| Culter Burn | LNCS, TPO |
| Culter Compensation Dam | LNCS |
| Cults Den | LNCS, TPO, CA |
| Cults Quarry | LNCS |
| Deeside Old Railway Line | LNCS, CA |
| Denwood-Hazlehead | LNCS |
| Den of Leggart | LNCS |
| Den of Maidencraig | LNR, LNCS, TPO |
| Den of Moss-Side | LNCS |
| Farburn Wood | LNCS |
| Foggieton | LNCS |
| Grandholme Moss | LNCS |
| Hazlehead Park | LNCS |
| Hillhead Road | LNCS |
| Hilton Woods | LNCS |
| Kinaldie Den | LNCS |
| Kincorth Hill | LNCS |
| Leuchar Moss | LNCS |
| Loirston Loch | LNCS |
| Moss of Auchlea | LNCS |
| Murtle Den | LNCS, TPO |
| Old Manse Road | LNCS |
| Peterculter | LNCS, TPO |
| River Dee Corridor | SAC, LNCS, TPO, CA |

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|---|---|
| River Don Corridor | LNCS, TPO, CA |
| Rotten of Gairn | LNCS |
| Rubislaw | LNCS, CA |
| Rubislaw Quarry | LNCS |
| Scotstown | SSSI, LNR, LNCS, TPO |
| Southlasts Mire | LNCS |
| Stoneyhill Wood | LNCS, TPO |
| Three Hills | LNCS |
| Tullos Hill | LNCS |
| Walker Dam and Rubislaw Link | LNCS |
| Westburn of Rubislaw | LNCS |
| West Cults Woodland | LNCS |
| West Hatton | LNCS |
| Woodlands Wood – Beidleston | LNCS |
| Key:<br>LNCS – Local Nature Conservation Site<br>SSSI – Site of Special Scientific Interest<br>TPO – Tree Preservation Order<br>CA – Conservation Area<br>LNR – Local Nature Reserve<br>SAC – Special Area of Conservation | |

## Air & Climatic Factors

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Carbon dioxide ($CO_2$) emissions (kt) | Aberdeen City:<br>2007 - 1,670.4<br>2008 - 1686<br>2009 – 1516.3<br>2010 – 1579.2<br>2011 – 1479.2<br>2012 – 1564.5<br>2013 – 1488.2 | Aberdeenshire:<br>2007 – 2174.3<br>2008 – 2144.7<br>2009 – 2013.1<br>2010 – 2085.4<br>2011 – 1883.5<br>2012 – 1949.5<br>2013 – 1893.2<br><br>The Climate Change (Scotland) Act (2009) requires a 42% cut in emissions by 2020 and an 80% reduction by 2050. | Continues to fluctuate in the medium term. | Transport is a significant contributor to Aberdeen's $C0_2$ emissions:<br>Road Transport (A Roads): 135.1kt<br>Road Transport (Minor roads): 150.6kt<br>Transport Other: 21.3kt<br>(2013 data) | Department of Energy and Climate Change, Local Authority Carbon Dioxide Emissions Estimates 2013 (released 2015), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437384/2005_to_2013_UK_local_and_regional_CO2_emissions_statistical_release.pdf . |
| Natural resources consumption (footprint) | Aberdeen's annual global footprint (global hectares per person (gha/p)):<br>Total: 5.80gha/p<br>Energy consumption: 1.14gha/p (20%)<br>Food and drink: 1.11gha/p (19%)<br>Transport: 0.74ha/p (13%)<br>Other (Government, capital investment, holiday activities, consumables services, and sports): 2.81gha/p (48%) | Aberdeenshire's annual global footprint:<br>Total: 5.64gha/p<br>Energy consumption: 1.09gha/person (19%)<br>Food and drink: 1.07gha/person (19%)<br>Transport: 0.81gha/p (14%)<br>Other: 2.67gha/p (47%) | Both Aberdeenshire and Aberdeen City's global footprint is higher than the Scottish average (5.37gha/p).<br><br>Transport is one of the main contributors to Aberdeen's global footprint. | Aberdeen consumes more resources per person than any other Scottish city and it has the largest footprint in Scotland, which cannot be sustained in the long-term.<br><br>Transport is a significant contributor to this global footprint. | WWF, Aberdeenshire Council, Aberdeen City Council and North Lanarkshire Partnership, Scotland's Global Footprint: Reducing Our Environmental Impact – Final Report (Feb 2007), http://assets.wwf.org.uk/downloads/sgf_final_report.pdf. |
| Per Capita $CO_2$ Emissions (t $CO_2$ per person) | Aberdeen City:<br>2007 – 7.9<br>2008 – 7.9<br>2009 – 7.0 | Aberdeenshire:<br>2007 – 8.9<br>2008 – 8.7<br>2009 – 8.1 | Continues to fluctuate in the medium term. | Transport is a significant contributor to per capita emissions. | Department of Energy and Climate Change, Local Authority Carbon Dioxide Emissions |

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|---|---|---|---|---|---|
| | 2010 – 7.2<br>2011 – 6.6<br>2012 – 7.0<br>2013 – 6.6 | 2010 – 8.3<br>2011 – 7.4<br>2012 – 7.6<br>2013 – 7.3<br><br>The Climate Change (Scotland) Act (2009) requires a 42% cut in emissions by 2020 and an 80% reduction by 2050. | | | Estimates 2013 (released 2015), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437384/2005_to_2013_UK_local_and_regional_CO2_emissions_statistical_release.pdf |
| Transport $CO_2$ emissions (kt) | Aberdeen City:<br>2007 – 351.5<br>2008 – 339.9<br>2009 – 320.9<br>2010 – 317.3<br>2011 – 310.4<br>2012 – 309.5<br>2013 – 307.0 | Aberdeenshire:<br>2007 – 680.1<br>2008 – 651.4<br>2009 – 629.1<br>2010 – 623.0<br>2011 – 604.5<br>2012 – 599.3<br>2013 – 599.0 | Improvements in recent years. | Transport remains a significant contributor to $CO_2$ emissions. | Department of Energy and Climate Change, Local Authority Carbon Dioxide Emissions Estimates 2013 (released 2015), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437384/2005_to_2013_UK_local_and_regional_CO2_emissions_statistical_release.pdf |
| Air quality ($N0_2$) in μ g/$m_3$ | Aberdeen City:<br>Market Street<br>2009 – 38<br>2010 – 44<br>2011 – 40<br>2012 – 44<br>2013 - 43<br>Union Street<br>2009 – 56<br>2010 – 59<br>2011 – 44<br>2012 – 53<br>2013 - 48<br>Anderson Drive<br>2009 – 24 | Aberdeenshire:<br>Inverurie 1-2<br>2009 – 11.4 – 37.5<br>2010 – 10.4 – 33.6<br>2011 – 9.1 – 34.8<br>2012 – 8.9 – 34.9<br>2013 – 8.5 – 31.1<br>Peterhead 1-4<br>2009 – 23.7 – 25.0<br>2010 – 21.7 – 27.0<br>2011 – 23.3 – 28.7<br>2012 – 22.1 – 29.3<br>2013 – 21.2 – 28.5<br>Stonehaven<br>2009 – 23.7 | Fluctuations in recent years, although all sites reported a decrease in $NO_2$ between 2012 and 2013. | Regular exceedances of the annual mean limit value (40 μ g/$m_3$) are observed at 3 of the 6 monitoring stations in Aberdeen.<br><br>The location of the Harbour is a driver of poor air quality in the City Centre.<br><br>There is a need to increase energy efficiency and reduce | 2014 Air Quality Progress Report For Aberdeen City Council<br><br>2014 Air Quality Progress Report For Aberdeenshire Council<br><br>Aberdeen Air Quality Action Plan 2011 |

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|---|---|---|---|---|---|
| | 2010 – 27<br>2011 – 23<br>2012 – 30<br>2013 - 22<br><u>Wellington Road</u><br>2009 – 43<br>2010 – 52<br>2011 – 51<br>2012 – 59<br>2013 - 52<br><u>Errol Place</u><br>2009 – 26<br>2010 – 21<br>2011 – 23<br>2012 – 21<br>2013 - 20<br><u>King Street</u><br>2009 – 32<br>2010 – 29<br>2011 – 32<br>2012 – 29<br>2013 - 28 | 2010 – 26.1<br>2011 – 22.4<br>2012 – 23.8<br>2013 – 21.7<br><u>Westhill</u><br>2009 – 18.4<br>2010 – 20.3<br>2011 – 20.9<br>2012 – 22.3<br>2013 – 22.6<br><br>EU annual mean limit value (40 µg/$m_3$) | | our reliance on private transport to improve air quality, greenhouse gas emissions and health.<br><br>Traffic growth arising from new development may be a constraining factor in the future.<br><br>The proportion from each traffic source at key locations is as follows:<br><br><u>Union Street</u><br>• Bus/Coach – 65%<br>• Car/Taxi – 18%<br>• LGV – 6%<br>• OGV – 12%<br><br><u>Wellington Road</u><br>• Bus/Coach – 10%<br>• Car/Taxi – 14%<br>• LGV – 7%<br>• OGV – 70%<br><u>Haudagain Roundabout</u><br>• Bus/Coach – 23%<br>• Car/Taxi – 23%<br>• LGV – 6%<br>• OGV – 48%<br><u>Market Street</u><br>• Bus/Coach – 34%<br>• Car/Taxi – 13% | |

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|---|---|---|---|---|---|
| | | | | • LGV – 5%<br>• OGV – 48%<br><br>On Union Street, buses contribute to the ambient $NO_2$ concentrations to the greatest extent, whereas for Wellington Road, HGVs are the main source of the raised pollution levels. | |
| Air quality (PM10) in µg/m3 | <u>Market Street</u><br>2009 – 28<br>2010 – 22<br>2011 – 22<br>2012 – 23<br>2013 - 35<br><u>Union Street</u><br>2009 – 18<br>2010 – 18<br>2011 – 22<br>2012 – 21<br>2013 - 20<br><u>Anderson Drive</u><br>2009 – 15<br>2010 – 14<br>2011 – 16<br>2012 – 15<br>2013 - 15<br><u>Wellington Road</u><br>2009 – 23<br>2010 – 22<br>2011 – 24<br>2012 – 23<br>2013 - 22<br><u>Errol Place</u><br>2009 – 15<br>2010 – 13 | No PM10 monitoring carried our in Aberdeenshire.<br><br>EU annual mean limit value (40 µg/m3).<br><br>2010 annual mean Scottish Objective - 18 µg/m3 | Fluctuations. | 2010 Scottish annual mean objective exceeded regularly at Market Street, Union Street, Wellington Road and King Street.<br><br>The proportion from each traffic source at key locations is as follows:<br><br><u>Union Street</u><br>• Bus/Coach – 34%<br>• Car/Taxi – 44%<br>• LGV – 15%<br>• OGV – 7%<br><br><u>Wellington Road</u><br>• Bus/Coach – 5%<br>• Car/Taxi – 35%<br>• LGV – 16%<br>• OGV – 43%<br><br><u>Haudagain Roundabout</u> | 2014 Air Quality Progress Report For Aberdeen City Council<br><br>Aberdeen Air Quality Action Plan 2011 |

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|---|---|---|---|---|---|
| | 2011 – 14<br>2012 – 12<br>2013 - 13<br><u>King Street</u><br>2009 – 17<br>2010 – 18<br>2011 – 19<br>2012 – 19<br>2013 - 19 | | | • Bus/Coach – 11%<br>• Car/Taxi – 50%<br>• LGV – 12%<br>• OGV – 27%<br><br><u>Market Street</u><br>• Bus/Coach – 19%<br>• Car/Taxi – 35%<br>• LGV – 13%<br>• OGV – 33%<br><br>Cars are the most significant polluters of PM10. | |

## Land and Soil

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Land contamination | No statutorily identified contaminated sites in Aberdeen.<br><br>900 potentially contaminated sites. | There are 4 statutorily identified contaminated sites in Aberdeenshire. | Legal regime is in place to deal with contaminated sites therefore this position should improve in the future. | Contaminated land places financial and technological constraints on development.<br><br>Contaminants may also escape from development sites and cause air, land, surface water and ground water pollution and in some cases may even damage buildings and Underground services, and contaminate the food chain. | Aberdeen City Council (2001) *Contaminated Land Inspection Strategy*, http://www.aberdeencity.gov.uk/web/files/Pollution/ContaminatedLandInspectionStrategy.pdf<br><br>Aberdeenshire Council (2009) *Public Register of Contaminated Land*, http://www.aberdeenshire.gov.uk/environmental/strategy/PublicRegisterofContaminatedLandAug2009.pdf<br><br>SEPA (2009) *Dealing with Land Contamination in Scotland: A review of progress 2000-2008*, http://www.sepa.org.uk/library/library-search.aspx?q=land |

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Prime agricultural land | Aberdeen contains very little prime agricultural land. | Aberdeenshire's prime agricultural land is concentrated in central and southern Aberdeenshire. | Net loss of Scottish agriculture land from roads, housing and industry has doubled from 588ha in 1989 to 1,402ha in 2003. | Prime agricultural land may require further protection from development as demand for development rises and as land for food production rises. | Scottish Executive Statistics (2005): Economic Report on Scottish Agriculture, http://www.scotland.gov.uk/Publications/2005/06/2290402/05121<br><br>Scottish Government (2009): The Scottish Soil Framework, http://www.scotland.gov.uk/Publications/2009/05/20145602/6 |
| Soil Erosion | From Berwick to Aberdeen, the coastline is eroding, but is stable where there are rocky coasts or coastal defences.<br><br>From Aberdeen to Inverness the coastline is largely eroding, but parts are being replenished with sand and gravel from larger rivers. | The north of Scotland is mostly stable with little erosion, but south of Mallaig, towards Carlisle, the coastline is predominantly eroding but stable where there are rocky coasts or coastal defences. Precipitation will be greater in the west due to the west-east precipitation gradient. | The coastline is predominantly eroding along the east. Autumn/Winter rainfall is predicted to increase, giving rise to winter storms and affecting runoff and (wind and water) erosion. Upland schemes such as wind farm access roads and recreation tracks (e.g. mountain biking) on steep ground can increase surface water runoff and lead to significant soil loss (e.g. gullies). | Coastal erosion mostly where there are no rocks or coastal defences. Increase silting of rivers from fluvial flooding. Increase in soil erosion from wind and water which may also be exacerbated by bad land use practices, such as locating tracks/access roads on steep/ upland ground. Increasing use of motorised vehicles on sand dunes is contributing to coastal erosion. | Aberdeen and Aberdeenshire Councils (2006) *Strategic Flooding Issues Topic Paper*. Office of Science and Technology (2005) Foresight report: *Future Flooding Scotland*. Aberdeen Council Natural Heritage Team Davidson, D.A. and Grieve, I.C. (2004) *Trends in soil erosion*, Scottish Natural Heritage Commissioned Report No. 054 (ROAME No. F00AC106) http://www.snh.org.uk/p |

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| | | | | | dfs/publications/commissioned_reports/F00AC106.pdf |

## Water

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Quality of water Bodies (Ground water) | Aberdeen City (2013):<br>High status – 0<br>Good status - 7<br>Moderate status - 0<br>Poor status – 0<br>Bad status – 0<br><br>Aberdeen City (2014):<br>High status – 0<br>Good status - 7<br>Moderate status - 0<br>Poor status – 0<br>Bad status - 0 | Aberdeenshire (2013):<br>High status – 0<br>Good status - 39<br>Moderate status - 0<br>Poor status – 1<br>Bad status – 0<br><br>Aberdeenshire (2014):<br>High status – 0<br>Good status - 48<br>Moderate status - 0<br>Poor status – 2<br>Bad status – 0<br><br>The Water Framework Directive states that all waterbodies are of good ecological status, or similar objective, by 2015. | No change in water quality in Aberdeen between 2013 and 2014. Water quality is generally good. | It is important that development, including the development of transport infrastructure, does not prevent water bodies in the Aberdeen City area achieving at least 'good' ecological status. | SEPA |
| Quality of water Bodies (Coastal) | Aberdeen City (2013):<br>High status – 1<br>Good status – 1<br><br>Aberdeen City (2014):<br>High status – 1<br>Good status - 2 | Aberdeenshire (2013):<br>High status – 6<br>Good status - 7<br>Moderate status - 1<br>Poor status – 0<br>Bad status - 0<br><br>Aberdeenshire (2014):<br>High status – 6<br>Good status - 7<br>Moderate status - 1<br>Poor status – 0<br>Bad status – 0 | As above. | As above. | As above. |

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Quality of water bodies (Transitional) | Aberdeen City (2013):<br>High status – 1<br>Good status – 1<br><br>Aberdeen City (2014):<br>High status – 1<br>Good status – 1 | Aberdeenshire (2013):<br>High status - 3<br>Good status - 0<br>Moderate status - 1<br>Poor status – 0<br>Bad status – 0<br><br>Aberdeenshire (2014):<br>High status - 3<br>Good status - 0<br>Moderate status - 1<br>Poor status – 0<br>Bad status – 0 | As above. | As above. | As above. |
| Quality of water Bodies (River) | Aberdeen City (2013):<br>High status - 0<br>Good status - 0<br>Moderate status - 12<br>Poor status - 12<br>Bad status – 0<br><br>Aberdeen City (2014):<br>High status - 0<br>Good status - 0<br>Moderate status - 6<br>Poor status - 7<br>Bad status - 0 | Aberdeenshire (2013):<br>High status - 5<br>Good status - 52<br>Moderate status - 87<br>Poor status – 28<br>Bad status – 24<br><br>Aberdeenshire (2014):<br>High status - 5<br>Good status - 54<br>Moderate status - 86<br>Poor status – 30<br>Bad status – 11 | River water quality continues to be moderate or poor. | As above. | As above. |

## Landscape

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Landscape character | In Aberdeen there are 27 landscape character areas. | There are 42 landscape character areas in Aberdeenshire. | No trend | The inappropriate scale and insensitive siting of future new development may adversely affect landscape characteristics (e.g. changing its landscape character type, not respecting local topography/contours). New development not fitting in with the landscape's capacity to absorb further developments (e.g. design, layout and sense of place) – need to promote suitable development capacity. | Scottish Natural Heritage (1997) *National programme of landscape character assessment: Banff and Buchan*, Review No 37. Scottish Natural Heritage (1996) *Cairngorms landscape assessment*, Review No 75. Scottish Natural Heritage (1996) *Landscape character assessment of Aberdeen*, Review No 80 Scottish Natural Heritage (1998) *South and Central Aberdeenshire: landscape character assessment*, Review No 102. |

## Population

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Established Population | Aberdeen:<br>2010 – 214,120<br>2011 – 220,420<br>2012 – 224,970<br>2013 – 227,130<br>2014 – 228,990 | Aberdeenshire:<br>2010 – 245,780<br>2011 – 247,600<br>2012 – 255,540<br>2013 - 257,740<br>2014 – 260,500 | There was a 0.8% increase in the Aberdeen City population between 2013 and 2014. | A growing population has implications for increasing transport provision in the City, especially the need for more people to travel by sustainable transport. | National Records of Scotland, http://www.nrscotland.gov.uk/statistics-and-data/statistics/stats-at-a-glance/council-area-profiles. |
| Population Projection (2012 based) | Aberdeen:<br>2017 – 236,400<br>2022 – 249,896<br>2027 – 263,477<br>2032 – 276,397 | Aberdeenshire:<br>2017 – 264,248<br>2022 – 273,706<br>2027- 283,104<br>2032 – 291,890 | The projections show an increasing population in the City and the Shire. | As above. | National Records of Scotland, Population Projections for Scottish Areas (2012-based), http://www.gro-scotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/sub-national-population-projections/2012-based |
| Established Households | Aberdeen:<br>2010 – 103,285<br>2011 – 103,423<br>2012 – 103,934<br>2013 – 105,047<br>2014 – 105,287 | Aberdeenshire:<br>2010 - 104,017<br>2011 – 105,006<br>2012 – 106,018<br>2013 – 107,128<br>2014 – 108,381 | An increasing number of households in Aberdeen City and Shire. | As above. | National Records of Scotland, Estimates of Households and Dwellings in Scotland 2014, http://www.gro-scotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/households/household-estimates/2014 |

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|---|---|---|---|---|---|
| Household projections (2012 based) | Aberdeen:<br>2017 – 110,958<br>2022 – 117,834<br>2027 – 124,729<br>2032 – 132,326<br>2037 – 140, 380 | Aberdeenshire:<br>2017 – 111,042<br>2022 – 116,058<br>2027 – 120,709<br>2032 – 125,014<br>2037 – 128,982 | An increasing number of households in Aberdeen City and Shire is projected. | As above | National Records of Scotland, Household Projections for Scottish Areas (2012-based), http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/households/household-projections/household-projections-for-scotland-2012-based |
| Population Structure | Aberdeen:<br>Under 15 -16%<br>Working Age - 69%<br>Pensionable age - 17%<br>Median age - 35 | Aberdeenshire:<br>Under 16 -19%<br>Working Age - 62%<br>Pensionable age 19%<br>Median age - 42 | No trend, although it is recognised that Scotland as a whole is experiencing an ageing population. | Implications for transport in terms of improving mobility for the elderly. | National Records of Scotland, Mid-2013 Population Estimates Scotland, http://www.nrscotland.gov.uk/files//statistics/population-estimates/mid-2013/html/mid-2013-population-estimates-index.html |

## Human Health

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/ constraints | Data source(s) |
|---|---|---|---|---|---|
| Quality and availability of public open space | The Open Space audit identified 3471 hectares of open space on Aberdeen (not including private gardens or sites under 0.2ha). The quality of open space varies across the city. | Data not available. | The poorest quality parks and open spaces tend to be found within the regeneration priority areas. It is more difficult to provide open space within densely populated areas. | Development pressure to build on urban open spaces. | Aberdeen City Council (2010), Open Space Audit |
| Noise | The Aberdeen Agglomeration Noise Action Plan identifies 2 Rail Candidate Noise Management Areas and 14 Road Noise Management Areas where high transport noise impacts upon areas of high population densities. | Aberdeenshire has no Noise Management Areas. | No trends. | Transport noise negatively impacts upon health, primarily in terms of stress and sleep disturbance. | Aberdeen Agglomeration Noise Action Plan (2014) |
| Life expectancy at birth (years) | Aberdeen:<br>Male<br>2002-2004 – 74.4<br>2007-2009 – 75.7<br>2012-2014 – 76.8<br><br>Female<br>2002-2004 – 79.9<br>2007-2009 – 80.7<br>2012-2014 – 81.1 | Aberdeenshire:<br>Male<br>2002-2004 – 76.3<br>2007-2009 – 78.0<br>2012-2014 – 79.4<br><br>Female<br>2002-2004 – 80.8<br>2007-2009 – 81.4<br>2012-2014 – 82.3<br><br>Scotland<br>Male<br>2002-2004 – 73.8<br>2007-2009 – 75.4<br>2012-2014 – 77.1<br><br>Female | Life expectancy is improving year on year in the City and the Shire although life expectancy for males in Aberdeen has slipped below the Scottish average. | Increasing life expectancy has implications for ensuring adequate service provision (including transport) for an ageing population.<br><br>Opportunities for more people to adopt healthier lifestyles through active travel could further prolong life expectancy. | National Record of Scotland, Life Expectancy for Administrative Areas within Scotland 2012 – 2014, http://www.gro-scotland.gov.uk/files//statistics/life-expectancy-areas-in-scotland/12-14/life-exp-in-scotland-2012-to-2014.pdf. |

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|---|---|---|---|---|---|
| | | 2002-2004 – 79.0<br>2007-2009 – 80.1<br>2012-2014 -81.1 | | | |

## Cultural Heritage

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Conservation Areas | 11 Conservation Areas in Aberdeen City | 49 Conservation areas in Aberdeenshire | No trend | New development has the potential to put pressure on, or be constrained by, conservation areas. | http://www.aberdeencity.gov.uk/planning_environment/planning/conservation/pla_conservation_areas.asp |
| Scheduled Ancient Monuments (SAM) | 44 Scheduled Ancient Monuments in Aberdeen City | 581 Scheduled Ancient Monuments in Aberdeenshire | No trend | New development has the potential to put pressure on, or be constrained by, the presence of SAMs. | Historic Scotland |
| Archaeological Sites and Monuments Record | 699 Archaeological sites (from SMR) in the City | 17631 Archaeological sites (from SMR) in the Shire | No trend | New development has the potential to put pressure on, or be constrained by, archaeological sites. | Aberdeen City Council Sites and Monuments Record, http://www.aberdeencity.gov.uk/education_learning/local_history/Sites_Monuments/Introduction.asp |
| Listed Buildings | 1215 Listed Buildings in Aberdeen City<br>(68) Category A;<br>(681) Category B;<br>(466) Category C | 3715 Listed Buildings in Aberdeenshire | No trends. | Development can put pressure on listed buildings. | Historic Scotland |
| Gardens and Designed Landscapes (GDL) | There is 1 GDL in Aberdeen City (Duthie Park) | There are 27 GDLs in Aberdeenshire covering 5,745 hectares of land (0.9% of Aberdeenshire's land). In Scotland, there are 328 GDLs on 66, 765 hectares of land (8.3% of land). | No trend. | New development has the potential to put pressure on, or be constrained by, built and cultural sites. | Historic Scotland |

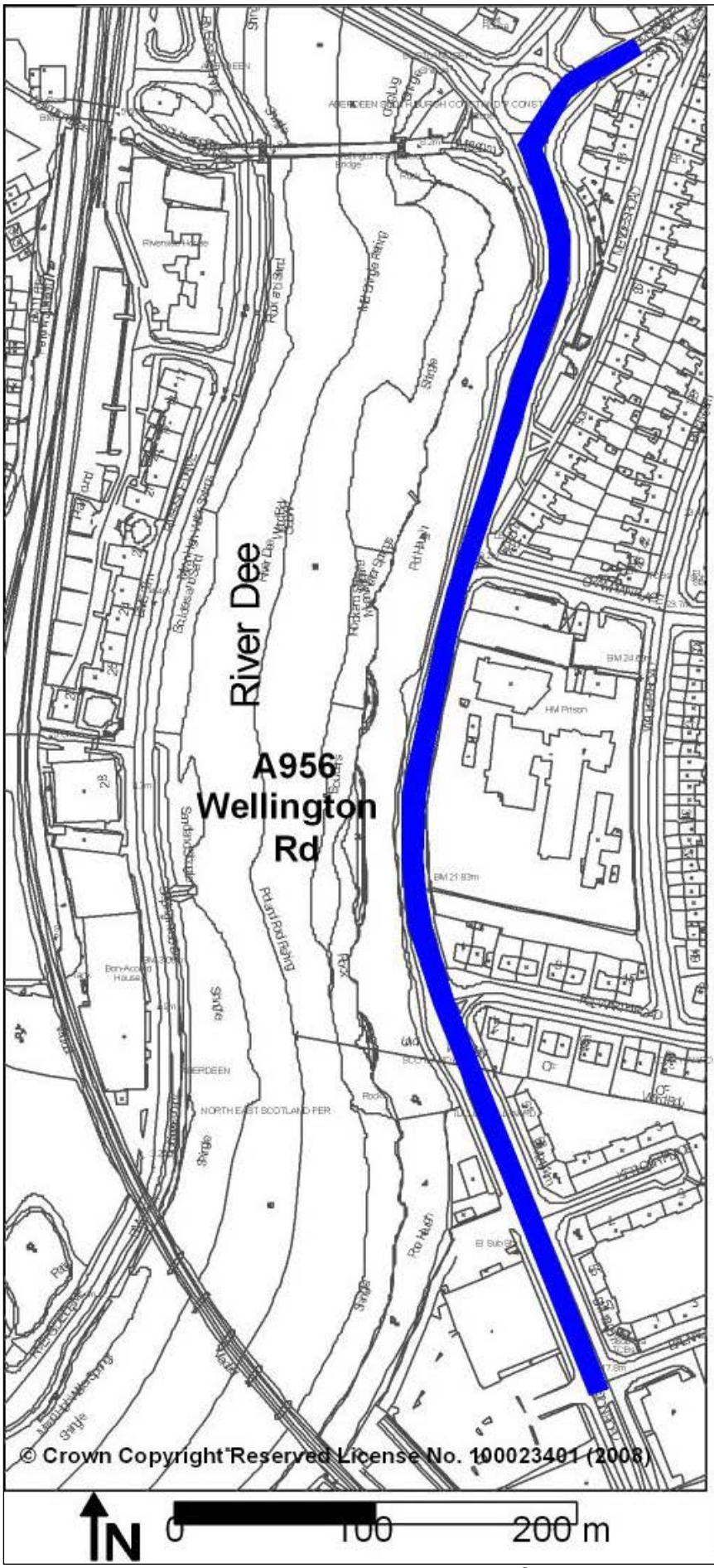
## Material Assets

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| Households with cars available for private use (%) | Aberdeen:<br>2005/6 – 66%<br>2007/8 – 69.1%<br>2009/10 – 69.4%<br>2012 – 71.4%<br>2014 – 73.5% | Aberdeenshire:<br>2005/6 – 86%<br>2007/8 – 87%<br>2009/10 – 84.5%<br>2012 – 83.4%<br>2014 – 85%<br><br>Scotland:<br>2005/6 – 68%<br>2007/8 – 69.7%<br>2009/10 – 69.5%<br>2012 – 69%<br>2014 – 69.2% | Car ownership rising in Aberdeen, while fairly constant in Scotland as a whole. | Increasing car ownership and use puts pressure on available roadspace, in terms of congestion, as well as contributing to pollution, poor air quality, noise and inactivity. | Scottish Household Survey Local Area Analysis, http://www.transportscotland.gov.uk/system/files/uploaded_content/documents/statistics/Transport%20and%20Travel%20in%20Scotland%202014%20-%20SHS%20LA%20tables%20%28For%20website%29%20-%20Final.pdf |
| Public road lengths (km) | Aberdeen:<br>2009 – 923<br>2010 – 936<br>2011 – 937<br>2012 – 937<br>2013/14 - 937 | Aberdeenshire:<br>2009 – 5596<br>2010 – 5606<br>2011 – 5630<br>2012 – 5648<br>2013/14 - 5659 | Public road lengths fairly static in Aberdeen, despite rising car ownership. | Static road lengths combined with rising car ownership put pressure on the transport network leading to roads operating beyond capacity, contributing to congestion and pollution. | Scottish Transport Statistics, http://www.transportscotland.gov.uk/statistics/scottish-transport-statistics-all-editions |
| Road Condition (% red/amber – requiring attention) | Aberdeen:<br>2009/10 – 31<br>2010/11 – 34.7<br>2011/12 – 32<br>2012/13 – 27<br>2013/14 - 27 | Aberdeenshire:<br>2009/10 – 26<br>2010/11 – 28.2<br>2011/12 – 25<br>2012/13 – 21<br>2013/14 - 21 | No trend. | Good road condition leads to better operation of the transport network, reducing congestion, pollution and accidents. | Scottish Transport Statistics, http://www.transportscotland.gov.uk/statistics/scottish-transport-statistics-all-editions |
| Park and Ride sites | Aberdeen – 2<br>New site in development at Dyce (A96) | Aberdeenshire - 1<br>New site in development on A90 (South) as well as smaller hubs. | No trend. | Park and Ride sites can help reduce the number of vehicles in the City, reducing | |

| SEA Indicator | Quantified information | Comparators and targets | Trends | Issues/constraints | Data source(s) |
|---|---|---|---|---|---|
| | | | | congestion, pollution and accidents. | |
| Railway stations | Aberdeen - 2 | Aberdeenshire - 6 | No trends. Only 1 station re-opened in Aberdeenshire during the lifetime of the last LTS. Re-opening of Kintore Station will take place in the next few years. | Limited finance available for new/re-opened railway stations in the region. | |
| Car Club Vehicles | Aberdeen:<br>2012 – 12<br>2013 – 21<br>2014 – 25<br>2014 – 37<br>2015 - 38<br>Targets are for an increase in the car club fleet, membership and usage. | Aberdeenshire:<br>2012 – 3<br>2013– 2<br>2014 – 3 | Car Club vehicle numbers and usage are steadily increasing in Aberdeen. | Affords opportunities for reducing car ownership and usage, improving social inclusion, allowing members of the public to experience low-emission and electric vehicles, and enabling low car housing development in the City. | ACC / CoWheels |
| Publicly available electric vehicle charge points | Aberdeen:<br>2012 – 8<br>2013 – 29<br>2014 – 32<br>2015 - 44<br>Targets are for a decline in usage of petrol and diesel vehicles in the City. | Aberdeenshire:<br>2012 – 4<br>2013 – 6<br>2014 – 16 | EV charge point numbers have been increasing steadily since 2012. | Available and accessible electric vehicle charge points enable a greater usage of such vehicles in Aberdeen and improve perceptions of ease of use. | ACCD |
| Length of cycleway | 2014 – 118.5km (advisory, dual use pavement and mandatory cycle lanes) | An increase in facilities for cyclists is desired. | Length of cycle facilities has been increasing in recent years in Aberdeen. | New development affords opportunities to integrate cycle facilities to, from and within the development. | |

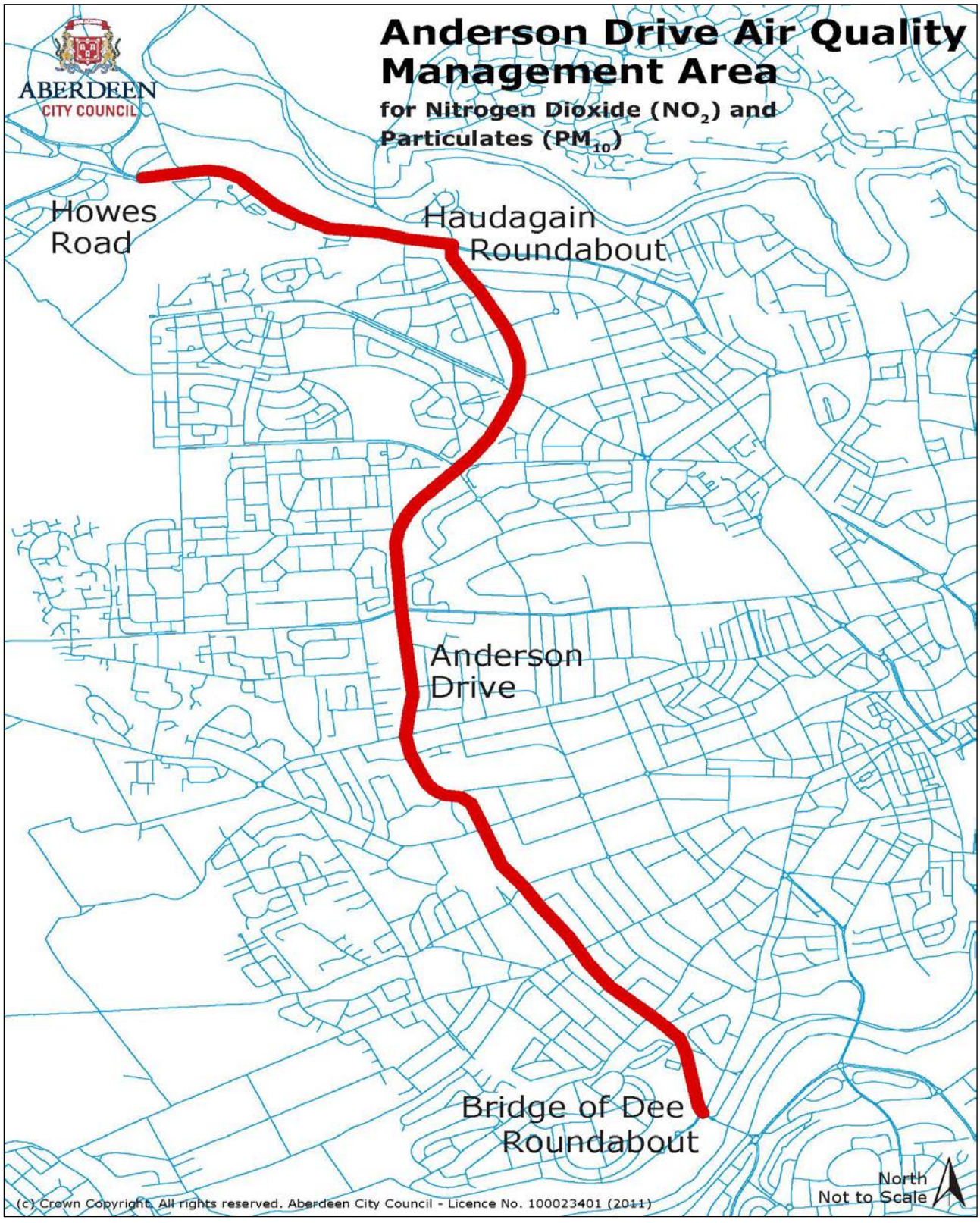
## Appendix C: Areas likely to be significantly affected

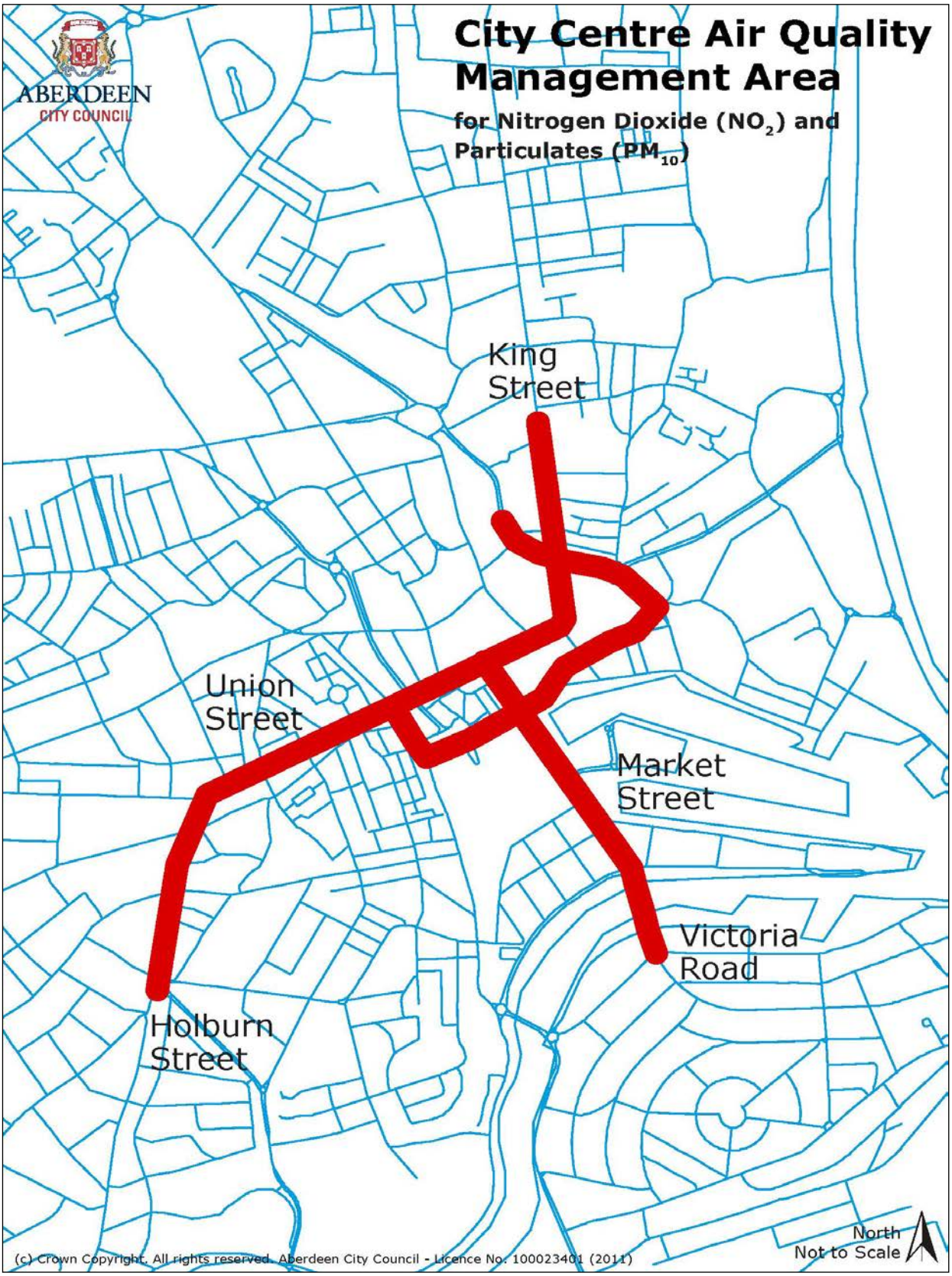
### C1: Air Quality Management Areas




ABERDEEN
CITY COUNCIL

**Wellington Road**
**Air Quality Management**
**Area for Nitrogen Dioxide (NO2)**
**and Particulates (PM10)**


Anderson Drive Air Quality Management Area
for Nitrogen Dioxide ($NO_2$) and Particulates ($PM_{10}$)
ABERDEEN CITY COUNCIL
Howes Road
Haudagain Roundabout
Anderson Drive
Bridge of Dee Roundabout
North
Not to Scale
(c) Crown Copyright. All rights reserved. Aberdeen City Council - Licence No. 100023401 (2011)


ABERDEEN
CITY COUNCIL
City Centre Air Quality Management Area
for Nitrogen Dioxide ($NO_2$) and Particulates ($PM_{10}$)
King Street
Union Street
Market Street
Victoria Road
Holburn Street
(c) Crown Copyright. All rights reserved. Aberdeen City Council - Licence No. 100023401 (2011)
North
Not to Scale

## C2: Noise Management Areas

Road Noise Management Areas**:**

- Auchmill Road at Newton Terrace
- North Anderson Drive at Clifton Road
- Great Northern Road near Smithfield Lane
- King Street at Don Street
- North Anderson Drive at Mastrick Road
- North Anderson Drive at Laburnum Walk
- King Street at Mealmarket Street
- King Street at St Clair Street
- Union Street at Dee Street
- Rennie's Wynd, Wapping Street, Carmelite Street, Trinity Street, Guild Street
- Market Street, Union Street, Netherkirkgate
- Palmerston Road, Market Street
- Victoria Road at Walker Road
- A90 at Holburn Street

Rail Candidate Noise Management Areas are:

- Near Polmuir Drive, Riverside Drive
- Near South College Street, North Esplanade West.

A determination has not yet been made by the Scottish Government regarding which of these will be taken forward as formal Noise Management Areas.

Maps of these areas are available on www.scottishnoisemapping.org. Information on the final Rail Noise Management Areas will also be available here once a determination has been made.

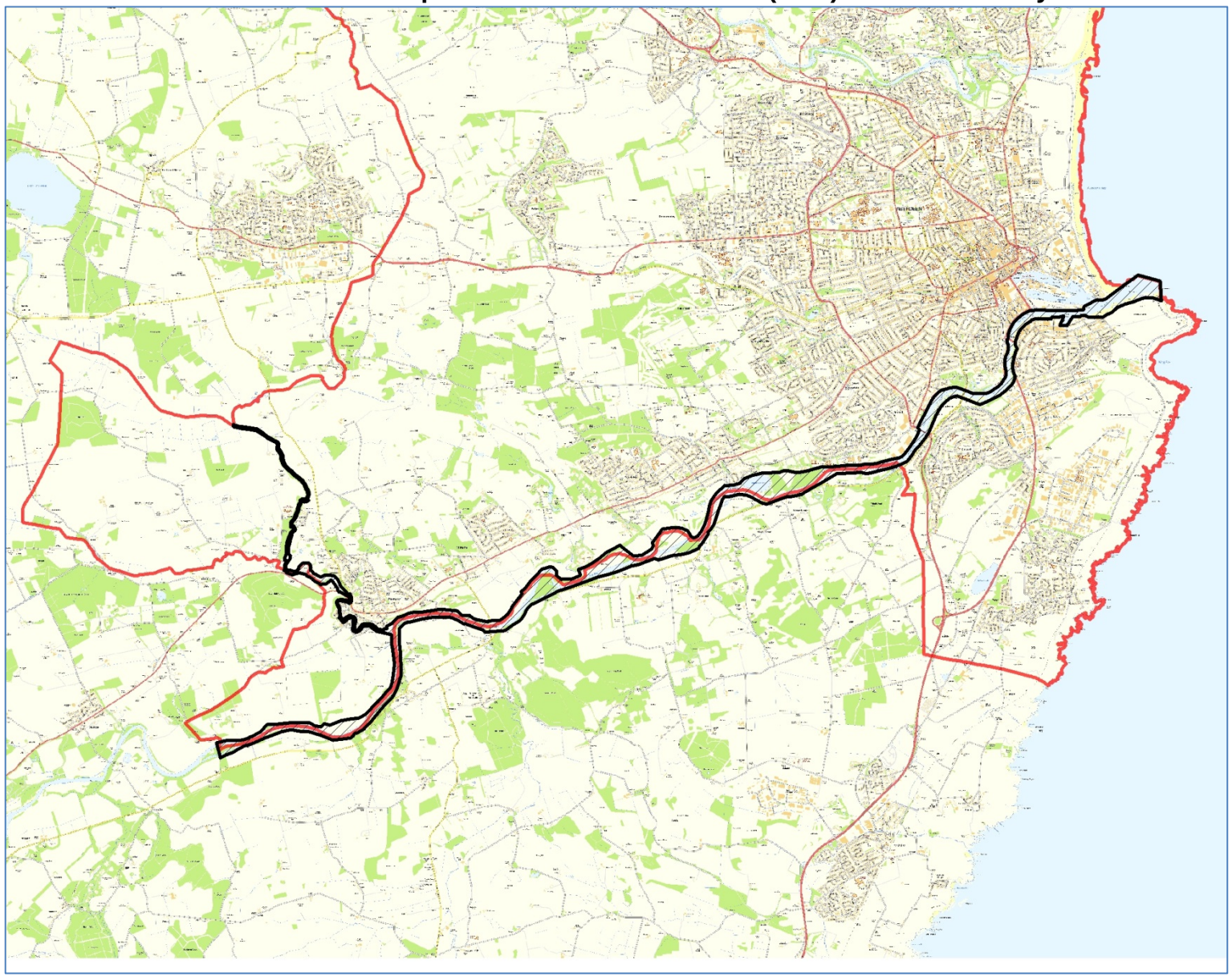
## C3: Cycle and Bus Networks

The current cycle and bus lane network can be seen by viewing the Aberdeen Cycle Map, available at:
http://www.aberdeencity.gov.uk/planning_environment/planning/transport/pla_cycle_maps.asp.

The current public transport network and coverage in the City can be seen by viewing the Aberdeen Public Transport Guide, available at:
http://www.aberdeencity.gov.uk/transport_streets/public_transport/put_public_transport_guide.asp

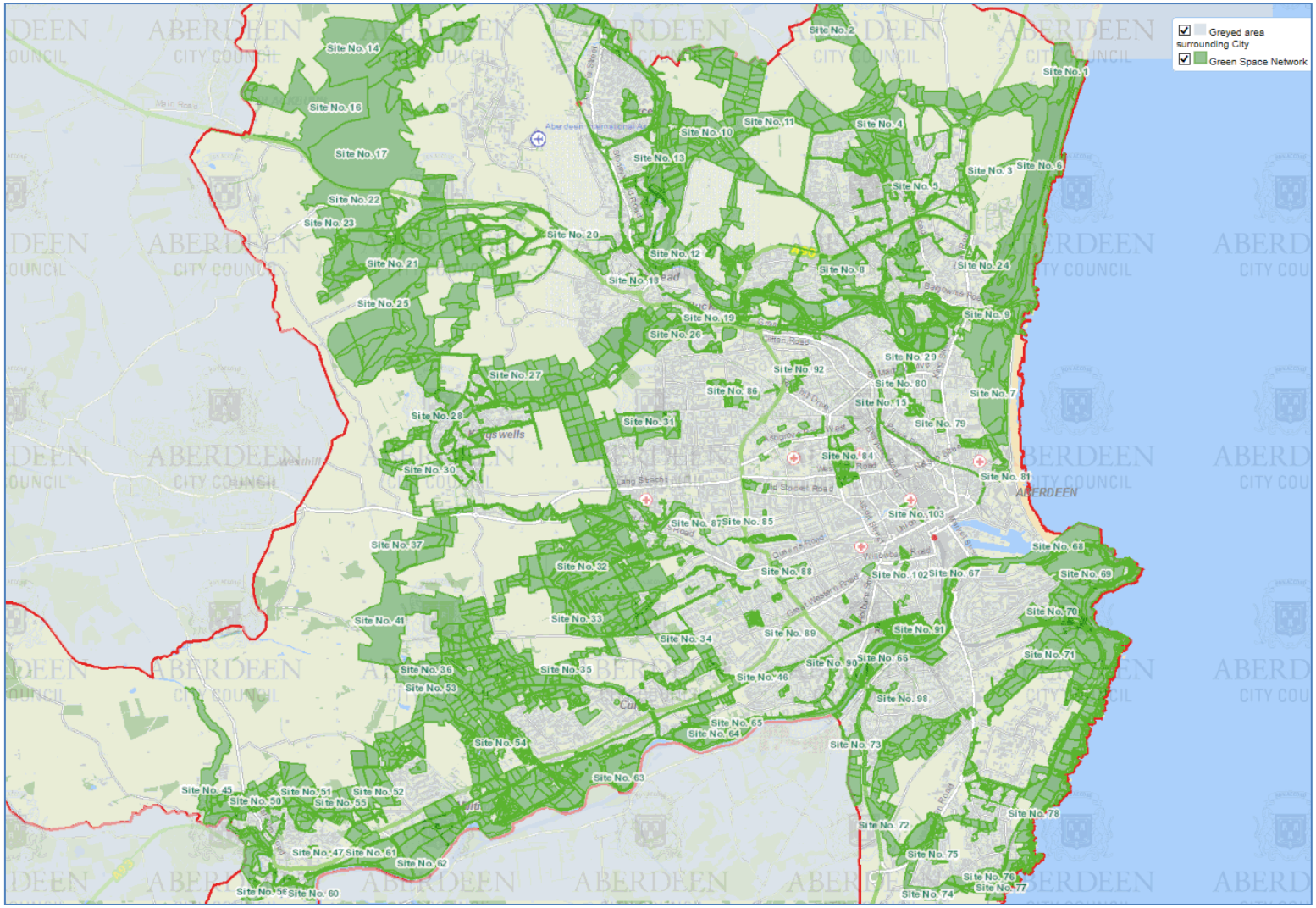
**Please note maps in Section C4 – C12 are all: © Crown Copyright. Aberdeen City Council. Licence No.100023401.**

## C4: River Dee Special Area of Conservation (SAC) in Aberdeen City

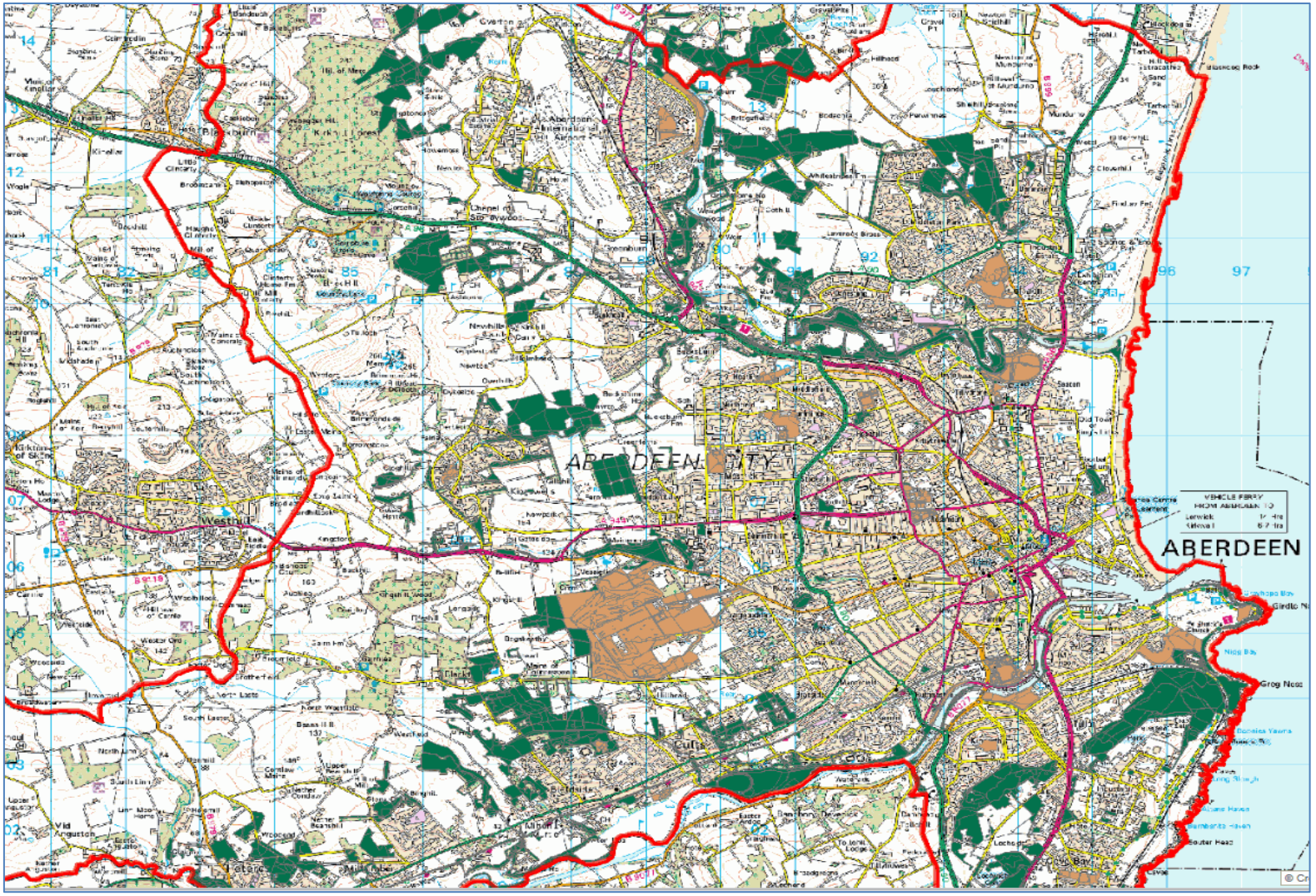


## C5: Natural Heritage Sites in Aberdeen

## C6: Green Space Network in Aberdeen

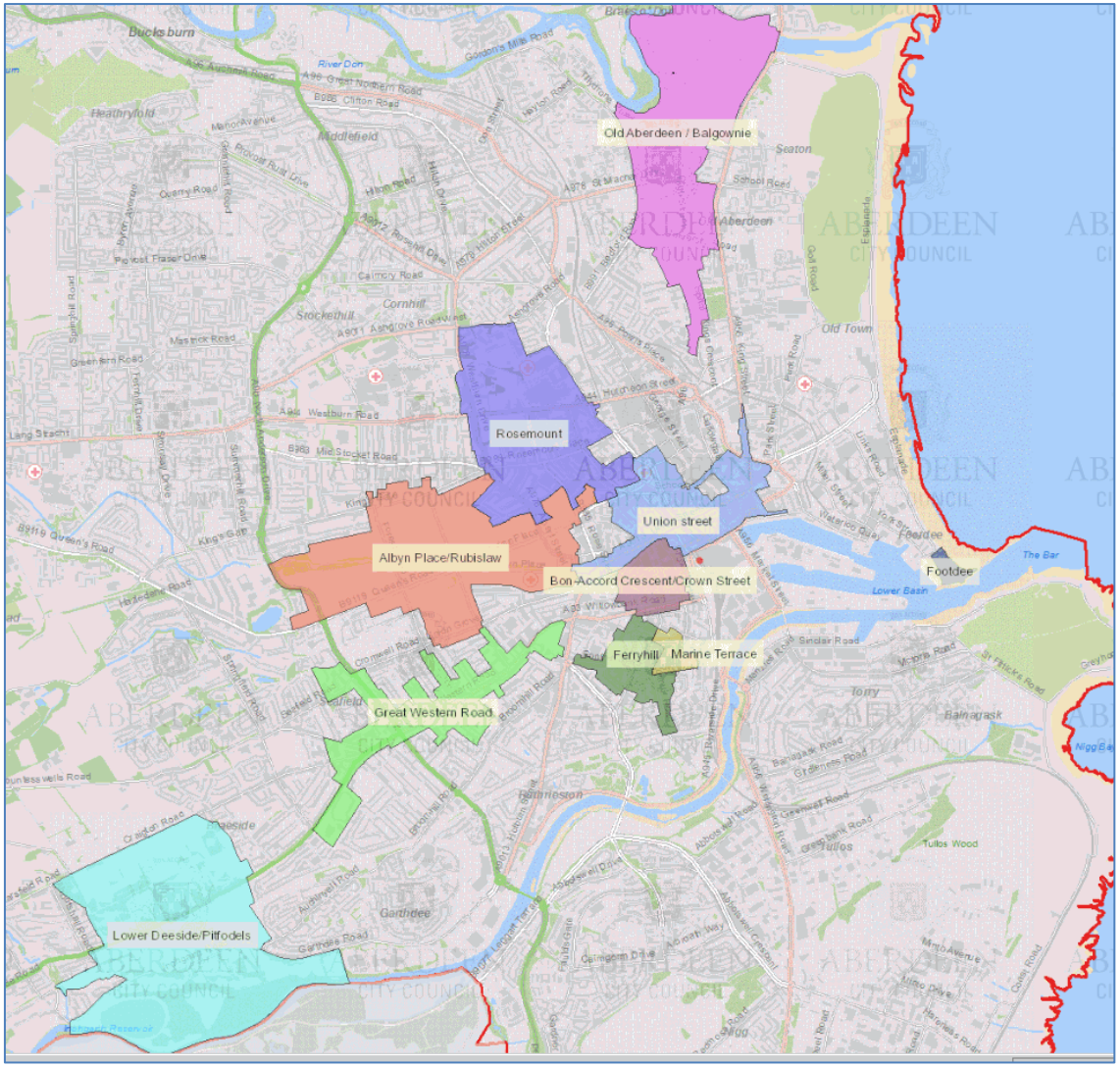


## C7: Open Space Provision in Aberdeen

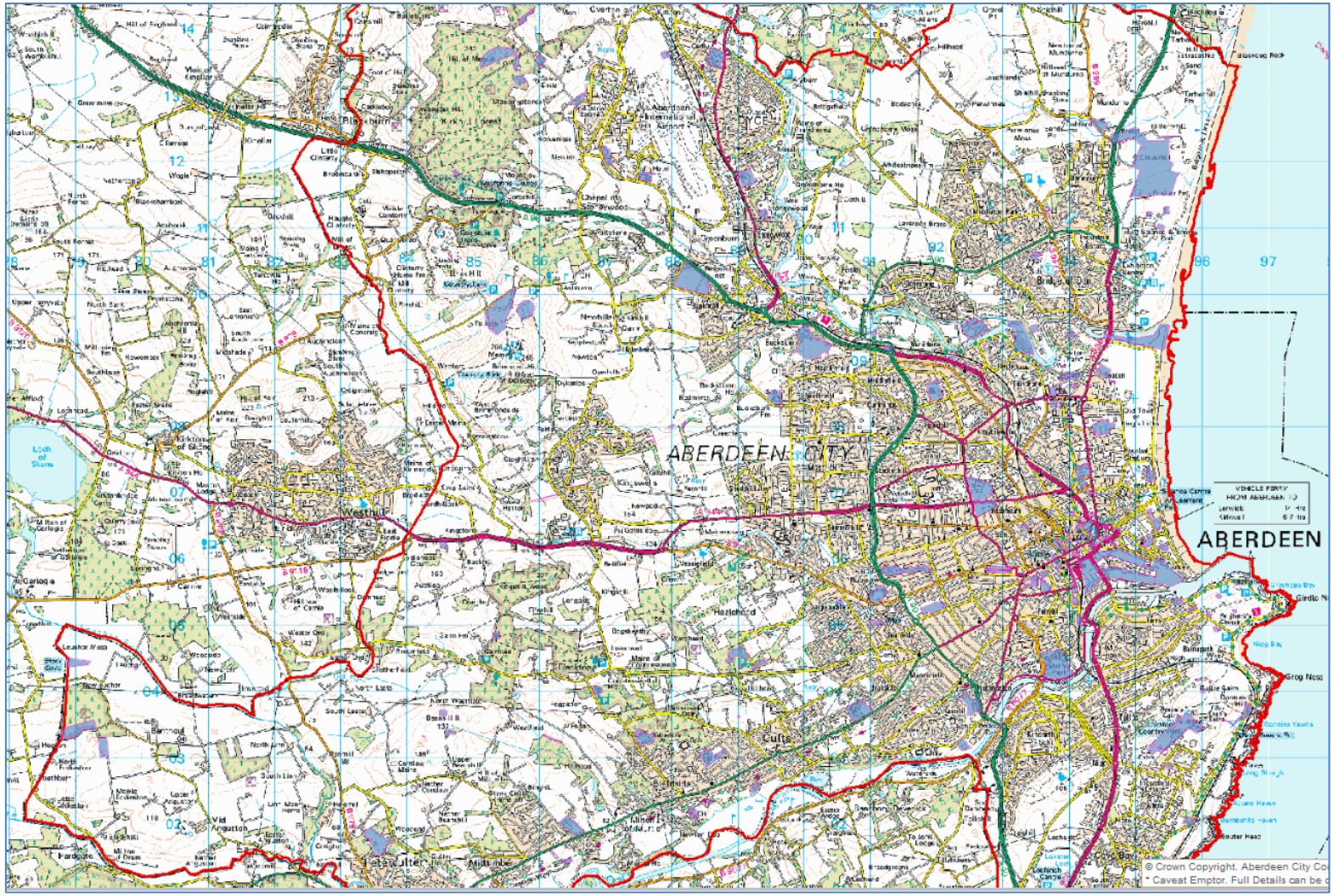


## C8: Ancient and Semi-Natural Woodland

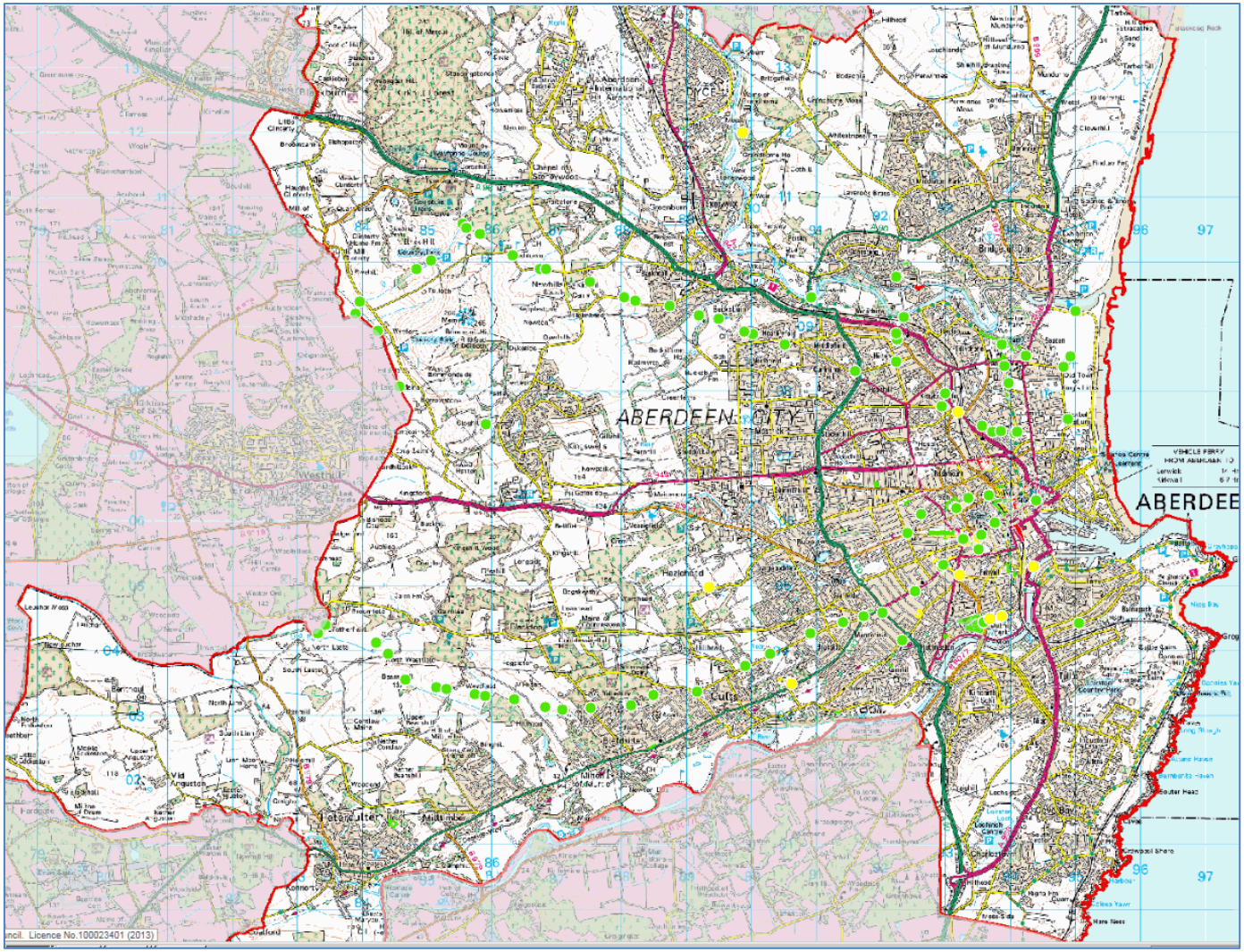
## C9: Conservation Areas in Aberdeen



## C10: Sites and Monuments Record



## C11: Listed Buildings



## C12: Gardens and Designated Landscape (Duthie Park)

## Appendix D: Full Assessment Tables

| **Vision: A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment.** | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Objectives** | **Will the vision…?** | **Assessment – Preferred Option (with LTS)** | **Score** | **Assessment – Alternative Option (without LTS)** | **Score** |
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site. | The emphasis on sustainability and environmental protection articulated in the vision suggest that the Strategy will have a long-term positive impact on biodiversity. This is preferable to the alternative scenario, where no such vision is in place and transport's impacts on biodiversity are likely to worsen. | ++ | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on biodiversity, resulting in increased development, pollution and emissions. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The vision emphasises sustainable transport and the need to minimise transport's environmental impact. A greater uptake of sustainable modes of transport will have a long-term positive impact on air quality and reduce emissions associated with road traffic. This is preferable to the alternative scenario, where no such vision is in place and transport's impact on air quality is likely to worsen. | ++ | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on air quality, resulting in increased motor traffic and emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | The vision emphasises the importance of sustainable travel and protecting the environment. A greater uptake of sustainable modes over car travel will contribute to reducing congestion, reducing greenhouse gas emissions and reducing the effects of climate change. This is preferable to the alternative scenario, where no such vision is in place and transport's impact on the climate is likely to worsen. | ++ | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on climactic factors, resulting in increased motor traffic and emissions. | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | The emphasis on protecting the environment suggests that there will be a long-term positive impact on soil quantity and quality. This is preferable to the alternative scenario, where no such vision is in place and transport's impact on soil is likely to worsen. | + | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on soil, resulting in increased run-off and pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | The emphasis on protecting the environment suggests that there will be a long-term positive impact on water quality. This is preferable to the alternative scenario, where no such vision is in place and transport's impact on water is likely to worsen. | + | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on water, resulting in increased run-off and pollution resulting from traffic growth. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The vision's emphasis on minimising the environmental impact of transport (including the impact on the visual environment) suggests this will have a long-term positive impact on the landscape, in preference to a scenario with no vision in place and transport's impact on the landscape continues to worsen. | + | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on the landscape, resulting in a poor visual environment caused by increasing traffic growth and transport development. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | A long-term positive impact on the population is envisaged with the vision specifically referencing the economy ('supports a vibrant economy') and social inclusion ('accessible to all'). This is preferable to the alternative scenario, where no such vision is in place and transport's impact on the population is likely to worsen. | ++ | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on the population, through increased congestion (resulting in economic disbenefits) and the development of an increasingly car-centric City, with limited opportunities for alternative modes of transport. | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A long-term positive impact is envisaged with the vision specifically referencing health as a priority. This is preferable to the alternative scenario, where no such vision is in place and transport's impact on health is likely to worsen. The vision's emphasis on environmental sustainability will also contribute to a long-term improvement in health by reducing the negative health impacts of motorised traffic (such as pollution and emissions). The emphasis on accessibility suggests there will be a long-term positive impact on improving access to healthcare facilities and physical exercise opportunities. | ++ | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on health resulting from increasing pollution and emissions, development of inaccessible areas of the City and limited opportunities for active travel. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | The vision's emphasis on minimising the environmental impact of transport (including the impact on the visual environment) suggests this will have a long-term positive impact on cultural heritage, in preference to a scenario with no vision in place and transport's impact on cultural heritage worsens. | + | Not having a coherent vision for transport supported across the Council could ultimately have a long-term negative impact on cultural heritage, resulting in a poor visual environment caused by increasing traffic growth and transport development. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | The vision suggests a long-term positive impact on material assets through the development of a transport system fit for the 21st century and its emphasis on sustainability, the environment and accessibility. | ++ | Having no vision in place for transport could contribute towards the long-term decline of our material assets. | - |

| Aim 1: A transport system that enables the efficient movement of people and goods | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Objectives** | **Will the aim…?** | **Assessment – Preferred Option (with LTS)** | **Score** | **Assessment – Alternative Option (without LTS)** | **Score** |
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This is unlikely to impact upon biodiversity. | 0 | Not having this as an aim is unlikely to impact upon biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The efficient movement of people and good implies less congestion and queuing will result, thus fewer emissions, and therefore a long-term positive impact on air quality is anticipated. This is preferable to a scenario with no such aim in place to address congestion and air quality continues to worsen. | ++ | Not having this as an aim could see an increase in congestion and queuing traffic, thus causing emissions to increase, with a long-term negative impact on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Efficient movement of people and good implies less congestion and queuing, thus fewer emissions, and therefore a long-term positive impact on climatic factors. This is preferable to the scenario with no such aim in place where emissions continue to increase. | + | Not having this as an aim could see an increase in congestion and queuing traffic, thus causing emissions to increase, with a long-term negative impact on climactic factors. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be | There is unlikely to be any significant impact on soil. | 0 | Not having this as an aim is unlikely to impact upon soil. | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | properly remediated and not impact upon sensitive receptors such as human health and the water environment? | | | | |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | There is unlikely to be any significant impact on water. | 0 | Not having this as an aim is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Decreasing congestion could improve the landscape setting of the City with long-term benefits. This is preferable to the scenario with no such aim in place where congestion blights the landscape. | + | Not having this as an aim could mean that traffic and congestion continue to increase in Aberdeen, with a long-term negative impact on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | This aim will have a long-term positive impact on the population. The efficient movement of people suggests a reduction in congestion and improved journey times for all. The efficient movement of freight will contribute towards economic growth. This is preferable to the scenario with no such aim in place where congestion continues to negatively impact upon the economy. | ++ | Not having this as an aim could result in an increase in congestion and therefore even more unreliable journey times for people and freight, with long-term negative impacts. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of | The efficient movement of traffic will result in less queuing traffic and hence fewer harmful emissions, with long-term positive impacts on human health. This is preferable to a scenario with no such aim in place where health | + | Not having such an aim could result in an increase in queuing vehicles and hence emissions, with long-term negative implications for human health. | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| | is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | conditions are likely to worsen. | | | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Less queuing traffic in affected areas will have a long-term positive impact on the setting of such areas and improve access to these buildings and sites. This is preferable to a scenario with no such aim in place where congestion continues to negatively impact on cultural heritage. | + | Not having this as an aim could see an increase in queuing traffic in sensitive areas with long-term negative impacts on cultural heritage. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This aim is unlikely to impact upon material assets. | 0 | Not having this as an aim is unlikely to impact on material assets. | |
| **Aim 2: A safe and more secure transport system** | | | | | | |
| **Indicator** | **Objectives** | **Will the aim…?** | **Assessment – Preferred Option (with LTS)** | **Score** | **Assessment – Alternative Option (without LTS)** | **Score** |
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems. | Cause disturbance or damage to any habitat or species? | The development of a safe and secure transport system is not anticipated to impact on biodiversity. | 0 | Not having this as an aim is unlikely to impact on biodiversity. | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | | | | |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | A safe transport system is one that is not damaging to human health, therefore suggesting an improvement in air quality. This is preferable to a scenario with no such aim in place and air quality worsens. | + | Not aiming for a safe transport system could see an increase in transport emissions with a long-term negative impact on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | A safe transport system is one that is not damaging to human health, therefore suggesting a reduction in climate change and greenhouse gas emissions. This is preferable to a scenario with no such aim in place where emissions continue to increase. | + | Not aiming for a safe transport system could see an increase in transport emissions with a long-term negative impact on climactic factors. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | This aim is not anticipated to impact upon soil. | 0 | Not having this aim in place is unlikely to impact upon soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off | This aim is not anticipated to impact upon water. | 0 | Not having this aim in place is unlikely to impact upon water. | 0 |

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| | | into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | | | | |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This aim is not anticipated to impact upon the landscape. | 0 | Not having this aim in place is unlikely to impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | A safe and secure transport system will contribute towards economic growth by reducing the number of accidents and fatalities on the City's roads and by enabling more people to travel around for work and shopping, thus engaging in economic activity. A safe and secure transport system will also contribute towards social inclusion by enabling the more vulnerable members of society, included the aged, to travel without fear of danger or harassment. This is preferable to a scenario where safety is not a priority and accidents, collisions and other undesirable incidents increase. | ++ | Not aiming for a safe and secure transport system could see an increase in accidents and collisions. This will have economic costs (in terms of addressing the aftermath and loss of life) and may put off certain vulnerable groups from travelling, with impacts on social inclusion. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open | A safe and secure transport system will reduce the number of casualties and fatalities suffered by the travelling public. An improved travelling environment will also facilitate access to healthcare and open space especially to the more vulnerable member of society. This is preferable to a scenario where safety is not a priority and accidents and collisions increase. | ++ | Not aiming for a safe and secure transport system could see an increase in accidents and collisions with long-term negative impacts on health. | -- |

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| | | space? | | | | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This is unlikely to impact upon cultural heritage. | 0 | Not having this aim in place is unlikely to impact upon cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | A safe and secure transport system will improve the transport network for all members of the travelling public. | + | Not aiming for a safe and secure transport system could contribute to the long-term deterioration of our material assets. | - |
| **Aim 3: A cleaner, greener transport system** | | | | | | |
| **Indicator** | **Objectives** | **Will the aim…?** | **Assessment – Preferred Option (with LTS)** | **Score** | **Assessment – Alternative Option (without LTS)** | **Score** |
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | A cleaner transport system will reduce the impact of transport on protected sites such as the River Dee SAC with long-term positive effects. This is preferable to a scenario with no such aim in place where environmental conditions continue to deteriorate. | ++ | Not aiming for this could see environmental conditions deteriorate, with long-term negative impacts on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do | Lead to an increase or a reduction in vehicular traffic? | A cleaner, greener transport system will see more people travelling by sustainable modes of transport, with a corresponding reduction in | ++ | Not aiming for this could air quality continue to decline, with long-term negative impacts. | - |

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| | not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | road traffic and a reduced need for large-scale transport construction. This will have long-term positive impacts on air quality. This is preferable to a scenario with no such aim in place where air quality continues to deteriorate. | | | |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | A cleaner, greener transport system will see more people travelling by sustainable modes of transport and using clean fuels and technologies, thus reducing the release of climate-changing emissions. This will have a long-term positive impact on climactic factors. This is preferable to a scenario with no such aim in place where climactic problems, particularly vehicle emissions, continue to increase. | + | Not aiming for this could cause emissions to increase, with long-term negative impacts on climactic factors. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | A cleaner, greener transport system will have a long-term positive impact on soil by reducing the likelihood of contamination. This is preferable to a scenario with no such aim in place where a risk of soil contamination from transport activities continues. | + | Not aiming for this could see an increase in soil contamination resulting from transport activities, with long-term negative impacts. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | A cleaner, greener transport system will have a long-term positive impact on water by reducing the likelihood of water pollution. This is preferable to a scenario with no such aim in place where a risk of contamination from transport activities continues. | + | Not aiming for this could see an increase in contamination resulting from transport activities, with long-term negative impacts. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological | A clean, green transport system should reduce the need for the construction of large, unsightly transport facilities, such as new roads and bridges, which would have a negative impact on the landscape. This is preferable to a | + | Not aiming for this could result in an increased need for transport development, with potentially long-term negative impacts on the landscape. | - |

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| | landscape. | features?<br><br>Reduce the amount or quality of public open space and green space in the City? | scenario with no such aim in place, where transport development continues to impact upon the landscape. | | | |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | A clean, green transport system will have long-term economic benefits, reducing the requirement for environmental clean-up activities. This is preferable to a scenario where transport activities stifle economic growth. | + | With no such aim in place, the economic consequences of increasing pollution and congestion could worsen. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A clean, green transport system will have long-term positive impact on human health by affording opportunities for active travel, reducing pollution and air quality, and decreasing noise and vibration. This is preferable to a scenario with no such aim in place, where transport continues to negatively impact on health. | ++ | Not aiming for a clean and green transport system could see an increase in pollution, noise and a worsening of air quality with long-term negative implications for human health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | A cleaner, greener transport system should have a long-term positive impact on cultural heritage as it will result in less pollution which can be damaging to historic buildings. This is preferable to a scenario with no aim in place where conditions continue to worsen. | + | Not aiming for this could lead to an increase in pollution and a further deterioration of historic buildings and structures. | - |

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| | environment. | | | | | |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | A clean, green transport system should provide adequate facilities to meet the needs of the people of Aberdeen, particularly high quality pedestrian and cycle links, and will allow for the sustainable use of resources. | + | Not aiming for a cleaner greener transport system could contribute to the long-term deterioration of our material assets. | - |
| **Aim 4: An integrated, accessible and socially inclusive transport system** | | | | | | |
| **Indicator** | **Objectives** | **Will the aim…?** | **Assessment – Preferred Option (with LTS)** | **Score** | **Assessment – Alternative Option (without LTS)** | **Score** |
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An integrated transport system should encourage more usage of non-car modes of transport. This will have a long-term positive impact on biodiversity by reducing the need for land take for new transport facilities such as roads and bridges, which could cause disruption to habitats and species or adversely impact upon protected sites. This is preferable to a scenario with no such aim in place where road traffic continues to increase and environmental conditions worsen. | + | Not aiming for this could result in an increase in motorised forms of transport, thus increasing the need for transport development, noise and pollution, all of which would have long-term negative impacts on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An integrated transport system should encourage more usage of non-car modes of transport, with long-term positive impacts on air quality resulting from fewer emissions. This is preferable to a scenario with no such aim in place, where motorised traffic and hence emissions continue to increase. | + | Not aiming for this could result in an increase in motorised forms of transport, leading to a worsening of air quality, with long-term negative impacts. | - |
| Climatic factors | To reduce the cause and effects of climate change. | Promote sustainable and active travel?<br><br>Promote the use of clean | An integrated transport system should encourage more usage of non-car modes of transport and reduce congestion, with long- | + | Not aiming for this could result in a growth in motorised forms of transport, leading to an increase in climate- | - |

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| | To limit or reduce the emissions of greenhouse gases. | fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | term positive impacts on climactic factors resulting from fewer emissions. This is preferable to a scenario with no such aim in place, where motorised traffic and hence emissions continue to increase. | | changing emissions, with long-term negative impacts. | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | An integrated transport system should encourage more usage of non-car modes of transport. This will have a long-term positive impact on soil by reducing the need for land take for new motorised transport facilities, reducing run-off from roads to soil and limiting the impact of air pollution on soil. This is preferable to a scenario with no aim in place where efforts are not made to reduce car dependency and negative impacts on soil continue to increase. | + | Not aiming for this could see an increase in motorised transport, increasing pollution to soil from transport activities and increasing the requirement for development resulting from transport. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An integrated transport system should encourage more usage of non-car modes of transport. This will have a long-term positive impact on water by reducing the need for construction of new motorised transport facilities such as roads and bridges which could result in water pollution. This is preferable to a scenario with no aim in place where efforts are not made to reduce car dependency and negative impacts on water continue to increase. | + | Not aiming for this could see an increase in motorised transport, increasing run-off from transport activities and increasing the likelihood of development resulting from transport. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | An integrated transport system should encourage more usage of non-car modes of transport, resulting in a long-term positive impact on the landscape due to the reduced need to construct large and unsightly transport facilities such as roads and bridges. This is preferable to a scenario with no aim in place where efforts are not made to reduce car dependency and negative impacts on the landscape continue. | + | Not aiming for this could see an increase in motorised transport, thus increasing the negative impacts of transport on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability? | An integrated and accessible transport system will have a long-term positive impact on the population. A fully integrated system will reduce the need for private car travel, resulting in less congestion and greater journey time | ++ | Not aiming for this could result in an increase of motorised transport journeys, thus increasing congestion and unreliable journey times. Not having social inclusion policies in place in | -- |

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| | | Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | reliability for both individuals and freight. A more accessible system will increase opportunities for all citizens, including the aged, to access the goods and services they need (including employment, education and healthcare) thus helping to combat social exclusion. This is preferable to a scenario with no such aim in place, where transport-related social exclusion continues to affect many and where congestion increases. | | relation to transport could lead to isolation of vulnerable groups. This will have a long-term negative impact on the population. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | An integrated and accessible transport system will enable more use of active and sustainable modes of transport which will have a long-term positive impact on human health by improving levels of physical activity and reducing noise, emissions and pollution. An integrated and accessible system will also make it easier for members of the public to travel to healthcare facilities and areas of open space. This is preferable to a scenario with no such aim in place, where people find it hard to travel around by non-car modes of transport. | ++ | Not aiming for this could see an increase in motorised transport, with long-term negative health implications resulting from increasingly sedentary behaviour and an increase in congestion and pollution. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | A more accessible transport system will improve opportunities for accessing sites of historic and/or cultural interest. This is preferable to a scenario with no such aim in place where certain sites remain inaccessible. | + | Not aiming for this could have long-term negative impacts on cultural heritage by failing to improve the accessibility of cultural and historic sites. | - |

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| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | An integrated, accessible and inclusive transport system will necessitate improvements to the walking, cycling and public transport infrastructure, significantly improving our material assets. | ++ | Not aiming for an integrated and inclusive transport system could contribute to the long-term deterioration of our material assets. | - |

## Aim 5: A transport system that facilitates healthy and sustainable living

| Indicator | Objectives | Will the aim…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in opportunities for sustainable travel could reduce land take required for new transport schemes, which may involve disruption or damage to species, habitats and protected sites. The aim therefore has a long-term positive impact on biodiversity. This is preferable to a scenario where no aim is in place and the need for new transport schemes to support motorised travel continues to increase. | ++ | Failing to facilitate sustainable travel could result in increased land take for development of new transport infrastructure which may have long-term negative impacts on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | This aim will involve improving opportunities for sustainable travel which should lead to a decline in car use throughout the City. This should have a long term positive impact on air quality through a reduction in emissions and pollution. This is preferable to a scenario with no aim in place where sustainable transport is not enabled and air quality continues to worsen. | ++ | Failing to facilitate sustainable travel could see an increase in motorised travel with long-term negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, | This aim will involve improving opportunities for sustainable travel which should lead to a decline in car use and therefore congestion throughout the City. This should have a long term positive impact on climactic factors through a reduction in emissions and pollution. This is preferable to a scenario with no aim in place where sustainable transport is not enabled and where emissions continue to grow. | ++ | Failing to facilitate sustainable travel could see an increase in motorised travel with long-term negative impacts on climactic factors. | - |

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| | | especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | An increase in opportunities for sustainable travel could reduce the need for construction of new transport facilities, such as roads and bridges, which could lead to soil contamination. This will therefore have a long-term positive impact on soil. This is preferable to a scenario where no aim is in place and the need for new transport schemes to support motorised travel continues to increase. | + | Failing to facilitate sustainable travel could result in increased land take for development of new transport infrastructure which may have long-term negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An increase in opportunities for sustainable travel could reduce the need for construction of new transport facilities, such as roads and bridges, which could lead to water contamination and impact on the coastline. This will therefore have a long-term positive impact on water. This is preferable to a scenario where no aim is in place and the need for new transport schemes to support motorised travel continues to increase. | + | Failing to facilitate sustainable travel could result in increased land take for development of new transport infrastructure which may have long-term negative impacts on water. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | An increase in sustainable transport could reduce the need for construction of new transport facilities, such as roads and bridges, which could lead to an unsightly landscape. This will therefore have a long-term positive impact on soil. This is preferable to a scenario where no aim is in place and the need for new transport schemes to support motorised travel continues to increase. | + | Failing to facilitate sustainable travel could result in increased land take for development of new transport infrastructure which may have long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and | Reduce congestion and allow for | A transport system that facilitates healthy and | + | Failing to facilitate sustainable travel | - |

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| | social inclusion. | greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | sustainable living will have a long-term positive impact on the population. An increase in healthy and sustainable travel will reduce congestion, allowing the more efficient movement of freight and will improve social inclusion by increasing opportunities for low-cost travel to key destinations. This is preferable to a scenario with no such aim in place where car transport continues to dominate and cause problems for the travelling population. | | could result in more people choosing to drive, thus increasing congestion and leading to greater journey time unreliability. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Health is identified as a key aim of the LTS. There will be a significant long-term positive impact on human health through increased opportunities for active travel. This will enable people to incorporate physical activity into their daily routines, while an increase in active travel at the expense of vehicular modes will reduce pollution and emissions that impact upon health as well as noise and vibrations. Fewer road vehicles would result in a safer transport system with fewer injuries and fatalities. Enabling a greater uptake of sustainable transport could improve access to key services (such as healthcare) and to areas of open space. This is preferable to a scenario with no aim in place, where car travel continues to be the most attractive form of transport for many, and the resulting problems of inactivity, emissions and road safety remain. | ++ | Failing to facilitate sustainable travel could have long-term negative impacts on health by preventing people from walking and cycling. Also, by making car travel more attractive, harmful emissions are likely to increase and travel will become increasingly sedentary, while more traffic on our roads increases the likelihood of transport-related casualties and fatalities. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An increased focus on, and prioritisation of, sustainable modes of transport should reduce the need for construction of new transport facilities (such as roads and bridges) that could impact upon important sites with a long-term positive impact on cultural heritage. Fewer cars in conservation areas will also have a positive impact on the special characteristics of such areas. This is preferable to a scenario with no such aim in place where car traffic | + | Failing to facilitate sustainable travel could result in the need for increased transport development that could impact on important sites, and an increase in traffic around such sites with long-term negative impacts. | - |

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| | environment. | | continues to dominate and new infrastructure is required to cope with growing demand. | | | |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | A transport system that facilitates healthy and sustainable living is likely to include an increase in facilities/infrastructure that enables sustainable travel which will have a long-term positive impact. | + | Failing to facilitate sustainable travel would lead to a significant gap in our material assets. | - |

## SUPPORT

### Objective 1: Strategic Rail Network - To work with partners to increase opportunities for rail travel to, from and within Aberdeen

**Actions:**

- Continue to promote rail travel to, from and within Aberdeen as part of a sustainable and integrated transport network.
- Continue to improve access to both Aberdeen and Dyce Railway Stations, particularly by foot, bicycle, bus and taxi.
- Support Nestrans to implement key priorities emerging from the RTS and Rail Action Plan including lobbying the Scottish Government for further improvements.
- Support the Scottish Government in improvements to the Aberdeen to Inverness rail corridor.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in mode share for rail is desired, which could result in less road traffic and therefore lead to a decrease in the negative impacts of road traffic on biodiversity (particularly in terms of pollution and run-off from roads likely to affect aquatic biodiversity). More people travelling by rail rather than road could lead to a decline in the need for construction of new road transport facilities (such as roads and bridges) to cater for increasing demand, the construction of which could cause disruption to habitats and species and impact on protected sites, depending on where these are located. A long-term positive impact on biodiversity is therefore anticipated. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in motor traffic and increased land take for facilities for road transport which could cause disruption to and/or severance of habitats and species. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An increase in mode share for rail could lead to a corresponding decrease in vehicular traffic, resulting in fewer emissions and less pollution, with long-term positive impacts on air quality. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in road traffic and hence emissions that impact on air quality, with long-term negative impacts. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | An increase in mode share for rail could lead to a corresponding decrease in vehicular traffic, resulting in fewer emissions and less pollution, with long-term positive impacts on the climate. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in road traffic and hence an increase in climate-changing emissions, with long-term negative impacts. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | In both cases, increased mode share for rail could lead to a corresponding decline in mode share for road transport. Reduced demand for road transport would reduce the need for new traffic infrastructure, such as roads and bridges, the construction of which could have negative impacts on soil, resulting in contamination and pollution. Air quality improvements could also positively impact on soil. The objective therefore could have a long-term positive impact on soil. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in road traffic. This may lead to the necessity of new transport construction and a worsening of air quality, resulting in soil pollution and contamination, with long-term negative impacts. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | In both cases, increased mode share for rail could lead to a corresponding decline in mode share for road transport. Reduced demand for road transport would reduce the need for new traffic infrastructure, such as roads and bridges, the construction of which could have negative impacts on water, resulting in contamination and pollution. The objective therefore could have a long-term positive impact on water. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in road traffic. This may lead to the necessity of new transport construction, potentially leading to water pollution and contamination, with long-term negative impacts. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | In both cases, increased mode share for rail could reduce the need for new infrastructure for vehicular traffic, such as roads and bridges, which could be unsightly, resulting in a long-term positive impact on the landscape. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Failing to encourage mode transfer to rail could see an increase in road traffic with a corresponding increase in infrastructure to cater for such traffic which may have long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Improved rail services and opportunities for rail travel would have a long-terms positive impact on the people of Aberdeen. An increase in the number of destinations/origins that can be reached from Aberdeen and the wider regions by rail would, combined with reduced journey times, contribute towards social inclusion by improving access to jobs, education and other key services, particularly for those without access to a car or who are no longer able to drive, such as the elderly. More people travelling by | ++ | No improvement to rail services could lead to a continuing growth in car travel, increasing congestion with long-term negative impacts on the economy. Certain destinations could remain inaccessible to those without access to a car, with long-term negative impacts on social inclusion. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | train rather than private car could reduce congestion and pollution and result in more reliable journey times for people and freight. Increased opportunities to move freight by rail would also reduce congestion and allow faster and more reliable freight movements. This is preferable to the alternative scenario where conditions are anticipated to worsen. | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved rail services and opportunities for rail travel will have a long-term positive impact on health by potentially making healthcare facilities and areas of open space more accessible, especially for those without access to a car. Should rail mode share increase at the expense of car use, this will lead to a decrease in pollution and in improvement in air quality. This is preferable to the alternative scenario where conditions are anticipated to worsen. | ++ | Without improvements to rail services, some destinations potentially benefitting health may remain inaccessible to those without access to a car. Not encouraging mode transfer from road to rail could see an increase in pollution and emissions, with long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Improvements to rail services could improve accessibility to sites of historic and/or cultural interest. An increase in rail mode share at the expense of the car could reduce pollution and poor air quality which can have a damaging effect on older buildings. This will therefore have a positive impact on cultural heritage. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Without improvements to rail services, some destinations may remain inaccessible to those without access to a car. Not encouraging mode transfer from road to rail could see an increase in pollution and poor air quality, with damaging effects on buildings and monuments. This would therefore have a long-term negative impact on cultural heritage. | - |

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| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Improved rail services would be a valuable resource for the people of Aberdeen, with a long-term positive impact on material assets. | + | Not improving rail services could deprive the people of Aberdeen of what could be a significant material asset. It may also lead to the further deterioration of our road assets through increased usage. | - |

**Objective 2: Shipping and Ferry Service - To work with partners to ensure that Aberdeen Harbour remains a world-class port and the main port of call in Scotland for the Northern Isles ferry services with appropriate access for all users.**

**Actions:**

- Support Aberdeen Harbour Board in the development of Aberdeen Harbour and Nigg Bay, including identification of infrastructure required to ensure the Nigg site is viable.
- Support measures to improve accessibility to Aberdeen Harbour for passengers and freight.
- Support Nestrans to deliver their proposals within the RTS as part of their Connections by sea proposals for action.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on biodiversity. Proposals such as the Harbour development will have impacts, but must be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on air quality. Proposals such as the Harbour development may have impacts, but must be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on air quality. | 0 |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on climate change. Proposals such as the Harbour development may have impacts, but should be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on climate change. | 0 |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on soil. | 0 | Not supporting improvements is unlikely to impact on soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on water quality. Individual proposals, such as the Harbour development, will have impacts on water quality and the coastline, but should be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on water quality. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on landscape. Individual proposals may have impacts, but should be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on the population. Individual proposals may have impacts, but should be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on the population. | 0 |

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| | | needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on health. Individual proposals may have impacts, but should be subject to their own individual assessments. | 0 | Not supporting improvements is unlikely to impact on health. | 0 |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact on cultural heritage. | 0 | Not supporting improvements is unlikely to impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | The objectives and actions merely outline support for improvements to shipping and ferry services so will have no impact. | 0 | Not supporting improvements is unlikely to impact on material assets. | 0 |

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| | opportunities and rights. | | | | | |

**Objective 3: Air Services - To support the future growth and improvement of Aberdeen International Airport, including surface access, in order to support the economic strength of the region and ensure continued connectivity to key businesses and leisure destinations.**

**Actions:**

- Support BAA in the future growth and extension of Aberdeen International Airport.
- Support Nestrans to deliver their aspirations for frequency of services and support for key aviation routes as part of the RTS.
- Continue to improve surface access to the Airport by all modes of transport
- Support Aberdeen International Airport in delivering an up to date Surface Access Strategy to ensure commitment to improving modal choice to/from the airport.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | The objectives and actions merely outline support for improvements to air services so will have no impact on biodiversity. Individual proposals may have impacts, but must be subject to their own individual assessments. Improving surface access to the airport is unlikely to impact upon biodiversity. | 0 | Not supporting improvements is unlikely to impact on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The objectives and actions merely outline support for improvements to air services so will have no impact on air quality. Individual proposals may have impacts, but must be subject to their own individual assessments. Improving surface access to the airport for sustainable modes of transport could have a long-term positive impact on air quality by reducing the need to drive to the airport, hence resulting in fewer emissions from airport traffic. This is preferable to the alternative scenario where air quality conditions are anticipated to worsen. | + | Failing to improve surface access to the airport for all modes of transport means that access by car will continue to dominate, thus increasing emissions around the Airport, with long-term negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | The objectives and actions merely outline support for improvements to air services so will have no impact on climate change. Individual proposals may have impacts, but must be subject to their own individual assessments. Improving surface access to the airport for sustainable modes of transport could have a long-term positive impact on climate change by reducing the need to drive to the airport, hence resulting in fewer emissions from airport traffic. This is preferable to the alternative scenario where conditions are | + | Failing to improve surface access to the airport for all modes of transport means that access by car will continue to dominate, thus increasing emissions around the Airport, with long-term negative impacts on the climate. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | anticipated to worsen. | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from actions in relation to this objective can positively impact upon soil. This is preferable to the alternative scenario, where air quality is anticipated to worsen. | + | Failing to address air quality problems could have long-term negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | The objectives and actions merely outline support for improvements to air services so will have no impact on water. Improving surface access to the airport is unlikely to impact upon water to any significant extent. | 0 | There are unlikely to be any impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The objectives and actions merely outline support for improvements to air services so will have no impact on the landscape. Improving surface access to the airport is unlikely to impact upon the landscape to any significant extent as the area around the airport is already heavily built-up. | 0 | There are unlikely to be any impacts on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | The objectives and actions merely outline support for improvements to air services so will have no impact on the population. Improving surface access to the airport could have a long-term positive impact on the population by reducing congestion, allowing the more efficient movement of freight in the area, and improving accessibility to the airport, especially for those without access to a car. This is preferable to the alternative scenario where congestion and accessibility are likely to worsen. | + | Failing to improve surface access to the airport for all modes of transport could see car use continue to dominate, this exacerbating and minimising opportunities for travel for those without access to car, with long-term negative impacts on the population. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | The objectives and actions merely outline support for improvements to air services so will have no impact on health. Individual proposals could have impacts, however, so should be subject to their own assessments. Improving surface access to the airport could have a long-term positive impact on health by encouraging access by healthy and sustainable modes of travel, particularly walking and cycling. This is preferable to the alternative scenario where no such provision for healthy travel is made. | + | Failing to improve surface access to the airport for all modes of transport could see car use continue to dominate, with resulting air quality disbenefits. Failing to facilitate access by active modes of transport could have long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | The objectives and actions merely outline support for improvements to air services so will have no impact on cultural heritage. | 0 | There are unlikely to be cultural heritage impacts. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Any improvements to the Airport , as supported by Aberdeen City Council, could help to enhance this material asset, with a long-term positive impact. | + | Failing to support airport improvements could result in the deterioration of this material asset. | - |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 4: Freight - To work with partners to ensure the efficient movement of freight to, from and within the North East of Scotland

**Actions:**

- Continue to work with Nestrans and partners in the Freight Forum to implement elements of the Freight Action Plan.
- Continue to encourage the transfer of freight from road to more sustainable modes such as rail and sea.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | The transfer of freight from road to sea or rail could have benefits for some land-based species through reduced road traffic but negative impacts on water-based species and habitats, especially around the Harbour, through an increase in shipping. | +/- | Not encouraging the transfer of freight from road to rail and sea would see road transport's impacts on biodiversity continue to worsen, with long-term negative impacts. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | A reduction in road freight could have a long-term positive impact on air quality through reducing the volume of high-emitting HGVs on our roads. An increase in shipping, however, could have long-term negative impacts on air quality, as harbour traffic is known to be a significant contributor to poor air quality in the City Centre (currently an AQMA) through emissions from ships themselves and via traffic accessing the harbour. | +/- | Not encouraging the transfer of freight from road to rail and sea would see road transport's impacts on air quality continue to worsen, with long-term negative impacts. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | A reduction in road freight could have a long-term positive impact on climate change through reducing the volume of high-emitting HGVs on our roads. An increase in shipping, however, could have long-term negative impacts, as harbour traffic is known to be a significant contributor to pollution and emissions, both from ships themselves and from traffic accessing the harbour. | +/- | Not encouraging the transfer of freight from road to rail and sea would see road transport's impacts on the climate continue to worsen, with long-term negative impacts. | - |

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| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Impacts on air quality can impact on soil through increases/decreases in air pollution. | +/- | Not encouraging the transfer of freight from road to rail and sea would see road transport's impacts on air quality continue to worsen, with long-term negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An increase in shipping could have a long-term negative impact on water quality through an increase in sea pollution resulting from a growth in seagoing vessels. A corresponding decrease in HGV traffic could have positive impacts on the freshwater environment by reducing road runoff. This objective will therefore have a mixed impact on water. | +/- | Not encouraging the transfer of freight from road to rail and sea would see road transport's impacts on water continue to worsen (through an increase in run-off to water from road transport activities), with long-term negative impacts on water. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | A reduction in the number of HGVs on our roads could have a long-term positive impact on the landscape. This is preferable to the alternative scenario where conditions continue to worsen. | + | Not encouraging the transfer of freight from road to rail and sea will likely result in an increase in road freight vehicles, with long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | An increase in the volume of freight moved by rail and sea could reduce congestion and enable the more efficient movement of freight. This is preferable to the alternative scenario where congestion is likely to worsen. | ++ | Not encouraging the transfer of freight from road to rail and sea will likely result in an increase in road freight vehicles, with a corresponding increase in congestion. Journey times will remain variable. There will therefore be long-term negative impacts on the population. | - |

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| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A reduction in road freight would reduce the volume of HGVs on our roads, resulting in fewer harmful emissions and reducing the likelihood of accidents involving large vehicles of this nature. An increase in shipping, however, could have long-term negative impacts on air quality, as harbour traffic is known to be a significant contributor to poor air quality in the City Centre (currently and AQMA) through emissions from ships themselves and via traffic accessing the harbour. The impact on human health is therefore mixed. | +/- | Not encouraging the transfer of freight from road to rail and sea will likely result in an increase in road freight vehicles. As well as causing an increase in emissions, this will result in a less safe travelling environment, especially for pedestrians and cyclists. | 0 |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | A reduction in HGVs around historic/cultural sites and conservation areas could improve the setting of such sites and reduce damage resulting from pollution and emissions. This is preferable to the alternative scenario where conditions continue to worsen. | + | Not encouraging the transfer of freight from road to rail and sea will likely result in an increase in road freight vehicles, therefore negatively impacting on the setting of such historic sites and increasing pollution around such sites which can be damaging to buildings and monuments. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Objectives and actions will contribute to the development of a clean environment and the sustainable use of resources. | + | An increase in road freight vehicles could see contribute towards the long-term deterioration of our roads. | - |

## Objective 5: Trunk Road Network - Support improvements to the trunk road network for the benefit of people and freight travelling to, from and within Aberdeen

**Actions:**

- Support the dualling of the A90 Balmedie-Tipperty and the A96 and continue to work with the Scottish Government, Nestrans and Aberdeenshire Council to ensure the completion of these projects.
- Continue to work with partners to identify the optimum solution for congestion and capacity problems at the Bridge of Dee.
- Support improvements to the Haudagain Roundabout following construction of the AWPR.
- Continue to press the Scottish Government to ensure that roads that are de-trunked in 2018 are fit for purpose when passed to the Council.
- Work with Transport Scotland on delivering improvements to the walking and cycling network around trunk roads.
- Develop a Roads Hierarchy for the City in partnership with Nestrans.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | There are unlikely to be any impacts on biodiversity, although it is recognised that improvement to traffic capacity at the Bride of Dee could impact upon the qualifying features of the SAC, therefore any options recommended for implementation will require to be subject to their own environmental assessment. | 0 | There are unlikely to be impacts on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Improvements to the walking and cycling network could have minor positive impacts by encouraging usage of these modes in preference to the private car, resulting in fewer harmful emissions. Measures to tackle traffic congestion will also have a positive impact through decreasing emissions. This is preferable to the alternative scenario where no action is taken and air quality is likely to worsen. | + | Failing to enable walking and cycling around trunk roads could see an increase in car travel, with long-term negative impacts on air quality through increased emissions. Failing to tackle traffic congestion will also increase emissions, with a long-term negative impact. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | . Improvements to the walking and cycling network could have minor positive impacts by encouraging usage of these modes in preference to the private car, thus reducing climate-changing emissions. Measures to tackle traffic congestion will also have a positive impact through decreasing emissions This is preferable to the alternative scenario where no action is taken and emissions are likely to increase. | + | Failing to enable walking and cycling around trunk roads could see an increase in car travel, with long-term negative impacts through increased emissions. Failing to tackle traffic congestion will also increase emissions, with a long-term negative impact | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements have the potential to positively impact on soil. | + | Failing to enable walking and cycling around trunk roads or to tackle traffic congestion could have long-term negative impacts on soil through a worsening of air quality. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | There are unlikely to be impacts on water although it is recognised that any improvements in the vicinity of the River Dee could impact upon that SAC so should be subject to their own environmental assessments. | 0 | There are unlikely to be impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | There are unlikely to be significant impacts on the landscape. | 0 | There are unlikely to be significant impacts on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Measures to reduce congestion will allow for greater journey time reliability and ensure the efficient movement of freight, thus contributing to economic growth. Improved walking and cycling conditions alongside trunk roads could promote social inclusion and improve accessibility by allowing greater use of these modes to access key services and facilities, with long-term positive impacts. This is preferable to the alternative scenario, where there are no benefits to congestion or social inclusion. | + | Failing to enable walking and cycling around trunk roads could see an increase in car travel, thus exacerbating congestion and contributing to journey time unreliability. Opportunities to travel along such routes for those without access to a car will be limited, this contributing to social exclusion. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improvements to the walking and cycling conditions alongside trunk roads could improve human health by promoting the use of active and healthy transport modes with long-term positive impacts. Less traffic will also result in air quality improvements. This is preferable to the alternative scenario where no improvements are made. | + | Failing to tackle congestion is likely to see an increase in harmful emissions as traffic grows. Failing to enable walking and cycling around trunk roads could reduce opportunities for active travel, with long-term negative impacts on health, as well as increasing pollution and emissions. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | There are unlikely to be impacts on cultural heritage, although any proposals to improve traffic conditions on or around the Bridge of Dee (a scheduled ancient monument) could have significant impacts on that site and must be subject to their own assessments. | 0 | There are unlikely to be significant impacts on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Improved trunk roads and conditions for pedestrians and cyclists around trunk roads will contribute to the development of a fit for purpose transport system for the good of all the people of Aberdeen. | + | There are unlikely to be significant impacts on material assets. | 0 |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 6: Aberdeen Western Peripheral Route - To support the implementation of the Aberdeen Western Peripheral Route (AWPR) and to fully realise the benefits the new road will bring in terms of improving conditions in the City for users of sustainable modes of transport

**Actions:**

- Continue to work with Transport Scotland, Nestrans and Aberdeenshire Council to deliver the AWPR on time and on budget.
- Develop the remaining Locking In The Benefits schemes prior to the AWPR opening in Winter 2017
- Continue to identify measures to 'lock in' the benefits of the AWPR, with a particular emphasis on revising the transport network within the City to improve conditions for, and to prioritise and promote, sustainable modes of transport.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Merely supporting the AWPR will have no impact on biodiversity as this scheme was not generated by the LTS and has undergone its own environmental assessments. Measures to improve conditions for sustainable transport modes following implementation of the AWPR could have long-terms positive impacts on biodiversity by reducing noise and pollution, as well as run-off from roads, all of which can impact upon biodiversity in terms of species and habitat damage and disruption. This is preferable to the alternative scenario where conditions continue to worsen. | + | Failing to improve conditions for sustainable transport modes following implementation of the AWPR could have long-terms negative impacts on biodiversity. Without such measures, cat traffic is likely to increase, thus increasing noise and pollution, as well as run-off from roads, all of which can impact upon biodiversity in terms of species and habitat damage and disruption. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Merely supporting the AWPR will have no impact on air quality as this scheme was not generated by the LTS and has undergone its own environmental assessments. Measures to improve conditions for sustainable transport modes following implementation of the AWPR could have long-term positive impacts on air quality by encouraging and facilitating the use of cleaner modes of transport. This is preferable to the alternative scenario where conditions continue to worsen. | + | Failing to improve conditions for sustainable transport modes following implementation of the AWPR could have long-term negative impacts on air quality by encouraging car traffic at the expense of sustainable modes, thus increasing emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | Merely supporting the AWPR will have no impact on the climate as this scheme was not generated by the LTS and has undergone its own environmental assessments. Measures to improve conditions for sustainable transport modes following implementation of the AWPR could have long-terms positive impacts on the climate by encouraging and facilitating the use of cleaner modes of transport. This is preferable to the alternative scenario where conditions continue to worsen. | + | Failing to improve conditions for sustainable transport modes following implementation of the AWPR could have long-term negative impacts by encouraging car traffic at the expense of sustainable modes, thus increasing emissions. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements have the potential to positively impact on soil. This is preferable to the alternative scenario where air quality is anticipated to worsen. | + | Failing to improve conditions for sustainable transport modes lead to an increase in road traffic thus a worsening of air quality, which could have a long-term negative impact on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Merely supporting the AWPR will have no impact on water as this scheme was not generated by the LTS and has undergone its own environmental assessments. Measures to improve conditions for sustainable transport modes following implementation of the AWPR are unlikely to impact on water. | 0 | This is unlikely to impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Merely supporting the AWPR will have no impact on the landscape. Measures to encourage more walking and cycling in the City Centre and a reduction in car usage could have long-term benefits for the landscape setting of the City Centre. This is preferable to the alternative scenario where transport's impact on the landscape is anticipated to worsen. | + | Failing to improve conditions for sustainable transport could see an increase in road traffic and congestion, with negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Merely supporting the AWPR will have no impact on the population. Prioritisation and promotion of active travel in the City Centre will reduce congestion, allow the more efficient movement of freight and contribute towards social inclusion by improving accessibility to key services and destinations by these inexpensive modes. A long-term positive impact on the population will therefore result. This is preferable to the alternative scenario where congestion and social exclusion remain problems. | + | Failing to improve conditions for sustainable transport could see an increased in car travel and hence congestion. It will likely be the case that certain areas/destinations remain inaccessible to those without access to car thus contributing to social exclusion. This will have long-term negative impacts on the population. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Merely supporting the AWPR will have no impact on health. Prioritisation and promotion of active travel in the City Centre will have long-tem positive impacts on health by encouraging use of active travel modes and reducing pollution, emissions, noise and vibration associated with motor traffic. This is preferable to the alternative scenario which fails to provide any health benefits. | + | Failing to improve conditions for sustainable transport could discourage healthy and active travel with long-term negative impacts on health. This may lead to an increase in car travel, and a corresponding increase in noise, emission and pollution, | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Merely supporting the AWPR will have no impact on cultural heritage. Prioritisation and promotion of active travel in the City Centre will have long-tem positive impacts by improving accessibility by these modes to areas of cultural and historical interest and reducing noise and vibrations around sensitive sites. This is preferable to the alternative scenario which provides no benefits. | + | Failing to improve conditions for sustainable transport could see certain areas remaining inaccessible for those without access to a car. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Implementation of the AWPR and supporting schemes will contribute to the development of a fit for purpose transport system for the good of all the people of Aberdeen. | ++ | Failing to improve sustainable transport infrastructure will limit the assets available to the people of Aberdeen and will lead to the erosion of our existing asserts through overuse. | - |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## MAINTENANCE

### Objective 7: Road Carriageway and Footway Maintenance - To improve the condition of the road, footway and cycle networks

**Actions**

- Seek increased investment in roads maintenance and lobby the Scottish Government for funding to support the Council's efforts to address the historic backlog in Aberdeen.
- Seek to increase investment in the maintenance of footways and cycleways across the City.
- Continue to undertake maintenance works in accordance with appropriate legalisation and guidance.
- Prevent roads maintenance schemes occurring simultaneously when these are likely, in combination, to have a significant detrimental effect upon the travelling public.
- Seek to ensure that the development of new infrastructure, such as cycleways, is matched by specific funding allocations for maintenance purposes.
- Continue to update the Roads Asset Management Plan (RAMP).
- Seek to reduce the cost of public liability claims.
- Prioritise and undertake repairs to reported road defects.
- Work to encourage other Roads Authorities to maintain a high standard of road and footway maintenance for the travelling public.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place as a result of increased noise, vibration and materials on site. | - | Failing to adequately maintain infrastructure is unlikely to impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place, resulting from increased emissions from queuing traffic and emissions displaced elsewhere. Ultimately, however, long-term positive impacts should arise with road users able to move through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. This is preferable to the alternative scenario as it allows people to continue walking and cycling. | +/- | Failing to adequately maintain our transport infrastructure could lead to inefficient traffic movements and discourage people walking and cycling, which will have long-term negative impacts on air quality (especially if people choose to drive rather than walk or cycle. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the | Promote sustainable and active travel?<br><br>Promote the use of clean | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place, resulting from increased emissions from queuing traffic and emissions displaced elsewhere. Ultimately, however, | +/- | Failing to adequately maintain our transport infrastructure could lead to inefficient traffic movements and discourage people walking and cycling, which will have long-term negative | - |

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| | emissions of greenhouse gases. | fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | long-term positive impacts should arise with road users able to move through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. This is preferable to the alternative scenario as it allows people to continue walking and cycling. | | impacts on the climate (especially if people choose to drive rather than walk or cycle). | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place as a result of pollution and contamination. Air quality improvements have the potential to positively impact on soil. This is preferable to the alternative scenario where there are unlikely to be air quality improvements. | +/- | Failing to adequately maintain foot and cycleways could discourage walking and cycling. If these journeys are undertaken by car instead there will be air quality disbenefits, with negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place as a result of run-off contaminating watercourses. In the long-term, however, improving road conditions could include the upgrade and improvement of surface water drainage systems which could have a positive impact on water quality. The impact is therefore likely to be mixed, in preference to the alternative scenario which could have a negative impact. | - | Poorly maintained roads may result in run-off contaminating watercourses, with long-term negative impacts. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact while works are taking place, with an increase in materials and equipment on site. Impacts in the long term should be more positive though with well-maintained infrastructure complementing the landscape. This is preferable to the alternative scenario where the landscape is negatively impacted in the long-term. | +/- | Poorly maintained infrastructure can lead to an unsightly landscape in the long term. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact, making certain areas difficult to access and increasing congestion. In the long-term positive impacts will result with road users able to move | +/- | Failing to adequately maintain our transportation assets will result in long-term problems to the travelling public, making certain areas inaccessible and contributing towards journey time | - |

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| | | Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. This is preferable to the alternative scenario which has long-term negative implications. | | unreliability. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact to human health causing queuing, rising traffic levels in some areas and increases in emissions, noise and vibration while works are ongoing. In the longer term, though, this should bring positive impacts with road users able to move through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. Better surfaces also reduce noise. This is preferable to the alternative scenario where long-term impacts are unambiguously negative. | +/- | Failing to adequately maintain our transportation assets could lead to an increase in accidents and injuries and could discourage walking and cycling, with long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Improving the condition of road, footway and cycle networks may cause a temporary short-term negative impact to cultural heritage, making certain areas difficult to access and impacting on the setting of historic buildings and sites. Maintenance activities may increase vibrations around sites which could be potentially damaging. This should bring long-term positive impacts with road users able to move through a better maintained network more efficiently and should improve the setting of historic buildings and sites with better maintained surroundings. This is preferable to the alternative scenario where long-term impacts are negative. | +/- | Failing to adequately maintain our transportation assets could lead to an unsightly environment around historic sites or impede access to such sites with long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources? | This should bring long-term positive impacts with road users able to move through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. This will be more pronounced in the preferred Strategy | ++ | Failing to adequately maintain our transportation assets will lead to their long-term deterioration. | -- |

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| | use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | scenario as this advocates an increase in current activities, with greater long-term benefits to our material assets. | | | |

## Objective 8: Lighting - To ensure that all street lighting columns in Aberdeen are fit for purpose, safe and sustainable

**Actions:**

- Continue to increase levels of funding for the City's lighting infrastructure.
- In compliance with the Council's Carbon Management Plan, look to replace obsolete lantern and lighting systems with modern energy efficient equipment.
- Consideration of lower lighting levels or reduced operating hours of lighting in low priority areas.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Lower lighting levels or reduced operating hours could have a positive impact on biodiversity by benefitting nocturnal species, whose movements and behaviours may be inhibited by the presence of light. This is preferable to the alternative scenario which has a neutral impact on biodiversity. | + | This will not impact upon biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Improved lighting could have long-term benefits for air quality as people feel safer walking and cycling in better lit areas and may be more likely to choose these modes over the car, resulting in fewer emissions. This is preferable to the alternative scenario where the opposite is anticipated. At the same time, with lower lighting levels, or street lighting switched off overnight, perceptions of safety amongst pedestrians and cyclists could decrease, resulting in less sustainable transport use and more car driving during these hours. | +/- | Poorly maintained street lighting could discourage walking and cycling as people feel unsafe. If these people travel by car instead, emissions will increase and air quality worsen. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | A shift to lower carbon lighting systems and potentially reducing lighting at certain times will consume less energy, with a long-term positive impact on climactic factors. Improved lighting could cause a long-term benefit as people feel safer walking and cycling in better lit areas and become more likely to choose these modes over the car, thus reducing emissions. At the same time, with lower lighting levels, or street lighting switched off overnight, perceptions of safety amongst pedestrians and cyclists could decrease, resulting in less sustainable transport use and more car driving during these hours. This is preferable to the alternative scenario which has a negative impact. | +/- | A shift to lower carbon lighting systems consumes less energy – not doing this, therefore, will have negative impacts on our carbon emissions. | - |

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| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Impacts on air quality may have knock-on effects on soil resulting from air pollution. | + | Air quality disbenefits may have knock-on impacts on soil resulting from air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is not anticipated to impact on water. | 0 | This is unlikely to impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Ensuring that all street lighting columns in Aberdeen are fit for purpose, safe and sustainable will have a long term positive impact on the landscape by helping to better frame the surroundings. This is preferable to the alternative scenario where the impact is neutral. | + | This is unlikely to impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Certain vulnerable members of society (such as lone women, the elderly and partially sighted) may be discouraged from travelling in the evenings and at night if streets are not well-lit, causing them to feel unsafe, therefore accessibility and social inclusion are negatively affected. | - | Poorly maintained street lighting may discourage certain vulnerable members of society (such as lone women, the elderly and partially sighted) to travel around in the evenings safely and securely. | - |

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| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved lighting should have a long-term benefit for human health as people feel safer and are more likely to walk and cycle during the hours of darkness in appropriately lit areas. Reducing light pollution can improve peoples' mental health and well-being. At the same time, reduced lighting levels in the evening or overnight could contribute to an increase in road accidents and fewer people walking and cycling during the hours of darkness as a result of safety and security concerns, with long-term negative impacts on health. This is preferable, though, to the alternative scenario which is unambiguously negative. | ++/- | Poorly maintained lighting columns may discourage walking and cycling if people feel unsafe. As well as reducing opportunities for active travel, this could lead to an increase in noise and pollution if these journeys are undertaken by car instead. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Ensuring that all street lighting columns in Aberdeen are fit for purpose, safe and sustainable will have a long term positive impact by helping to better frame the surroundings. | + | This is unlikely to impact significantly on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Ensuring that all street lighting columns in Aberdeen are fit for purpose, safe and sustainable will have a long term positive impact by making best use of existing assets. This is preferable to the alternative scenario where assets suffer long-term decline. | + | Failing to adequately maintain lighting columns will lead to the long-term deterioration of these assets. | - |

## Objective 9: Winter Maintenance - To ensure the safe movement of traffic on carriageways, footpaths, cycle paths and pedestrian precincts to minimise delays caused by adverse winter weather

**Actions:**

- Continue to undertake winter maintenance operations and examine opportunities to achieve Best Value through partnership working.
- Lobby for further investment in winter maintenance relative to the needs of the North East climate.
- To review and update the programme of winter maintenance based on priorities established in the Winter Maintenance Operations Programme on an annual basis.
- To continue to review annually and publish a Winter Maintenance Operations Programme.
- Provide a standard of service on public roads which will permit safe passage of vehicles and pedestrians on main routes appropriate to the prevailing weather conditions.
- Establish a pattern of working which will minimise delays and diversions due to winter weather as far as is reasonably practical.
- Respond to cases of serious hardship during extended periods of severe weather.
- Update annually and implement the Winter Maintenance Procedures and Resources document.
- Following receipt of adverse winter conditions forecast treat …% of the road network on a precautionary basis.
- Following receipt of adverse winter conditions forecast treat x% of the footway network on a precautionary basis.
- During extreme weather conditions treat secondary and extreme (road) routes as resources permit.
- During extreme weather conditions treat (footway) accessibility routes and the rest as resources permit.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Winter maintenance could have a short-term negative impact on biodiversity, with materials running into watercourses. | - | This is unlikely to impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Winter maintenance could have a short-term positive impact on air quality. Treated roads, cycleways and footways allow traffic to move freely and allows pedestrian and cycle activities to continue, thus minimising emissions. This is preferable to the alternative scenario where traffic is unable to flow freely. | + | Without maintenance activities, traffic may be prevented from flowing freely, with negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Winter maintenance could have a short-term impact effect on climatic factors. Treated roads, cycleways and footways allow traffic to move freely and allows pedestrian and cycle activities to continue, thus minimising emissions. This is preferable to the alternative scenario where traffic is unable to flow freely. | + | Without maintenance activities, traffic may be prevented from flowing freely, with negative impacts. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health | Winter maintenance could have a short-term negative effect on soil. Road clearing can lead to banked up snow on the roadside while salt treatment can lead to salty water running into soil. Air quality improvements have the potential to positively impact on soil. Overall, this is preferable to the alternative scenario which has a purely negative impact. | +/- | Negative air quality impacts resulting from non-flowing traffic can negatively impact on soil. | - |

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| | | and the water environment? | | | | |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Winter maintenance could have a short-term negative effect on water. Salt treatment can lead to salty water running into watercourses. | - | This is unlikely to impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Winter maintenance could have a short-term negative effect on the landscape. Road clearing can lead to banked up snow on the roadside while salt treatment can lead to salty, muddy meltwater which is unsightly. | - | This is unlikely to impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Winter maintenance has a short term positive effect on the population as it makes it easier for the people to move around, thus maintaining accessibility and preventing certain groups suffering exclusion. This is preferable to the alternative scenario which is likely to have a negative impact. | + | By not undertaking winter maintenance activities, traffic may not be able to flow freely, resulting in congestion and unreliable journey times in wintery conditions. There is also a danger that certain groups are prevented from travelling in such weather, causing them to be excluded. This would therefore have short-term negative impacts. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration? | Winter maintenance has a short term positive effect on human health, significantly reducing the likelihood of accidents and injuries. This is much preferable to the alternative scenario where the likelihood of accidents will be high. | ++ | Failure to undertake winter maintenance will result in an increase in accidents and injuries resulting from snowy and icy conditions, with long-term negative impacts on health. | -- |

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| | connectivity of publicly accessible open space | Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | | | | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Winter maintenance has both positive and negative short term effects on cultural heritage. Road clearing can lead to banked up snow on the roadside while salt treatment can lead to salty, muddy meltwater which is unsightly. However, access to cultural heritage is maintained. Overall, this performs better than the alternative scenario which is negative. | +/- | By not undertaking winter maintenance activities, access to cultural heritage may be impeded with short-term negative impacts. | -- |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This is unlikely to impact on material assets to an significant degree. | 0 | This is unlikely to impact on material assets to an significant degree. | 0 |

## Objective 10: Structures - To ensure that all road related structures in Aberdeen that the Council is responsible for are managed and maintained, safe and fit for purpose

**Actions:**

- Work to increase investment in structural maintenance and repairs across the City to continue to address backlogs.
- Continue to inspect, assess and maintain all structures in accordance with the Code of Practice for Bridge Management.
- Where new bridges are required, strive to develop structures that complement the surrounding environment and are accessible to all modes.
- Aberdeen City Council will maintain and enhance where appropriate the existing road network to allow adequate transportation of road freight.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact while works are taking place. Works can cause noise and lead to increases in materials and equipment on site. In the longer term, impacts will be positive though with a well maintained structure less likely to impact adversely on biodiversity (less rusty water runoff and likelihood of parts of the structure falling onto the surroundings). Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | +/- | Failing to adequately maintain structures could negatively impact on surrounding biodiversity should such structures erode or collapse. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact while works are taking place, in terms of emissions from works traffic, queuing traffic and traffic displaced to inappropriate roads. In the longer term though impacts will be positive with road users able to move through a better maintained network more efficiently. Ensuring new bridges can be used by a variety of transport modes may also encourage greater usage of non-car modes with positive impacts on air quality. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | ++/- | Failing to maintain structures and to ensure they are usable by all modes could discourage sustainable transport, with long-term negative impacts on air quality should these journeys be undertaken by car instead. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact while works are taking place, in terms of emissions from works traffic, queuing traffic and traffic displaced to inappropriate roads. In the longer term though impacts will be positive with road users able to move through a better maintained network more efficiently and more people encouraged to walk and cycle on better maintained networks. Ensuring new bridges can be used by a variety of transport modes may also encourage greater usage of | ++/- | Failing to maintain structures and to ensure they are usable by all modes could discourage sustainable transport, with long-term negative impacts these journeys be undertaken by car instead. | - |

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| | | Result in the development of peat rich soils? | non-car modes with positive impacts on emissions. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Maintenance may cause a temporary short-term negative impact while works are taking place in terms of pollution and contamination. Air quality improvements have the potential to positively impact on soil. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | +/- | Air quality disbenefits may negatively impact on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Maintenance and construction works may cause a temporary short-term negative impact while works are taking place in terms of pollution and contamination. In the longer term, this should bring more positive impacts with a well maintained structure less likely to impact adversely on water (less rusty water runoff and likelihood of parts of the structure falling onto the surroundings). Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | +/- | Poorly maintained structures could have negative impacts on water resulting from rusty water runoff and parts of the structure falling. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact while works are taking place as works can be unsightly and lead to increases in materials and equipment on site. Ensuring new bridges complement their surroundings represents an improvement compared to existing activity and will bring long-term positive impacts. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | ++/- | Poorly maintained/ruined structures can have long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact to the population, making certain areas difficult to access, causing traffic levels to rise in other areas and causing a negative impact to the quality of surfaces. In the long term though, positive impacts should result with road users able to move through a better maintained network more efficiently. Ensuring new bridges can be used by all modes of transport can also reduce congestion by encouraging use of non-car modes. Overall, this is preferable to the alternative scenario which has an unambiguously | ++/- | Poorly maintained structures can prevent the efficient movements of people and goods. | - |

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| | | appropriate transport facilities to meet their needs? | negative impact. | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact on human health from increased emissions, noise and vibration. In the longer term, however, maintenance brings obvious safety benefits (with structures less likely to collapse) and allows for a freer flow of traffic. Ensuring new bridges can be used by all modes of transport could result in more people walking and cycling. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | +/- | Poorly maintained structures could be very dangerous in the long-term, resulting serious accidents and injuries should they collapse. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Ensuring that all structures are managed, maintained, safe and fit for purpose may cause a temporary short-term negative impact to cultural heritage, making certain areas difficult to access and impacting on the setting of historic buildings and sites. Maintenance works may also increase vibration around sensitive with long-term negative impacts on such sites. This should bring long-term positive impacts with road users able to move through a better maintained network more efficiently and should improve the setting of historic buildings and sites with better maintained surroundings. Overall, this is preferable to the alternative scenario which has an unambiguously negative impact. | +/- | Poorly maintained structures could lead to certain important sites becoming inaccessible. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Ensuring all structures are safe and secure will have long-term positive impacts on material assets. | + | Failing to maintain our transportation assets will lead to their deterioration in the long term, rendering them unusable ultimately. | -- |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 11: Flooding - To ensure that the road network is as resilient as possible in case of flooding from extreme weather conditions

**Actions:**

- Continue to assess flood defences throughout the City.
- Work with Partners to develop a North East local plan.
- Continue to assess areas at risk from flooding.
- Implement a range of hard and soft engineering measures to deal with flood risk management and mitigation.
- Continue the maintenance programme to clear blocked drains and inspection of water courses.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | A reduction in the likelihood of flooding incidents leads to long-term benefits to biodiversity, offering protection to habitats and species at risk of flooding. This is preferable to the alternative scenario where no such protection is offered. | + | Failing to take action to prevent and reduce flooding could have long-term negative impacts on species and habitats vulnerable to flooding incidents. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Ensuring that the road network is as resilient as possible in the event of flooding brings long-term positive impacts on air quality, resulting in less queuing traffic, more attractive conditions for sustainable transport and less chance of traffic being displaced to cleaner areas. This is preferable to the alternative scenario where a neutral impact is predicted. | + | This is unlikely to have a significant impact on air quality. | 0 |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | Ensuring that the road network is as resilient as possible in the event of flooding brings long term positive impacts through reduced emissions resulting from less queuing traffic, more attractive conditions for sustainable transport and less chance of traffic being displaced to cleaner areas. This is preferable to the alternative scenario where a neutral impact is predicted. | + | This is unlikely to have a significant impact on climactic factors. | 0 |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Ensuring that the road network is as resilient as possible in the event of flooding could bring short-term negative effects on soil due from construction works. There should be longer-term benefits though offered to soil from flood protection. Overall, this is preferable to the alternative scenario where a negative impact is predicted. | +/- | Flooding incidents could lead to soil damage and/or contamination, with long-term negative impacts. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Ensuring that the road network is as resilient as possible in the event of flooding could bring short-term negative effects to water during construction activities resulting in run-off to water courses. | - | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Flood defences can negatively impact upon the landscape setting of the City, but do serve to protect important features from the effects of flooding. This is preferable to the alternative scenario which offers no such protection. | +/- | Landscape features will not be protected from the effects of flooding, with long-term negative impacts. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Ensuring that the road network is as resilient as possible in case of flooding from extreme weather conditions could bring long term positive impacts, ensuring extreme weather events cause minimal disruption to travel patterns. This is preferable to the alternative scenario which offers no such protection. | + | Not protecting from the effects of flooding leaves the population vulnerable to massive disruption from flooding incidents. | -- |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Ensuring that the road network is as resilient as possible in case of flooding from extreme weather conditions could bring long term positive effects as it will lead to fewer accidents, less queuing traffic, more attractive conditions for sustainable transport and less chance of displaced traffic, all of which impacts positively on air quality and personal health. This is preferable to the alternative scenario which offers no such protection. | + | Failing to protect the public from the effects of flooding could lead to an increase in accidents and casualties. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | The presence of flood protection measures can detract from cultural and historical sites, but also offers protection to such sites. This is preferable to the alternative scenario which offers no such protection. | +/- | Cultural heritage features will not be protected from the effects of flooding, with long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Ensuring that the road network is as resilient as possible in case of flooding from extreme weather conditions will have a long term positive impact on material assets by allowing these assets to survive extreme weather events. | + | Not protecting our material assets from the effects of flooding could see these assets damaged or destroyed. | -- |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 12: Contingency Planning and Utilities – To ensure efficient flow of traffic

**Actions :**

- Ensure that roads and pavements are repaired promptly and appropriately as part of utilities works.
- Ensure inspections are carried out by ACC and road defects associated with roadworks/utility operations are identified and reported.
- Ensure that any roadworks are promoted through appropriate channels, such as Smart Journey, and that notice for works and any amendments are given in a timely manner to avoid impact on Partners, such as the bus operators, and the travelling public.
- Ensure that temporary closures make provision for cyclists and pedestrians.
- In the case of an emergency, such as severe weather conditions or a major accident, the Council will update the corporate website, as well as Twitter and Facebook, and Variable Message Signs on the local and regional network with relevant information and advice.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | The contingency planning process is not anticipated to impact on flora and fauna. | 0 | There are no impacts on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The contingency planning process should bring long-term benefits to air quality. If people are given advanced warning about works it encourages them to choose another route, thus reducing queuing traffic. However, it may lead to short-term negative effects to air quality in areas where traffic is displaced to. Overall, this is preferable to the alternative scenario which is likely to have negative impacts. | +/- | Failure to implement the above could lead to increases in queuing traffic, thus increasing emissions and contributing towards poor air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | The contingency planning process should bring long-term benefits. If people are given advanced warning about works it encourages them to choose another route, thus reducing queuing traffic, or perhaps a more sustainable mode. However, it may lead to short-term negative effects in areas where traffic is displaced to in terms of increasing emissions there. Overall, this is preferable to the alternative scenario which is likely to have negative impacts. | +/- | Failure to implement the above could lead to increases in queuing traffic, thus increasing emissions. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements have the potential to positively impact on soil. Equally, negative impacts could negatively impact on soil. Overall, this performs better to the alternative scenario which is likely to be simply negative. | +/- | Any negative impacts on air quality resulting from this will lead to negative impacts on soil resulting from air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | The contingency planning process is not anticipated to impact on water. | 0 | There are unlikely to be impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The contingency planning process is not anticipated to impact on the landscape. | 0 | There are unlikely to be impacts on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | The contingency planning process should bring short-term benefits to the population. People are given appropriate information in advance, encouraging them to better plan their journeys, thus reducing disruption and minimising congestion. This is preferable to the alternative scenario where people are not warned of such works in advance. | + | Not having such processes in place will lead to disruption of the travelling public, resulting in congestion and unreliable journey times, with short-term negative impacts. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | The contingency planning process should bring short-term benefits to health. People are given appropriate information in advance, encouraging them to better plan their journeys, thus reducing stress. There may, however, also be short-term negative impacts resulting from increased pollution and emissions in some areas from displaced traffic. Overall, this is preferable to the alternative scenario, the results of which are likely to be only negative. | +/- | Not having such processes in place will lead to disruption of the travelling public, potentially resulting in an increase in driver stress. Harmful emissions may increase as a result of congestion and displaced traffic. This will therefore have short-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | The contingency planning process is not anticipated to impact on cultural heritage. | 0 | This is unlikely to impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Contingency planning does not impact on material assets. | 0 | This is unlikely to impact on material assets. | 0 |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## MANAGEMENT

## Objective 13: Car Parking - To develop a car parking regime that sustains and enhances the economic vitality of the City Centre and district shopping centres

**Actions:**

- Encourage a high turnover of spaces, especially in the city centre, by ensuring our parking controls, pricing structures and policies do not encourage commuter car parking and instead support short stay retail, leisure and business trips.
- Encourage shorter trips within the urban area to transfer to walking, cycling and public transport, and longer trips outwith the urban area to utilise Park & Choose.
- Minimise the negative impacts of parking on streetscape and ensuring the ability of public transport to flow freely on key bus corridors.
- Protect residents' ability to park and load close to their homes by extending Controlled Parking Zones to areas where residential amenity is affected by commuter parking.
- Protect businesses', tradespeople's, and visitors' ability to park and load by management of Controlled Parking Zones and ensuring enforcement of parking and loading restrictions.
- Facilitate the operation of car clubs, take up of car sharing and environmentally friendly vehicles.
- The Council will ensure that parking policies take into account the needs of people with mobility impairments and other disabilities.
- Improve payment options by ensuring pay by phone parking is available to all on-street parking as well as all Council owned car parks.
- Work with partner organisations and private car park operators using contractual and planning powers to encourage pricing and length of stay regimes in off-street car parks that facilitate shopping and other short/ medium stay activities.
- To increase compliance with disabled parking arrangements and reduce fraudulent use of 'blue badges' by the creation of a temporary blue badge fraud investigation service.
- To adopt car parking recommendations emerging from the City Centre Masterplan and Sustainable Urban Mobility Plan currently being developed.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective will have a minimal impact on biodiversity. | 0 | This has a minimal impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Encouraging short trips within the City Centre (an AQMA) to transfer to alternative modes will have long-term benefits for air quality through reducing traffic and congestion. Facilitating the use of Car Clubs, car sharing and low emission vehicles will also benefit air quality through reducing traffic, congestion and emissions. This is preferable to the existing scenario where driving is often the most attractive option and there are few incentives to use sustainable modes. | ++ | Current parking availability and pricing often makes driving a more attractive mode of transport than other options, with long-term negative impacts on air quality. | - |

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| | standards. | | | | | |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | The objective aims to transfer short trips, especially within the City Centre, to sustainable modes – this will reduce road traffic, congestion and emissions, with long-term benefits for climate change. Promoting the use of cleaner fuel vehicles and Car Clubs (which typically have a low-emission fleet) will also have a long-term positive impact. This is preferable to the existing scenario where driving is often an attractive option. | ++ | Current parking availability and pricing often makes driving a more attractive mode of transport than other options, with long-term negative impacts on climactic factors. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements resulting from this objective may reduce the potential for soil contamination. This is preferable to the alternative scenario which is likely to have negative impacts. | + | Air quality disbenefits may increase the potential for soil contamination. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact on water quality. | 0 | Car parking does not impact on water quality. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open | One of the actions emanating from this objective is to *Minimise the negative impacts of parking on streetscape*. This will have a long-term positive impact on the landscape character of the City, especially in conservation areas and other areas noted for their local distinctiveness. This is preferable to the existing scenario where an abundance of parking in certain areas detracts from the landscape. | + | Parking detracts from the landscape setting in some areas of the City. | - |

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| | | space and green space in the City? | | | | |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Prioritising the available parking spaces for short stay retail, leisure and business trips will have a long-term positive impact on the economy as such trips are most likely to have economic benefits, particularly in terms of maintaining the retail viability of the City Centre and neighbourhood centres. Efforts to take into account the needs of the mobility impaired and disabled and to ensure blue badge parking spaces are being used responsibly will promote social inclusion by ensuring key destinations and services are accessible to the disabled travelling by car. This is preferable to existing parking policies which often encourage driving and hence contribute to congestion. | ++ | Current parking availability and pricing often make driving a more attractive mode of transport than other options, with long-term negative impacts on the population through contributing to congestion and unreliable journey times. Abuse of the blue badge parking scheme limits the number of parking spaces available to those with a genuine need, contributing to social exclusion. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Encouraging short trips in the City Centre to be undertaken by active travel will increase levels of physical activity, reduce pollution and improve air quality, with long-term positive impacts on health. An adequate supply of short-stay parking spaces near healthcare facilities will improve access to such facilities, especially for those finding it difficult to walk, cycle or use public transport. This is preferable to existing parking policies which often discourage active travel. | ++ | Current parking availability and pricing often make driving an attractive mode of transport than active modes, such as walking and cycling, with long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Minimising the negative impacts of parking on streetscape will have long-term positive benefits for cultural heritage, especially in conservation areas and areas of historical/cultural interest. An adequate supply of appropriate parking in the vicinity of such sites will improve access to them. This is preferable to the alternative scenario where no effort is made to address parking's impacts on cultural heritage. | + | An abundance of vehicles and parked cars in and around important sites can have negative impacts on the setting of such sites. | - |

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| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | An improved car parking regime will improve conditions for all, providing an adequate supply of parking spaces for those with most need, and allowing available spaces to be used efficiently and economically. | + | Car parking spaces are not always used to their best advantage, with a negative impact on material assets. | - |

## Objective 14: Community and Demand Responsive Transport - To continue to work with Partners to deliver Demand Responsive Transport for the benefit of the public

**Actions:**

- Continue to provide DRT services through the Council.
- Continue to support groups looking to develop Community Transport schemes.
- Work with Partners to deliver a Social Transport Action Plan.
- Work with Partners through the Health and Transport Action Plan and Social Transport Working Group with the ultimate aim of pulling together Council services with those of the voluntary and health sectors into one centralised and integrated booking system.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This has a minimal impact on biodiversity. | 0 | This has a minimal impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An increase/improvement in community and demand responsive transport could encourage travellers to use such services in preference to the private car. A decline in private car usage would lead to a decline in emissions, with a long-term positive impact on air quality. This is preferable to a scenario with no services, where emissions increase. | + | Failure to provide such service could see users or their carers/families using the car to access key services, thus increasing emissions and contributing to poor air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | An increase/improvement in community and demand responsive transport could encourage travellers to use such services in preference to the private car. A decline in private car usage would lead to a decline in pollution and emissions, with a long-term positive impact on climate change. This is preferable to a scenario with no services, where emissions increase. | + | Failure to provide such service could see users or their carers/families using the car to access key services, thus increasing emissions and contributing to climate change. | - |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Any improvements to air quality resulting from this objective could also have benefits for soil through less air pollution. | + | Any disbenefits to air quality resulting from an increase in traffic could negatively impact on soil through an increase in air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This will not impact upon water quality. | 0 | There are unlikely to be significant impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This will not impact upon the landscape. | 0 | There are unlikely to be significant impacts on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | Increases/improvements to community and demand responsive transport promote social inclusion by providing a means of transport for those unable to use more mainstream transport modes, particularly the elderly and disabled. This will improve accessibility to essential services, such as education, healthcare and shopping, with a long-term positive impact on the population. This is preferable to the alternative scenario where a lack of services contributes to social exclusion. | ++ | Not having community or demand responsive transport services could see those who are unable to use mainstream transport struggle to get around and thus suffering social exclusion, with long-term negative impacts. | - |

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| | | needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Increases/improvements to community and demand responsive transport will provide a safe and secure means of travel for those unable to use more conventional modes of transport. Such services will also improve access to healthcare and open space and allow vulnerable members of society to remain mobile and take a more active role in community life, providing mental health benefits. Services may also result in a decrease in private vehicle traffic, resulting in less harmful emissions and pollution. This will therefore have a long-term positive impact on health. This option therefore performs far more favourable than the alternative, for which a strong negative impact is predicted. | ++ | Not having community or demand responsive transport services could see those who are unable to use mainstream transport struggle to get around and thus suffering social exclusion. As well as preventing these people from attending medical appointments, lack of mobility could also contribute to poor mental health. Harmful emissions could also increase from users using private rather than public transport. There could therefore be long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This is not anticipated to impact upon cultural heritage. | 0 | This is not anticipated to impact upon cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | An increase in, and improvement to, community and demand responsive transport systems will increase the range of transport options available to our citizens, especially the more vulnerable members of society, providing an additional sustainable way of getting about. | + | Not having such services would deprive some sectors of the population of a valuable asset. | - |

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| | opportunities and rights. | | | | | |

## Objective 15: Taxis and Private Hire Cars - To work in partnership with the taxi and private car trade to ensure an adequate supply of safe, clean and accessible vehicles

**Actions:**

- To continue to improve the safety of School and Social Work Transport by implementing Best Practice procedures stemming from Transport Guidelines issued by the Department fro Transport and Transport Scotland
- To continue to monitor the cap on taxi licences and modify according to demand.
- To comply with the Equality Act 2010 and ensure all taxis are wheelchair accessible by summer 2017.
- To investigate potential for increasing the number of ultra low or low emission vehicles onto the taxi and PHC fleets.
- To ensure the continued successful operation of the Night Time Transport Zone with associated marshals.
- To continue to monitor taxi supply at Aberdeen station and Aberdeen Airport.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective will have a minimal impact on biodiversity. | 0 | This has a minimal impact on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An increased number of low emission taxis/PHCs on Aberdeen's streets will lead to a decline in pollution and emissions, with a long-term positive impact on air quality. This is preferable to the alternative scenario which does not take emissions into account. | + | Not exploring options to increase ultra and low emission vehicles result in a negative impact on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | An increased number of low emission taxis/PHCs on Aberdeen's streets will lead to a decline in pollution and emissions, with a long-term positive impact on climate change. This is preferable to the alternative scenario which does not take emissions into account. | + | Not exploring options to increase ultra and low emission vehicles result in a negative impact on climatic factors. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Improvements to air quality resulting from this objective could protect soil from the effects of air pollution. This is preferable to the alternative scenario which has a neutral impact. | + | This does not impact upon soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact upon the landscape. | 0 | This does not impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | An appropriate volume of taxis/PHCs operating in the City will contribute towards social inclusion by providing a means of reaching destinations by car for those without access to a car. Ensuring all taxis/PHCs are wheelchair accessible will allow a greater usage by wheelchair users, with accessibility and social inclusion benefits. This will have a long-term positive impact on the population and is preferable to the alternative situation where many vehicles remain inaccessible to wheelchair users. | ++ | A transport system inaccessible to wheelchair users could contribute to social exclusion, with long-term negative impacts. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | More low emission vehicles will reduce pollution and improve air quality in the City, with long-term health benefits for the population. This is preferable to the existing scenario which does not take emissions into account. Continued operation of the Night Time Transport Zone will ensure a safe and secure transport system for those travelling by taxis and public transport late at night. | ++ | This is unlikely to have a significant impact on health. | 0 |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This objective is not anticipated to impact upon cultural heritage. | 0 | There will be no impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | An appropriate number of environmentally-friendly and accessible taxis/PHCs will improve transport options, especially sustainable and accessible modes, available to the people of Aberdeen. | + | There will be no impact on material assets. | 0 |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 16: Coaches - To highlight appropriate pick up, drop off and waiting zones for tourist coaches

**Actions:**

- To continue to promote awareness amongst coach operators for appropriate pick up, drop off and waiting areas.
- To review pick up and drop off points in line with any pedestrianisation schemes.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective is not anticipated to impact upon biodiversity. | 0 | This does not impact upon biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Removal of coaches, especially idling coaches, from the City Centre will reduce pollution and emissions, thus improving air quality in an Air Quality Management Area. Directing coaches to appropriate pick-up, drop-off and waiting areas will also remove the likelihood of such vehicles causing obstruction and congestion in key area, which can increase emissions. This objective will therefore have a long-term positive impact on air quality, and performs better than the alternative scenario where no action is taken. | + | Coaches idling in the City Centre can contribute towards poor air quality in this AQMA, as can congestion resulting from inappropriately-parked vehicles, with long-term negative impacts. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Directing coaches to appropriate pick-up, drop-off and waiting areas will remove the likelihood of such vehicles causing obstruction and congestion in key area, which can increase emissions. This objective will therefore have a long-term positive impact on climate change, and performs better than the alternative scenario where no action is taken. | + | Coaches idling in the City Centre, and congestion resulting from inappropriately-parked vehicles, can increase emissions with long-term negative impacts on climactic factors. | - |
| Soil | To reduce contamination, safeguard soil quantity and | Cause soil sealing and compaction? | Improvements to air quality resulting from this objective could protect soil from the effects of air pollution. This performs better than the alternative | + | Air quality disbenefits can negatively impact on soil via air pollution. | - |

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| | quality. | Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | scenario which ahs a negative impact. | | | |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact upon water. | 0 | This does not impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact upon the landscape. | 0 | This does not impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Coaches using designated areas will remove the likelihood of them obstructing traffic when picking up, dropping off and waiting in inappropriate areas which can lead to congestion. This will therefore have a long-term positive impact on the population, and is preferable to the alternative scenario which is judged to have negative impacts. | + | Failing to do this could result in inappropriately parked vehicles contributing to congestions, with negative impacts. | - |
| Human Health | To protect and improve | Facilitate and/or encourage active travel? | Coaches using designated areas will remove the likelihood of them obstructing traffic when picking up, | + | Inappropriately parked vehicles may obstruct traffic and encourage other | - |

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| | human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | dropping off and waiting in appropriate area. This will reduce congestion and resulting air quality issues which will have positive impacts on human health. This could also remove the likelihood of drivers undertaking risky manoeuvres with obvious safety benefits. This is preferable to the alternative scenario which is judged to have negative impacts. | | drivers to undertake risky manoeuvres, thus increasing the likelihood of traffic accidents and injuries, with long-term negative impacts on health. Emissions may also increase from congestion and idling vehicles. | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Directing coaches to appropriate stopping and waiting areas will reduce the likelihood of parked vehicles detracting from areas of cultural/historical significance, with a short-term positive impact on cultural heritage. This is preferable to the alternative scenario which is judged to have negative impacts. | + | Parked vehicles may detract from areas of cultural/historical significance, with a short-term negative impacts on cultural heritage. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This is unlikely to impact upon material assets. | 0 | This is unlikely to impact upon material assets. | 0 |

## Objective 17: Traffic Management and Road Safety - To work towards a road network where all users are safe from the risk of being killed or seriously injured, and the injury rate is much reduced

**Actions:**

- To consider additional 20mph zones.
- To continue to work with Partners to deliver the Joint Road Safety Plan and ensure that the current low levels of road fatalities in Aberdeen are maintained.
- To continue to work with Partners at the Community Road Safety Partnership to prepare an Action Plan and deliver improvements to the emerging trends and targets for the Road Safety Working Group.
- To continue to implement a combination of encouragement, enforcement, education and engineering measures to improve road safety and reduce casualty levels for all groups across the City.
- To continue to implement traffic calming schemes in order to reduce speeds aimed at minimising casualties and will ensure that such schemes reduce perceptions of danger for both pedestrians and cyclists.
- To continue to undertake an annual collision scan to identify hotspots or routes giving concern and from that do more in-depth analysis of all categories of accidents and users, and then determine whether traffic management interventions are appropriate

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This is not anticipated to impact upon biodiversity. | 0 | This is not anticipated to impact upon biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Reducing speeds can increase emissions, with long-term negative impacts on air quality. At the same time, reduced speeds can lead to an improved pedestrian and cycling environment which could result in increased usage of these modes over the private car. This would have long-term benefits for air quality. Overall, this is preferable to the alternative scenario which has a neutral impact. | +/- | This is not anticipated to impact upon air quality. | 0 |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by | Reducing speeds can lead to an increase in emissions, with long-term negative impacts on climate change. At the same time, reduced speeds can lead to an improved pedestrian and cycling environment which could result in increased usage of these modes over the private car. This would have long-term benefits for climate change. Overall, this is preferable to the alternative scenario which has a neutral impact. | +/- | This is not anticipated to impact upon climactic factors. | 0 |

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| | | motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements can reduce the impacts of air pollution on soil. Equally, a worsening of air quality will have negative impacts on soil. | +/- | This is not anticipated to impact upon soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is not anticipated to impact upon water. | 0 | This is not anticipated to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | An increase in traffic management/speed reduction features could detract from and/or harm the landscape setting of certain areas of the City, with a long-term negative impact. | - | This is not anticipated to impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially | A safe travelling environment would contribute towards social inclusion by enabling certain sectors of the population, who currently perceive the transport environment as unsafe, to travel to key destinations without fear of danger. This is preferable to the alternative scenario which contributes to social exclusion. | + | An unsafe travelling environment may lead to social exclusion, with some groups unwilling to travel for fear of injury. This could have long-term negative impacts on the population. | - |

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| | | for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improvements to road safety will have a long-term positive impact on human health by reducing the likelihood of casualties and fatalities arising from road accidents and collisions. Improved conditions for pedestrians and cyclists will encourage greater usage of these healthy modes of transport which encourage physical activity, contributing to healthier lifestyles. Reduced speeds could, however, lead to an increase in emissions which can have long-term negative impacts on human health. Overall, this is preferable to the alternative scenario which could lead to a very unsafe travelling environment. | ++/- | An unsafe travelling environment will increase the likelihood of accident and injuries suffered by the travelling public. People may be less willing to walk or cycle if they perceive these modes as unsafe. There could therefore be long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An increase in traffic management and speed reduction features in conservation areas and around sites of historical/cultural significance could undermine the visual quality and setting of such sites, with long-term negative impacts. | - | This is unlikely to impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of | A safer travelling environment will contribute to the development of a 21st century transport system, meeting the needs of all those travelling within and through Aberdeen. | + | This could lead to our material assets becoming increasingly unsafe to use. | + |

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| | existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | way? | | | | |

## Objective 18: Enforcement - To ensure the Council manages and enforces the road network to ensure safety and effectiveness for the benefit of all users.

**Actions:**

- Bus lane enforcement cameras will continue to be managed to prosecute unauthorised drivers who enter bus lanes during operating hours. As per the Scottish Government legislation the Council will continue to invest any revenue into delivering LTS objectives and actions.
- To ensure greater enforcement the Council will adhere to urban clearway principles in sensitive locations with a strict 'no stopping regime' except for buses at certain times of the day.
- ACC will continue to address indiscriminate parking outside schools with Police Scotland and will work with Parent Teacher Associations to identify where traffic management solutions could improve safety around schools
- ACC will support the implementation of speed cameras where appropriate to improve levels of safety. The Council will also support the use of average speed cameras where appropriate.
- To increase compliance with disabled parking arrangements and reduce fraudulent use of 'blue badges' by the creation of a temporary blue badge fraud investigation service.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective is not anticipated to impact upon biodiversity. | 0 | This does not impact upon biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Improved enforcement of traffic and parking violations will aid the flow of traffic, resulting in fewer emissions arising from congestion. This will have long-term positive impacts on air quality. This is preferable to the alternative scenario, for which negative impacts are anticipated. | + | Failing to enforce traffic and parking violations could impede the flow of traffic, resulting in increased emissions arising from congestion. This could have long-term negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | Improved enforcement of traffic and parking violations will aid the flow of traffic, resulting in fewer emissions arising from congestion. This will have long-term positive impacts on climate change. This is preferable to the alternative scenario, for which negative impacts are anticipated. | + | Failing to enforce traffic and parking violations could impede the flow of traffic, resulting in increased emissions arising from congestion. This could have long-term negative impacts on climate change. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements can reduce the impacts of air pollution on soil. This is preferable to the alternative scenario, for which negative impacts are anticipated. | + | Air quality disbenefits can exacerbate the impacts of air pollution on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact upon water. | 0 | This does not impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact upon the landscape. | 0 | This does not impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Improved enforcement of violations will reduce congestion and improve traffic flow, allowing for greater journey time reliability and the more efficient movement of people and goods. Better enforcement of blue badge space violations in particular will enable better usage of these spaces by those who really need them, resulting in social inclusion and accessibility benefits for disabled travellers. This objective will therefore have a long-term positive impact on the population. This is preferable to the alternative | ++ | Failing to adequately enforce violations could result in congestion and the impeded flow of traffic, preventing the efficient movement of people and goods. Failure to adequately enforce blue badge violations could, prevent these spaces being used by most in need, thus contributing to social inclusion. This will therefore have long-term negative impacts on the population. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | scenario, for which negative impacts are anticipated. | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved enforcement of violations will reduce emissions and pollution resulting from congestion, with long-term positive implications for human health. This is preferable to the alternative scenario, for which negative impacts are anticipated. | + | Failure to enforce violations could result in increases in emissions and pollution resulting from congestion, with long-term negative implications for human health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This objective is not anticipated to impact upon cultural heritage. | 0 | This does not impact upon cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This allows our assets to be used in as efficient a manner as possible. | + | This prevents the efficient use of our assets. | - |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 19: Air Quality - To improve air quality across the City, so that the existing Air Quality Management Areas are revoked and no further Air Quality Management Areas are declared

**Actions:**

- Ensure that Air Quality Action Plan measures and Local Transport Strategy aims, outcomes, objectives and actions are aligned.
- Improve air quality throughout the City, particularly within the AQMAs and investigate and implement measures designed to reduce air pollution (for example low emission zones, emission based parking charges, alternatively fuelled vehicles).
- To require mitigation measures for new schemes, where additional vehicle trips will impact on air quality.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Improved air quality will have a long-term positive impact on biodiversity, especially for those species currently suffering as a result of poor air quality. This is preferable to the alternative scenario where air quality continues to negatively impact on biodiversity. | + | Failing to address air quality could have long-term negative impacts on nay species suffering as a result of poor air quality. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | This objective specifically seeks to improve air quality by addressing the contribution of transport and requiring mitigation measures for new schemes that will have negative air quality implications. This is obviously preferable to a scenario where air quality is not addressed. | ++ | Not addressing air quality will obviously have long-term negative impacts. | -- |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | Measures to improve air quality are likely to reduce transport's contribution to climate change, with a long-term positive impact. This is obviously preferable to a scenario where air quality is not addressed. | + | Not addressing air quality may have knock-on negative impacts on the climate through a failure to tackle emissions . | - |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements can reduce the impacts of air pollution on soil. This is preferable to a scenario where air quality is not addressed and negative impacts continue. | + | Not addressing air quality could exacerbate the negative impacts of air pollution on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact upon water. | 0 | This does not impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact upon the landscape. | 0 | This does not impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | Improved air quality will have obvious benefits in terms of a healthier population with increased life expectancy. There may also be economic benefits in terms of ensuring Aberdeen remains an attractive place to live, visit and do business. This is preferable to a situation where air quality is not addressed and conditions worsen. | ++ | Failure to address air quality could see conditions worsen in Aberdeen – the ultimate outcome of this is that Aberdeen is no longer a pleasant place to live, visit and do business, and that life expectancy reduces as a result of environmental conditions. | -- |

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| | | needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved air quality will have significant long-term positive impacts on human health by reducing emissions and pollutions inhaled by the people of Aberdeen, thus reducing a number of respiratory conditions caused by poor air quality and increasing life expectancy. This is preferable to a situation where air quality is not addressed and conditions worsen. | ++ | Failure to address air quality could result in conditions worsening, potentially leading to an increase in illnesses and fatalities resulting from poor air and a reduced life expectancy. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Improved air quality will have long-term positive impacts on cultural heritage by reducing the impacts of air pollution on historical buildings and sites. This is preferable to a situation where air quality is not addressed and continues to contribute to the deterioration of buildings and monuments. | ++ | Failure to address air quality could result in conditions worsening, with long-term negative impacts on buildings and monuments at risk from air pollution. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | A significant improvement in air quality will contribute to a much more pleasant environment in which to live, work and play. | ++ | Failing to address air quality could see long-term environmental degradation and the erosion of our material assets. | - |

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| | opportunities and rights. | | | | | |

## Objective 20: Noise - To reduce transport noise within Aberdeen City

**Actions:**

- To identify Noise Management Areas and Quiet Areas within Aberdeen.
- To implement the Noise Action Plan.
- To require mitigation measures for new schemes, with respect to managing transportation noise.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Reducing transport-related noise in the City will have a long-term positive impact on biodiversity, particularly on those species and habitats that are vulnerable to disturbance by noise. Mitigation activities for transport schemes in particular have the potential to protect biodiversity from noise. This is preferable to the alternative scenario where biodiversity is not protected from noise. | ++ | Failing to address transport noise could result in long-term negative impacts to species vulnerable to the effects of noise. | -- |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Actions to tackle transport noise, especially from road traffic, are likely to have positive indirect impacts on air quality. | + | Failing to tackle noise, especially from road transport, could have indirect negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Actions to tackle transport noise, especially from road traffic, are likely to have positive indirect impacts on emissions and climatic factors. | + | Failing to tackle noise, especially from road transport, could have indirect negative impacts on emissions and climatic factors.. | - |

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| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | This objective is not anticipated to impact on soil. | 0 | This does not impact on soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact on water. | 0 | This does not impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact on the landscape. | 0 | This does not impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | This objective is not anticipated to impact on economic growth or social inclusion. | 0 | This does not impact on economic growth or social inclusion. | 0 |

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| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A reduction in noise will have a long-term positive impact on human health as noise is known to contribute towards or exacerbate sleeplessness, irritation and certain mental health conditions. Mitigation measures from transport schemes in particular will reduce the impact of noise on human health. This is preferable to the alternative scenario where health is not protected from noise. | ++ | Failing to address noise could see the negative impacts of noise continue to effect large parts of the population with long-term negative disbenefits. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An increased commitment to reducing transport noise will significantly improve the setting of conservation areas or cultural/historical sites currently affected by noise. This is preferable to the alternative scenario where no protection from noise is offered. | + | Failing to address noise could see historical sites continue to be affected by transport noise, detracting from the experience of being in or around such sites, with long-tem negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This is unlikely to impact on material assets. | 0 | This is unlikely to impact on material assets. | 0 |

## SUSTAINABLE DEVELOPMENT AND TRAVEL

### Objective 21: Land Use Planning - To promote and enable development that reduces the need to travel, minimises reliance on the private car and facilitates and encourages walking and cycling for everyday trips

**Actions:**

- Ensure that new developments are accessible by a range of modes of transport and prioritise access and permeability by sustainable modes.
- Ensure that all new developments demonstrate that sufficient measures have been taken to minimise traffic generation through Transport Assessments, Travel Plans and Travel Packs.
- Require developers to contribute towards appropriate off-site transport measures, particularly where new development is adding further pressure to the transport network.
- Ensure maximum car parking standards are adhered to in all new developments.
- Support the implementation of Home Zones and low/no car housing where appropriate.
- Support development of brownfield sites and mixed use communities in recognition of their ability to reduce travel distances.
- In the case of several individual developments taking place in an area over a period of years, use Masterplans to ensure appropriate infrastructure and services, including transport, are provided for the whole development area.
- Ensure the vision, aims and objectives of the refreshed LTS are reflected in the content of the next Aberdeen Local Development Plan, due to be published in draft form in February 2015.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Encouraging sustainable travel to new developments will have long-term positive impacts on biodiversity through reducing land take for transport, reducing pollution and minimising disruption to habitats and species resulting from transport. Ensuring synchronicity between Transport and Land Use strategies should ensure biodiversity needs play a more prominent role in decision-making than they do at present. This is preferable to the alternative scenario where biodiversity is not offered protection from transport development. | ++ | Not encouraging and facilitating sustainable travel to new developments could see increased land take from transport and increased pollution hence disruption to habitats and species, with long-term negative impacts. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Land use planning can bring long-term positive effects to air quality. It encourages developments to be planned in such a way that the need to travel is reduced and encourages travel by the most sustainable modes by prioritising access to these in the design. Ensuring synchronicity between Transport and Land Use strategies should ensure air quality needs play a more prominent role in decision-making than it does at present. This is preferable to the alternative scenario where air quality is not considered in the development process and conditions worsen. | ++ | Not encouraging and facilitating sustainable travel to new developments could see a worsening of air quality as car travel becomes the main mode of transport to such sites, with long-term negative impacts. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the | Promote sustainable and active travel?<br><br>Promote the use of clean | Land use planning can bring long-term positive effects. It encourages developments to be planned in such a way that the need to travel is reduced and encourages travel by the most sustainable modes by prioritising | ++ | Not encouraging and facilitating sustainable travel to new developments could contribute to climate change as car travel becomes the main mode of | - |

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| | emissions of greenhouse gases. | fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | access to these in the design. Ensuring synchronicity between Transport and Land Use strategies should ensure climactic factors play a more prominent role in decision-making than it does at present. This is preferable to the alternative scenario where transport is not considered in the development process and conditions worsen. | | transport to such sites, with long-term negative impacts. | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Supporting development on brownfield sites has a long-term positive impact on soil quantity and quality. Air quality improvements can reduce the impacts of air pollution on soil. This is preferable to the alternative scenario where transport is not considered in the development process and conditions worsen. | + | Any deterioration in air quality can have knock-on negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Supporting the development of brownfield sites will minimise the impact of new development on watercourses. This is preferable to the alternative scenario which has a neutral impact. | + | This is not anticipated to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Development of brownfield sites can reduce loss of landscape features and areas of open space. Developers are also encouraged to consider the landscape as an integral part of masterplanning. This is preferable to the alternative scenario where transport is not considered in the development process. | + | Failure to cater for sustainable travel in the development process could see an increased requirement for new roads and bridges to accompany new development with long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability? | Land use planning can bring long-term positive effects to the population. It encourages developments to be planned in such a way that the need to travel is reduced and encourages travel by the most sustainable modes by prioritising access to these in | + | Failure to properly consider transport in the land use planning process can result in developments that are centred around the car and are difficult to access by other modes. This can have a long-term | - |

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| | | Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | the design. This means that access to, from and around such developments is possible by a range of modes, thus making travel available to a large proportion of the population. This is preferable to the alternative scenario which caters largely for car drivers. | | negative on the population, especially non-car drivers. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Land use planning can bring long-term positive effects to health. It encourages developments to be planned in such a way that travel by the most sustainable modes is the easiest, bringing benefits to air quality, noise and encouraging people to stay active. Ensuring synchronicity between Transport and Land Use strategies should ensure health impacts play a more prominent role in decision-making than they do at present. This is preferable to the alternative scenario which caters largely for car drivers. | ++ | Failure to properly consider transport in the land use planning process can result in developments that are centred around the car and are difficult to access by other modes. This can result in the increase of harmful emissions and reduce the likelihood of people walking and cycling, with long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This is unlikely to impact on cultural heritage. | 0 | This is unlikely to impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources? | Land use planning can bring long term positive benefits to material assets. It encourages such assets to be planned in the most effective way to give the largest benefit to the and helps ensure that facilities are planned in a joined up and easily accessible way. | + | Failure to consider transport and land use planning in tandem can result in the development of sub-standard assets. | - |

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| | use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | | | | |

## Objective 22: Travel Plans - To ensure that the transport impacts of existing and new developments are is minimised by requiring workplaces, schools and developers to prepare Travel Plans and, where appropriate, Travel Packs for all sites in the City

**Actions:**

- Continue to require all significant developments in the City to be accompanied by a Travel Plan to demonstrate how the impact of that development on the surrounding transport network will be minimised.
- Continue to require Residential Travel Packs to be issued to residents of new housing developments in the City.
- Encourage the widespread implementation of voluntary Travel Plans for schools, housing developments and workplaces.
- Continue to work with partners in Getabout to share information and best practice in relation to Travel Plans and sustainable transport initiatives.
- Revise the Council's own Travel Plan as an example of best practice in the City.
- Promote and facilitate 'smarter' working and measures to reduce the need to travel, including promotion of remote and flexible working practices, the use of video- and web-conferencing technologies and the increased implementation of Wi-Fi facilities across the City.
- Identify resources to ensure that Travel Plans are monitored and enforced to maintain momentum and ensure effectiveness beyond the initial implementation of a development.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Travel planning brings long term positive impacts to biodiversity by discouraging trips by the private car. This can reduce the size of car parks required for new developments and improve air quality, both of which are beneficial for flora and fauna. This is preferable to the alternative scenario which could see a worsening of conditions for biodiversity. | + | Not engaging with travel planning could result in an increase in travel by private car, with negative impacts on biodiversity from land take (for car parking and other infrastructure) and increased pollution. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Travel planning brings long term benefits to air quality by encouraging travel by the most sustainable means and discouraging car trips, hence reducing emissions. This is preferable to the alternative scenario which could see a worsening of air quality. | ++ | Not engaging with travel planning could result in an increase in travel by private car, with negative impacts on air quality from increasing emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by | Travel planning brings long term benefits to climatic factors by encouraging travel by the most sustainable means and discouraging car trips, thus reducing emissions of greenhouse gases. This is preferable to the alternative scenario which could see a worsening of conditions. | ++ | Not engaging with travel planning could result in an increase in travel by private car, with negative impacts arising from increasing emissions. | - |

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| | | motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Travel planning has long term positive effects on soil. It aims to minimise the impact that a development has on its surroundings by discouraging trips by the private car, therefore can reduce the size of car parks required for new developments thus reducing land take. Any air quality benefits arising from this objective will also benefit soil by reducing air pollution. This is preferable to the alternative scenario which could see a worsening of conditions. | + | Not engaging with travel planning could have long-term negative impacts on soil arising from increased land take for transport to accompany new development. Air quality disbenefits may also negatively impact on soil as a result of increased air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Travel planning has long term positive effects on the landscape. It aims to minimise the impact that a development has on its surroundings by discouraging trips by the private car. Therefore it can help reduce the amount of land given over to transport, such as car parks. This is preferable to the alternative scenario which could see a worsening of conditions. | + | Not engaging with travel planning could necessitate additional construction to accompany new development (in the form of roads and car parks), the presence of which could have long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially | Travel Planning brings long term positive benefits to the population. By encouraging travel by the most sustainable modes, it can reduce congestion and improve journey time reliability. By raising awareness of and facilitating travel by non-car modes, it can promote social inclusion, ensuring sites are accessible by a variety of modes of transport. This is preferable to the alternative scenario which could see a worsening | ++ | Not engaging with travel planning can result in an increasing number of trips being undertaken by private car, thus contributing to congestion and reduced journey time reliability. It can also result in car-dependant developments that are difficult to access by those unable to use a private car. There could therefore be | - |

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| | | for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | of congestion and social inclusion. | | long-term negative impacts on the population. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Travel Planning has long-term positive impacts on health. It encourages travel by the most sustainable modes so helps reduce emissions and encourages people to engage with active travel. This is preferable to the alternative scenario which could see a worsening of conditions with regards to health.. | ++ | Not engaging with travel planning can result in an increasing number of trips being undertaken by private car at the expense of healthy modes of transport such as walking and cycling. As well as encouraging sedentary behaviour, increased car traffic can result in an increase of emissions that are damaging to human health. This therefore has long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Travel planning can have minor positive impacts on cultural heritage by reducing air pollution from road traffic that can be damaging to buildings and monuments. This is preferable to the alternative scenario where poor air continue to have negative impacts. | + | Failure to engage with travel planning can bring minor long-term negative impacts on cultural heritage, resulting in continued damage to buildings caused by air pollution resulting from road traffic. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of | Travel planning can bring long term benefits to material assets, by encouraging responsible use of the transport network. | + | Failure to engage with travel planning can result in the long-term misuse or overuse of our material assets, particularly roads, thus reducing their lifespan. | - |

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| | existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | way? | | | | |

## Objective 23: Car Sharing - To continue to promote and facilitate car sharing as a sustainable transport option

**Actions**:

- Continue to promote the benefits of car sharing and the regional car sharing database.
- Encourage employers to join the car sharing scheme or set up their own site-specific schemes as an important element of an effective Travel Plan.
- Encourage workplaces to introduce preferential car parking spaces for car sharers and look to introduce a similar scheme in the City Centre.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in car sharing could have long-term positive impacts on biodiversity through reducing traffic, thus resulting in less run-off from roads, pollution, less pollution, noise, artificial light etc., all of which can be disruptive or damaging to certain species. This is preferable to the alternative scenario where the impacts on biodiversity could worsen. | + | Not promoting and encouraging car sharing could result in an increase in traffic resulting from more single occupancy vehicle trips being undertaken. This could have long-term negative impacts on biodiversity, through increased run-off from roads, more pollution, noise, artificial light etc., all of which can be disruptive or damaging to certain species. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Promoting and encouraging car sharing should have long term benefits for air quality through reducing single occupancy car journeys and thus emissions This is preferable to the alternative scenario where the impacts on air quality could worsen. | + | Not promoting and encouraging car sharing could result in an increase in traffic resulting from more single occupancy vehicle trips being undertaken. This would have a long-term negative impact on air quality through increasing emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Promoting and encouraging car sharing should bring long term benefits through reducing single occupancy car journeys and thus emissions. This is preferable to the alternative scenario where the impacts on air quality could worsen. | + | Not promoting and encouraging car sharing could result in an increase in traffic resulting from more single occupancy vehicle trips being undertaken. This would have a long-term negative impact on climactic factors through increasing emissions. | - |

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| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective can reduce the impacts of air pollution on soil. This is preferable to the alternative scenario where the impacts on soil could worsen. | + | Increased air pollution could result from traffic growth should car sharing not be encouraged. This could have a long-term negative impact on soil. | |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Minor benefits might accrue from fewer cars on our roads. This is preferable to the alternative scenario where traffic could continue to increase. | + | Minor disbenefits might accrue from the continued increase in the number of cars on our roads. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | The promotion of car sharing should bring long term benefits to the population. Car sharing reduces single occupancy car trips, thus reducing congestion and allowing the transport system to operate more efficiently. This is preferable to the alternative scenario which could see an increase in congestion. | + | Not encouraging car sharing could result in the growth of single-occupancy car trips on the network, leading to more congestion and unreliable journey times for travellers. | - |

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| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | The promotion of car sharing should bring long term benefits to health as fewer cars on the road means fewer harmful emissions and reduces the likelihood of accidents. This is preferable to the alternative scenario which could see transport's impact on health worsen. | + | Not encouraging car sharing could result in the growth of single-occupancy car trips on the network, leading to an increase in harmful emissions, with long-term negative impacts on health. | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Fewer cars around historic sites could result in less damage to such sites from air pollution and improve the setting of such sites, with long-term positive impacts. This is preferable to the alternative scenario where transport continues to negatively impact on cultural heritage. | 0 | An increase in traffic around important sites could contribute to their deterioration as a result of increasing air pollution and detract from the setting of such sites, with long-term negative impacts. | – |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | The promotion of car sharing should bring positive long term benefits, helping make more efficient use of the transport system. | + | This encourages the inefficient use of our transport system. | - |

## Objective 24: Car Clubs - To continue to facilitate and promote the Car Club in order to provide transport choice without necessitating individual car ownership

**Actions:**

- Encourage the development of the Car Club in new locations and developments as part of general rollout and through the planning process.
- Continue to support the Car Club by installation of new bays and associated infrastructure.
- Continue to lead by example and ensure that Council staff members are utilising the Car Club rather than grey fleet in order to reduce emissions, congestion and reliance on the private car.
- Continue to promote the Car Club as a feasible alternative to private car ownership.
- Continue to support the Car Club in their roll out of Ultra Low Emission Vehicles (ULEVs).

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This is not anticipated to have significant impacts on biodiversity | 0 | This is not anticipated to have significant impacts on biodiversity | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | The facilitation and promotion of the car club will have a positive impact on air quality. It encourages car free developments; can lead to people giving up their own private cars; members make more journeys by sustainable modes; and the car club has a policy of using the lowest emitting cars. This is preferable to the alternative scenario where air quality may continue to worsen. | ++ | Not promoting and supporting the car club could result in an increase in private vehicles on our roads, thus increasing emissions, with a long-term negative impact on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | The continued facilitation and promotion of the car club will have a positive impact on greenhouse gas emissions. It encourages car free developments; can lead to people giving up their own private cars; members make more journeys by sustainable modes; and the car club has a policy of using the lowest emitting cars. This is preferable to the alternative scenario where emissions may continue to increase. | ++ | Not promoting and supporting the car club could result in an increase in private vehicles on our roads, thus increasing emissions, with a long-term negative impact . | - |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective can reduce the impacts of air pollution on soil. This is preferable to the alternative scenario where soil quality may worsen. | + | This may have long-term negative impacts on soil through increased air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The continued facilitation and promotion of the car club is not anticipated to impact on landscape. | 0 | This is unlikely to significantly impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | The continued facilitation and promotion of the car club brings long-term positive benefits to the population. It promotes social inclusion by giving a greater range of the population access to a car for essential journeys. It also helps reduce congestion. This is preferable to the alternative scenario which fails to tackle accessibility and congestion problems. | ++ | Failing to promote and support the Car Club could exacerbate social exclusion as Car Clubs enable access to key destinations (which may only be accessible by car) to those who do not own their own cars. Car Clubs also play a role in addressing traffic growth and congestion, allowing the more efficient movement of people and freight – problems may increase therefore without the continued operation and expansion of the Car Club. There will therefore be a long-term negative impact on the | - |

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| | | needs? | | | population. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Car Club availability and membership has been demonstrated to reduce car ownership. If people do not own cars, they are more likely to undertake everyday journeys by walking, cycling and public transport. This will have significant long-term positive impacts on human health by encouraging more active lifestyles and reducing the negative health impacts of car use resulting from emissions and pollution. The ability to use a car without the burden of ownership will also improve accessibility, allowing those without a car to access areas of open space and healthcare facilities. This is preferable to the alternative scenario which could see negative impacts on health resulting. | + | Failing to promote and support the Car Club could result in declining awareness and membership, meaning people continue to own and operate their own cars. As well as resulting in fewer journeys undertaken by walking and cycling, increased private car usage could result in a growth in harmful emissions released into the air. Not having the accessibility offered by the presence of a Car Club could restrict people's ability to reach healthcare facilities or opportunities for physical activity if such people do not have access to their own car or alternative forms of transport. There will therefore be a long-term negative impact on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Car Clubs can play a part in improving access to sites of historic and/or cultural interest so have long-term positive impacts. This is preferable to the alternative scenario where impacts are likely to be negative. | + | The loss of or lack of expansion of the Car Club could make certain sites inaccessible to those without access to a private car, with long term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Car Clubs in Aberdeen are one element of a fit for purpose transport system that meets the needs of the people of Aberdeen and offers a mode of transport that is often more sustainable than individual car ownership. | + | Not supporting or promoting the Car Club could result in the deterioration of a significant asset. | - |

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| | opportunities and rights. | | | | | |

## Objective 25: Ultra Low Emission Vehicles - To facilitate the uptake of ultra-low and low emission vehicles as a contribution towards improving air quality in the City.

**Actions:**

- Continue to develop Aberdeen's Electric Vehicle Charging Network and Hydrogen Refuelling Station Network with Partners.
- Encourage installation of EV infrastructure in new developments via Planning policies/ process.
- Encourage the purchase of low emission vehicles through development of emission reduction measures such as emission based parking charges, Low Emission Zones and additional infrastructure.
- Work with Partners to promote the benefits of ultra and low emission vehicles as an alternative to fossil fuels.
- Lead by example and utilise ULEVs within the Council's fleet.
- Work with Partners, such as bus companies and the Car Club, to demonstrate the practical benefits of ultra and low emission vehicles and offer the public the opportunity to trial them.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | A greater usage of low-emission vehicles would reduce the use of petrol and diesel vehicles which can have negative impacts on biodiversity through the release of pollutants. This is preferable to the alternative scenario which could have a negative impact on biodiversity. | ++ | Not facilitating usage of low-emission vehicles means the use of conventional vehicles continues which can have negative impacts on biodiversity through the release of pollutants. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | A greater usage of low-emission vehicles will have long-term positive impacts on air quality by reducing the volume of emissions from transport which contributes to poor air quality. This is preferable to the alternative scenario where air quality will continue to worsen. | ++ | Not facilitating usage of low-emission vehicles will mean that emissions continue to increase and transport's impact on air quality will remain negative in the long-term. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | A greater usage of low-emission vehicles has long-term positive impacts on the climate by reducing the volume of climate-changing emissions and pollution released by transport. This is preferable to the alternative scenario where emissions will continue to grow. | ++ | Not facilitating usage of low-emission vehicles will mean that emissions continue to increase and transport's impact on climate change will remain negative in the long-term. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective can reduce the impacts of air pollution on soil. This is preferable to the alternative scenario where impacts continue to be negative. | + | Continuing poor air quality will result in air pollution with long-term negative impacts on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | No impacts on water are anticipated. | 0 | This does not impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | No impacts on landscape are anticipated. | 0 | This does not impact upon the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | No impacts on economic growth or social inclusion are anticipated. | 0 | This does not impact upon economic growth or social inclusion. | 0 |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A greater usage of low-emission vehicles will have long-term positive impacts on health by reducing the volume of harmful emissions and pollution released by transport. This is preferable to the alternative scenario where the negative impacts of car usage on health remain. | ++ | Not facilitating usage of low emission vehicles means that usage of conventional vehicles will continue, potentially resulting in an increase in harmful emissions, with a long-term negative impact on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | A greater usage of low-emission vehicles will have long-term positive impacts on cultural heritage by reducing the volume of harmful emissions and pollution released by transport which can cause damage to, and discolouration of, buildings and monuments. This is preferable to the alternative scenario where transport's impact on cultural heritage continue to be negative. | ++ | Not facilitating usage of low emission vehicles means that usage of conventional vehicles will continue, potentially resulting in an increase in air pollution, with a long-term negative impact on buildings and monuments.. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Low emissions vehicles promote the sustainable use of resources and lead to environmental improvements with long-term benefits for our material assets. | ++ | This is unlikely to have a significant impact on material assets. | 0 |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

## Objective 26: Travel Information and Awareness - To engage with members of the public, employers and schools on travel behaviour-change campaigns, events and promotions and to provide the information that citizens and visitors need to let them undertake 'smarter' journeys in the City

**Actions:**

- To channel all behaviour change and promotional activity in support of sustainable transport through the regional brand, Getabout.
- Continue to work with partners in Getabout on key events and campaigns throughout the year including Bike Week and European Mobility Week.
- Continue to participate in In Town Without My Car Day and look for ways of improving the event in future years.
- Continue to publish and update walking, cycling and public transport maps and ensure these are disseminated to key locations and available on request and online.
- Maintain and update the Council's website as a source of transport information and increase our social media presence, allowing transport developments to be communicated to the public as they happen.
- Ensure information is available in a variety of formats reflecting the differing needs and preferences of users.
- Ensure that publicity materials are made available in suitable print for people with sight difficulties and in alternative languages wherever possible.
- Expand VMS coverage and look to include journey time information for various modes of transport.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Greater use of sustainable modes of transport will have a long-term positive impact on biodiversity by reducing the effects of car usage (such as noise, vibration and pollution) which can damage and/or disrupt vulnerable habitats and species. This is preferable to the alternative scenario where negative impacts remain. | + | Not promoting sustainable transport will mean that the negative impacts of car usage on biodiversity (such as noise, vibration and pollution) remain and potentially worsen. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Greater use of sustainable modes of transport will have a long-term positive impact by reducing the effects of car usage on air quality. This is preferable to the alternative scenario where negative impacts remain. | ++ | Not promoting sustainable transport will mean that the negative impacts of car usage on air quality (through harmful emissions) remain and potentially worsen. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies? | Greater use of sustainable modes of transport will have a long-term positive impact by reducing the impacts of transport on climate change, by reducing pollutions and emissions. This is preferable to the alternative scenario where negative impacts remain. | ++ | Not promoting sustainable transport will mean that the negative impacts of car usage (in terms of emissions) remain and potentially worsen. | - |

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| | gases. | Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This is preferable to the alternative scenario where negative impacts remain. | + | Air pollution resulting from traffic growth can negatively impact upon soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | A decline in car usage could have long-term positive impacts on the landscape by reducing visual intrusion resulting from road traffic and congestion. This is preferable to the alternative scenario where negative impacts remain or worsen. | + | Failing to promote sustainable transport could see an increase in motorised traffic, with long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve | A decline in private car usage and greater use of sustainable modes will reduce congestion, allow the more efficient movement of freight and allow for greater journey time reliability. Making the public more aware of the transport options available to them can promote social inclusion and improve accessibility, as lack of knowledge of options is a significant barrier to | + | Not promoting and encouraging sustainable modes of transport could see an increase in private car traffic, resulting in increased congestion and unreliable journey times for people and goods, with long-term negative impacts. | - |

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| | | accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | accessibility. The objectives and actions therefore have a long-term positive impact on the population. This is preferable to the alternative scenario which is likely to result in increased congestion. | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Encouraging active travel will have a long-term positive impact upon human health by promoting more physically active lifestyles. A reduction in car usage will lead to a decline in emissions of harmful pollutants which can contribute to a number of respiratory conditions and reduce life expectancy, and reduce the likelihood of accidents and casualties on our roads. Making people aware of the variety of transport options available to them can also increase their ability to access healthcare facilities and areas of open space, particularly those unable to access a private car. This is preferable to the alternative scenario where the impact on health is likely to be negative. | ++ | Not promoting and encouraging active modes of transport could result in fewer people walking and cycling. Car travel may also increase, thus increasing the release of harmful emissions. This will have long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An increase in sustainable transport and a decline in car usage can have long-term positive impacts on cultural heritage, through reducing the impact of traffic on historical and cultural buildings and sites in terms of their setting (less traffic can improve visual amenity) and preservation (as pollution is known to have a damaging effects on buildings). Improving awareness of the variety of non-car modes of transport can also improve the accessibility of cultural and historical sites by such modes. This is preferable to the alternative scenario where traffic and pollution are likely to worsen. | + | Failing to promote sustainable transport will lead to an increase in car travel. As well as cars detracting from the setting of historic sites, pollution from cars can have a damaging effect on buildings and monuments, with long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links? | Encouraging sustainable transport behaviours promotes effective use of our existing infrastructure and assets and the sustainable use of resources, and contributes to the development of a safe and clean environment. | + | Not promoting sustainable transport modes encourages the inefficient use of our transport infrastructure and contributes to the long-term decline in the quality of our material assets. | - |

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| | Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Destroy or sever any core path or right of way? | | | | |

## Objective 27: School Travel and Young People - To ensure that all young people have the opportunity to travel to school by active and/or sustainable modes of transport and are equipped with the necessary knowledge, skills and infrastructure to allow them to undertake local journeys safely and independently

**Actions:**

- Encourage and support the development of School Travel Plans including identification of safer routes to schools as well as pick up and drop off points for all new and existing schools.
- Continue to encourage travel planning initiatives such as walking buses and park and stride schemes in schools.
- Promote Best Practice examples of school travel initiatives and encourage knowledge transfer between schools.
- Consider traffic management solutions such as footway widening, improved crossing and car-free zones outside schools.
- Continue to work with schools on targeted promotional campaigns to encourage more pupils to travel by active modes of transport.
- Continue to facilitate active travel journeys through physical changes, such as improving safe routes to school for those travelling on foot, by bike or by scooter and improving cycle and scooter parking facilities at schools where required.
- Continue to take advantage of external funding opportunities for school travel projects when they arise.
- Maintain mandatory or part-time 20mph speed limits outside all schools and ensure these are in place outside any new schools that are built during the life of this LTS.
- Encourage all primary schools to deliver Bikeability Scotland training so that all our youngsters have the skills and knowledge required to cycle safely on today's roads.
- Continue to provide statutorily required transport services to schools and to support and promote the national youth concessionary travel scheme for 16 to 18 year olds along with any local ticketing arrangements.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Greater use of sustainable modes of transport will have a long-term positive impact on biodiversity by reducing the effects of car usage (such as noise, vibration and pollution) which can damage and/or disrupt vulnerable habitats and species. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Not promoting sustainable transport will mean that the negative impacts of car usage on biodiversity (such as noise, vibration and pollution) remain and potentially worsen.. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Greater use of sustainable modes of transport will have a long-term positive impact by reducing the effects of car usage on air quality, namely emissions. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Not promoting sustainable transport will mean that the negative impacts of car usage on air quality (through harmful emissions) remain and potentially worsen.. | - |

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| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Greater use of sustainable modes of transport will have a long-term positive impact by reducing the impacts of transport on climate change, by reducing pollutions and emissions. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Not promoting sustainable transport will mean that the negative impacts of car usage (in terms of emissions) remain and potentially worsen.. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | . Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This is preferable to the alternative scenario where conditions are anticipated to worsen. | + | Air pollution resulting from traffic growth can negatively impact upon soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This is unlikely to impact upon water. | 0 | This is unlikely to impact upon water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | A decline in car usage could have long-term positive impacts on the landscape by reducing visual intrusion resulting from road traffic and congestion. This is preferable to the alternative scenario where impacts are anticipated to worsen. | + | Failing to promote sustainable transport could see an increase in motorised traffic, with long-term negative impacts on the landscape. | - |
| Population | To promote economic | Reduce congestion and allow for greater | A greater proportion of school run journeys undertaken | + | Not promoting and encouraging | - |

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| | growth and social inclusion. | journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | by active and sustainable modes of transport can relieve pressure on the road network when it is most under strain, reducing congestion and improving journey time reliability. Measures to improve routes to and from schools, and to provide statutory school bus services, will also improve their accessibility by non-car modes, with a long-term positive impact on the population, particularly those without access to a private car. This is preferable to the alternative scenario where impacts are anticipated to worsen. | | sustainable modes of transport could see an increase in private car traffic, resulting in increased congestion and unreliable journey times for people and goods, with long-term negative impacts. Failing to provide school bus services could result in schools becoming inaccessible to some pupils, especially if their households do not have access to a car. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Encouraging more young people to walk and cycle can have significant long-term health benefits by encouraging and promoting healthy lifestyles from a young age and aiding the fight against childhood obesity which can have significant negative health implications as children develop into adults. Fewer cars around schools at peak times also reduce the likelihood of road accidents and casualties and reduce the volume of harmful emissions in the air breathed by children. This is preferable to the alternative scenario where transport's impact on health is anticipated to worsen. | ++ | Not promoting and encouraging active modes of transport could result in fewer children walking and cycling. Not adopting a healthy lifestyle including regular physical activity while young can lead to significant health problems later in life. Car travel may also increase, thus increasing the release of harmful emissions. An increase in cars around the school gates could lead to an increase in accidents and collisions involving schoolchildren. This will therefore have long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An increase in sustainable transport and a decline in car usage can have long-term positive impacts on cultural heritage, through reducing the impact of traffic on historical and cultural buildings and sites in terms of their setting (less traffic can improve visual amenity) and preservation (as pollution is known to have a damaging effects on buildings). This is preferable to the alternative scenario where the negative impacts of car use remain. | + | Failing to promote sustainable transport will lead to an increase in car travel. As well as cars detracting from the setting of historic sites, pollution from cars can have a damaging effect on buildings and monuments, with long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good | Provide adequate transport facilities that meet the needs of the people of Aberdeen? | Safe routes to school interventions can involve the improvement or provision of safe pedestrian and cycle links, benefitting all the people of Aberdeen. An increase in walking and cycling promotes the | + | Not promoting sustainable transport modes encourages the inefficient use of our transport infrastructure and contributes to the long-term decline in | - |

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| | quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | sustainable use of resources and leads to safer and cleaner environment for all. This therefore has a long-term positive impact on material assets. | | the quality of our material assets. | |

## Objective 28: Climate Change Adaptation and Mitigation - To contribute to Aberdeen's carbon emissions targets and develop climate resilient infrastructure

**Actions:**

- Ensure that the risk of flooding or environmental impact is taken into account in the design and construction of infrastructure.
- Continue to implement a range of hard and soft engineering measures when dealing with flood risk management and mitigation (also under flooding in maintenance).
- Reduce carbon emissions from all transport by the use of smaller, low emission vehicles and encourage people to use active and public transport.
- Maximise the opportunities to manage open spaces such as road verges to reduce surface water flooding and run off.
- In the urban environment consider where hard landscaping can be reduced where possible, for instance, resist front gardens being turned into car parks.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | A decrease in carbon emissions will have long-term positive impacts on those species particularly vulnerable to pollution. Improved flood risk management and mitigation will have significant long-term benefits for species and habitats vulnerable to damage or disruption from flooding. This is preferable to the alternative scenario where the vulnerability of species is likely to remain, | + | Not addressing carbon emissions is likely to lead to them continuing to increase, with long-term positive impacts on species vulnerable to climate change. Failing to implement flood risk management and mitigation will leave certain species vulnerable to the risks and effects of flooding. There will therefore be long-term negative impacts on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An increase in the use of low emission vehicles and sustainable transport mods in the City will reduce the negative impacts of transport on air quality, with long-term positive impacts. This is preferable to the alternative scenario where such behaviour is not encouraged and air quality continues to worsen. | + | Not promoting sustainable transport modes will likely result in an increase in car travel with long-term negative impacts on air quality resulting from an increase in emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | This objective specifically relates to climate change, seeking to reduce carbon emissions and develop climate resilient infrastructure, which will have a long-term positive impact. This is obviously preferable to the alternative scenario where such issues are not addressed and these significant problems remain. | ++ | Not seeking to address carbon emissions and climate change will obviously have long-term negative impacts on climactic factors. | -- |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This is preferable to the alternative scenario where air pollution continues to affect soil. | + | Air quality disbenefits arising as a result of failing to promote sustainable transport could have long-term negative impacts on soil resulting from air pollution's impact on soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Reducing run-off from roads will have a long-term positive impact on water through reducing pollution. This is preferable to the alternative scenario which could have long-term negative impacts. | + | Failing to reduce run-off from roads means the potential for water pollution remains with potentially long-term negative impacts. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | The presence of flood defences may have a negative impact on the landscape through visual intrusion. The presence of such infrastructure can also help to protect the landscape from the effects of flooding. Overall, though, this is preferable to the alternative scenario which is likely to have a neutral impact. | +/- | This is unlikely to have any significant impacts on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | Improved flood defences will ensure the efficient operation of the transport network even in extreme weather conditions, thus benefitting the population. This is much preferable to the alternative scenario where there is the potential for severe disruption to travel. | ++ | Failing to implement flood defences and other climate change mitigation measures means that the transport network will remain vulnerable from extreme weather events, with the potential to cause massive disruption to the movement of people and freight and to make certain areas inaccessible during extreme weather. This could have long-term negative impacts on the population. | -- |

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| | | needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved flood defences will protect the travelling population from flooding. Reduced carbon emission will protect against the harmful effects of climate change. There will therefore be a long-term positive impact on human health and is preferable to the alternative scenario where failing to act has negative implications. | + | Not implementing flood defences and climate change mitigation measures will leave people vulnerable to harm from extreme weather events. This could have long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Reduced carbon emissions and improved flood defences will help protect significant sites and buildings from the effects of climate change, with a long-term positive impact. This is preferable to the alternative scenario where not acting could have negative impacts. | + | Failing to reduce emissions and to implement climate change mitigation measures leaves historical sites and structures vulnerable to the effects of climate change, with long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | This will ensure transport facilities in Aberdeen are robust, safe and resilient. | ++ | Not implementing flood defences and other climate change mitigation measures will leave our material assets vulnerable to the consequences of extreme weather events, with long-term negative consequences. | -- |

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| | opportunities and rights. | | | | | |

## Objective 29: Biodiversity and the Green Space Network - Improve the accessibility to open spaces and contribute towards the development of the green space network through implementation of core paths and appropriate mitigation as part of transport scheme delivery

**Actions:**

- Taking opportunities to improve and create new habitats as part of improvement schemes.
- Changes to transport infrastructure should respect the character of all landscapes and conserve and enhance the best.
- Transport should contribute to sustainability by underpinning high quality spatial development.
- People should be able to travel around by low impact modes such as walking and cycling.
- Reducing the need to travel, by improving access to local services and green space and making the most of existing transport networks.
- Reducing the negative effects of transport as far as possible by including in any plans measures to protect wildlife, habitats and landscapes.
- The revised LTS will address these issues by working closely with other policy/strategy areas and contributing towards delivering actions proposed in different strategies such as open space strategy, nature conservation strategy and proposed woodland strategy along with the actions suggested in the LTS.
- Encourage the removal of unnecessary hardstanding structures and replace with soft material where appropriate.
- Maximise the opportunities to integrate ecosystem services into planning and development of road infrastructure.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective and accompanying actions specifically outline protection and enhancement measures for biodiversity resulting from transport improvements, thus minimising the impact of transport on biodiversity, with a long-term positive impact. This is preferable to the alternative scenario where no policy is in place to address transport's impact on biodiversity. | ++ | Transport schemes often have long-term negative impacts, disrupting habitats and their species. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Reducing the need to travel and promoting sustainable modes will reduce the negative impacts of transport on air quality, with a long-term positive impact. | + | Not reducing the need to travel and promoting sustainable modes could lead to an increase in traffic, with long-term negative impacts on air quality through increased emissions | - |
| Climatic factors | To reduce the cause and effects of climate change. | Promote sustainable and active travel?<br><br>Promote the use of clean | Reducing the need to travel and promoting sustainable modes will reduce the negative impacts of transport on the climate, with a long-term positive impact. | ++ | Not reducing the need to travel and promoting sustainable modes could lead to an increase in traffic, with long-term | - |

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| | To limit or reduce the emissions of greenhouse gases. | fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Improvements to, and increases of, greenspace can also mitigate against climate change. | | negative impacts on climactic factors through increased emissions | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Environmental protection is at the heart of this objective – this will include protecting soil quality. This is preferable to having no such protection policy in place, resulting in potentially damaging transport schemes. | + | Transport schemes have the potential to negatively impact upon soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Environmental protection is at the heart of this objective – this will include protecting water quantity and quality. This is preferable to having no such protection policy in place, resulting in potentially damaging transport schemes. | + | Transport schemes have the potential to negatively impact upon water | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | One of the actions under this policy specifically seeks the protection of valuable landscapes, resulting in a long-term positive impact. This is preferable to having no such protection policy in place, resulting in potentially damaging transport schemes. | ++ | Transport schemes have the potential to negatively impact upon the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability? | Increased opportunities for walking and cycling can improve accessibility to key destinations and thus promote social inclusion. An increase in walking and cycling can reduce congestion and allow for greater journey time reliability. A long-term positive impact on | + | Failing to increase opportunities for active and sustainable travel can lead to more car travel, resulting in increased congestion and greater journey time uncertainty. This can also make certain | - |

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| | | Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | the population is therefore anticipated. This is preferable to the alternative scenario where the impacts are predicted to be negative. | | destinations inaccessible to those without access to a car. There are therefore long-term negative impacts on the population. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Improved opportunities for walking and cycling can increase use of these modes, with long-term health benefits in terms of a more active population. This will also improve accessibility to key destinations such as healthcare facilities and areas of open space. Access to greenspace is mentioned as a particular action under the objective. An improved natural environment can also improve mental health by allowing people to use and enjoy the outdoors. This is preferable to the alternative scenario where impacts are likely to be negative. | ++ | Failing to increase opportunities for travel could lead to fewer people walking and cycling and more people driving. As well as reducing opportunities for physical activity, increasing car usage results in increasing emissions which can be harmful to human health. Not improving access to areas open and green space could also reduce the likelihood of people undertaking physical activity. This could therefore have long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | One of the actions under the objective mentions conserving and enhancing key landscapes and sites. This is preferable to the existing scenario where no such policy is in place. | + | Transport schemes have the potential to negatively impact upon cultural heritage. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources? | This objective and accompanying actions will promote an improved natural environment, improved access to the outdoors for pedestrians and cyclists and the sustainable use of our natural resources and existing infrastructure. This is preferable to the existing scenario where no such policy in relation to transport | ++ | Transport has the potential to negatively impact on our material assets through over-use of existing assets such as roads. | - |

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| | use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | is in place. | | | |

## IMPROVEMENTS

### Objective 30: Walking - To increase the number of people walking, both as a means of travel and for recreation, in recognition of the significant health and environmental benefits it can bring to our citizens.

**Actions:**

- Increase the attractiveness of walking by improving and increasing pedestrian facilities, including improved maintenance of existing footways, the development of new off-road footpaths, and the implementation of pedestrianised or part-pedestrianised areas.
- Continue to improve, expand and promote the City's Core Path network.
- Continue to install traffic calming schemes and pedestrian crossing facilities where required to improve pedestrian safety and to implement traffic islands where they can improve pedestrian crossing opportunities and/or reduce traffic speeds in residential areas.
- Continue to raise awareness of the health benefits of active travel.
- Contribute to the development of the National Walking Strategy.
- Contribute to the development of a Regional Active Travel Plan (AcTrAP).
- Monitor the pilot Wayfinding Scheme and consider additional areas for rollout

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in mode share for walking could contribute to a decline in car use. This would have a long-term positive impact on biodiversity, particularly for those species and habitats currently suffering from disturbance caused by road transport. Reduced car use would also remove the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This objective therefore has a long-term positive impact on biodiversity and is thus preferable to the alternative scenario which is predicted to have a negative impact. | + | Not achieving increased mode share for walking could lead to car usage continuing to increase. This could have a long-term negative impact on biodiversity, particularly for those species and habitats currently suffering from disturbance from road transport. Increased car use could also increase the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This therefore has a long-term negative impact on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An increase in mode share for walking at the expense of the private car will have a long-term positive impact on air quality through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact on air quality. | ++ | Not achieving increased mode share for walking could lead to car usage continuing to increase. This could have a long-term negative impact on air quality, resulting from increased emissions. | - |

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| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | An increase in mode share for walking at the expense of the private car will have a long-term positive impact on climate change through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact on climactic factors. | ++ | Not achieving increased mode share for walking could lead to car usage continuing to increase. This could have a long-term negative impact on climactic factors, resulting from increased emissions. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | An increased mode share for walking at the expense of private car use would reduce the necessity for new roads and bridges, the construction of which could lead to the loss or contamination of soil. Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This objective therefore has a long-term positive impact on soil and is preferable to the alternative scenario where the impact on soil is likely to be negative. | + | Not achieving increased mode share for walking could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could lead to the loss of or contamination of soil. This could also lead to an increase in air pollution, with negative implications for soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An increased mode share for walking could remove the necessity for new roads and bridges, the construction of which could lead to water pollution. This objective therefore has a long-term positive impact on water and is preferable to the alternative scenario where the impact is likely to be negative. | + | Not achieving increased mode share for walking could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could potentially water contaminations. This will therefore have a negative impact on water. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | An increased mode share for walking at the expense of the private car could reduce the need for construction of new, unsightly transport facilities such as roads and bridges. This objective therefore has a long-term positive impact on landscape and is preferable to the alternative scenario where the impact is likely to be negative. | + | Not achieving increased mode share for walking could lead to car use continuing to increase. This may ultimately necessitate the construction of new roads and bridges to cope with demand which could have long-term negative impacts on the landscape. | - |
| Population | To promote economic | Reduce congestion and allow for greater | Measures to increase walking will have long-term | ++ | Not achieving increased mode share for | - |

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| | growth and social inclusion. | journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | positive impacts on the economy by reducing congestion and improving journey time reliability, enabling the more efficient movement of freight. An improved walking environment could also have long-term positive impacts on social inclusion by encouraging more use of this mode, especially amongst those without access to car, and improving the accessibility for such groups to key services such as employment, education and healthcare. This is preferable to the alternative scenario which is likely to have negative impacts. | | walking could lead to car use continuing to increase, thus exacerbating congestion and contributing to journey time unreliability. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | An increase in walking will have significant long-term benefits for human health through increasing physical activity and reducing sedentary behaviour. If walking is undertaken at the expense of car use, this will result in less pollution and emissions which will also improve health through reducing the incidence of respiratory conditions resulting from poor air quality. Improved walking routes could improve access to healthcare facilities and areas of open space by this mode. An improved environment for active travel could also result in fewer casualties and fatalities from collisions and accidents. This is preferable to the alternative scenario which is anticipated to have a strong negative impact in the long term. | ++ | Not achieving increased mode share for walking will result in fewer people using this healthy mode of transport. If these people chose to drive instead, sedentary behaviour and harmful emissions will increase. This will have long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Fewer motor vehicles and more people walking in conservation areas and around distinctive cultural/historical sites could improve the setting and distinctiveness of these sites/areas, with a long term positive impact on cultural heritage. Improved walking routes to and around such sites/areas will also improve access to them. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for walking could result in more people driving around such sites, thus detracting from their setting and contributing to their degradation as a result of increased pollution, which could have long-term negative impacts. | - |
| Material Assets | Promote a safe and clean environment with good | Provide adequate transport facilities that meet the needs of the people of Aberdeen? | An improved walking environment would bring multiple benefits to the people of Aberdeen, enabling sustainable lifestyles, the effective use of existing infrastructure and enhanced opportunities for outdoor | + | Failing to improve the walking environment could deprive the people of Aberdeen of a useful asset and could lead to the overuse of existing assets, | - |

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| | quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | access. | | with a long-term negative impact. | |

## Objective 31: Cycling - To foster a cycling culture in Aberdeen by improving conditions for cycling in Aberdeen so that cycling becomes an everyday, safe mode of transport for all.

**Actions:**

- In support of the Regional Active Travel Action Plan, develop an updated Cycling Strategy with accompanying Action Plan, outlining in detail (including interventions, priorities and timescales) how the Council will improve conditions for cyclists in the City and engender a culture change in Aberdeen so that cycling becomes a natural transport choice for short journeys for all sectors of the population.
- Ensure that the needs of cyclists are prioritised during all new road construction and improvement schemes.
- Improve and increase on-road cycling facilities in the urban area, including facilities on all key corridors where this is safe and practical.
- Improve and increase off-road cycling facilities throughout the City, especially in areas of natural beauty and where the road conditions are such that everyday cyclists are deterred.
- Increase opportunities for recreational cycling by improving facilities in our parks and greenspaces.
- Implement measures to improve safety for cyclists, such as Advanced Stop Lines at junctions, toucan crossings of busy roads and priority measures for cyclists crossing side roads.
- Continue to work with partners on safety campaigns and projects, such as Give Me Cycle Space, to encourage drivers to behave safely and respectfully when sharing roadspace with cyclists.
- Ensure that all traffic management and road maintenance schemes incorporate measures for cyclists, such as cycle route diversions, one-way exemptions, contraflow cycle lanes, etc.
- Maximise opportunities for integrating cycling with other modes of transport by, for example, improving access to railway stations and Park and Ride sites and ensuring cycle parking facilities are available at these locations.
- Through the Transport Assessment and Travel Planning process, ensure that all new developments plan for cyclists and facilitate safe and direct cycle journeys to, from and within the development.
- Improve and increase the number of cycle parking facilities throughout the City especially in the City Centre, neighbourhood centres and at community facilities.
- Continue to support and assist with the Bikeability Scotland training scheme in schools and look at ways of rolling out cycle training to adults.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in mode share for cycling could contribute to a decline in car use. This would have a long-term positive impact on biodiversity, particularly for those species and habitats currently suffering from disturbance caused by road transport. Reduced car use would also remove the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This objective therefore has a long-term positive impact on biodiversity.<br>At the same time, the objective contains actions to improve cycle routes through areas of natural beauty, parks and greenspaces. This could encourage human activity around sensitive species and habitats or even cause severance of habitats which would have long term negative impacts on biodiversity. Overall, this scenario is preferable to the alternative, which is anticipated to have a negative impact. | +/- | Not achieving increased mode share for cycling could lead to car usage continuing to increase. This could have a long-term negative impact on biodiversity, particularly for those species and habitats currently suffering from disturbance from road transport. Increased car use could also increase the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This therefore has a long-term negative impact on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction? | An increase in mode share for cycling at the expense of the private car will have a long-term positive impact on air quality through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact. | ++ | Not achieving increased mode share for cycling could lead to car usage continuing to increase. This could have a long-term negative impact on air quality, resulting from increased emissions. | - |

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| | systems.<br><br>To limit air emissions to comply with air quality standards. | Impact on any Air Quality Management Areas? | | | | |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | An increase in mode share for cycling at the expense of the private car will have a long-term positive impact on climate change through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact. | ++ | Not achieving increased mode share for cycling could lead to car usage continuing to increase. This could have a long-term negative impact on climactic factors, resulting from increased emissions. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | An increased mode share for cycling at the expense of private car use would reduce the necessity for new roads and bridges, the construction of which could lead to the loss or contamination of soil. Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This objective therefore has a long-term positive impact on soil. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for cycling could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could lead to the loss of or contamination of soil. This could also lead to an increase in air pollution, with negative implications for soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An increased mode share for cycling could remove the necessity for new roads and bridges, the construction of which could lead to water pollution. This objective therefore has a long-term positive impact on water. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for cycling could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could potentially water contaminations. This will therefore have a negative impact on water. | - |
| Landscape | To conserve and support landscape character and local distinctiveness. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological | An increased mode share for cycling at the expense of the private car could reduce the need for construction of new, unsightly transport facilities such as roads and bridges. This objective therefore has a long-term positive impact on landscape. This is preferable to the | + | Not achieving increased mode share for cycling could lead to car use continuing to increase. This may ultimately necessitate the construction of new roads and bridges to cope with demand | - |

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| | To protect and enhance the landscape. | features?<br><br>Reduce the amount or quality of public open space and green space in the City? | alternative scenario which is anticipated to have a negative impact. | | which could have long-term negative impacts on the landscape. | |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Measures to increase cycling will have long-term positive impacts on the economy by reducing congestion and improving journey time reliability, enabling the more efficient movement of freight. An improved cycling environment could also have long-term positive impacts on social inclusion by encouraging more use of this mode, especially amongst those without access to car, and improving the accessibility amongst such groups to key services such as employment, education and healthcare. This will be further enhanced by measures to integrate cycling with other modes of transport. This is preferable to the alternative scenario which is anticipated to have a negative impact. | ++ | Not achieving increased mode share for cycling could lead to car use continuing to increase, thus exacerbating congestion and contributing to journey time unreliability. | - |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | An increase in cycling will have significant long-term benefits for human health through increasing physical activity and reducing sedentary behaviour. If cycling is undertaken at the expense of car use, this will result in less pollution and emissions which will improve health through reducing incidences of respiratory conditions resulting from poor air quality. Improved cycling routes could improve access to healthcare facilities and areas of open space. An improved environment for active travel and increased opportunities for cycle training could also result in fewer casualties and fatalities from collisions and accidents. This is preferable to the alternative scenario which is anticipated to have a negative impact. | ++ | Not achieving increased mode share for cycling will result in fewer people using this healthy mode of transport. If these people chose to drive instead, sedentary behaviour and harmful emissions will increase. This will have long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Fewer motor vehicles and more people cycling in conservation areas and around distinctive cultural/historical sites could improve the setting and distinctiveness of these sites/areas, with a long term positive impact on cultural heritage. Improved cycle routes to and around such sites/areas will also improve access to them. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for cycling could result in more people driving around such sites, thus detracting from their setting and contributing to their degradation as a result of increased pollution, which could have long-term negative impacts. | - |

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| | To promote access to the historic environment. | | | | | |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Improving cycle facilities has a long-term positive impact on material assets. This is preferable to the alternative scenario which is anticipated to have a negative impact. | ++ | Failing to improve the cycling environment could deprive the people of Aberdeen of a useful asset and could lead to the overuse of existing assets, with a long-term negative impact. | - |

## Objective 32: Bus - To increase public transport patronage by making bus travel an attractive option to all users and competitive with the car in terms of speed and cost

**Actions:**

- Continue to work with bus operators through the Health and Transport Action Plan to ensure health services are accessible by public transport.
- Review provision of bus services to ensure existing services meet peoples' needs, and where necessary consider provision of supported services where these are deemed socially necessary.
- Ensure all new developments are planned and designed with public transport access and penetration in mind.
- Require developers to engage with public transport providers from the beginning of the planning process to ensure that new sites can be served by public transport. Where services cannot be supplied commercially, require developers to provide these at their own cost until such time as they become commercially viable.
- Work with partners in LABOF to consider the potential of Statutory Quality Partnerships in securing enhanced services.
- Continue to work with LABOF to identify, implement and trial a range of schemes to better facilitate the movement of buses in the City, including priority measures and traffic management improvements, in line with Locking In the Benefits of the AWPR.
- Continue to maintain, manage and improve bus stop infrastructure in line with Quality Partnership targets.
- Encourage further adoption of low emission buses.
- Construct a new Park and Choose site at on the A96 at Chapelbrae near Dyce and progress projects to improve the operation, and therefore usage, of all Park and Choose sites in the City.
- Support Aberdeenshire Council in the development of a Park and Ride site at Portlethen south of the City and ensure the effectiveness of services from the site to the City through, for example, bus priority measures to ensure competitive journey times, reliability, etc..
- Continue to enforce bus lane violations and look to increase the coverage of the scheme in recognition of the benefits it has brought in terms of the free flow of buses.
- Work with operators to implement actions arising from the Bus Information Strategy to improve the availability and quality of bus information in Aberdeen.
- Work with partners to progress projects emanating from the regional Fares and Ticketing Strategy, especially those contributing to a simple and seamless payment process

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | An increase in mode share for public transport could contribute to a decline in car use. This would have a long-term positive impact on biodiversity, particularly for those species and habitats currently suffering from disturbance caused by road transport. Reduced car use would also remove the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This objective therefore has a long-term positive impact on biodiversity and is preferable to the alternative scenario which is predicted to have a negative impact. | + | Not achieving increased mode share for the bus could lead to car usage continuing to increase. This could have a long-term negative impact on biodiversity, particularly for those species and habitats currently suffering from disturbance from road transport. Increased car use could also increase the need for construction of new transport infrastructure, such as roads and bridges, which could also negatively impact on biodiversity through damaging, disrupting and/or severing species and habitats. This therefore has a long-term negative impact on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction? | An increase in mode share for public transport at the expense of the private car will have a long-term positive impact on air quality through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for the bus could lead to car usage continuing to increase. This could have a long-term negative impact on air quality, resulting from increased emissions. | - |

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| | systems.<br><br>To limit air emissions to comply with air quality standards. | Impact on any Air Quality Management Areas? | | | | |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | An increase in mode share for public transport at the expense of the private car will have a long-term positive impact on climate change through reducing emissions and pollution. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for the bus could lead to car usage continuing to increase. This could have a long-term negative impact on climactic factors, resulting from increased emissions. | - |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | An increased mode share for public transport at the expense of private car use would reduce the necessity for new roads and bridges, the construction of which could lead to the loss or contamination of soil. Air quality improvements will have a positive impact on soil resulting from less air pollution. This objective therefore has a long-term positive impact on soil. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for the bus could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could lead to the loss of or contamination of soil. This could also lead to an increase in air pollution, with negative implications for soil. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | An increased mode share for public transport at the expense of private car use could remove the necessity for new roads and bridges, the construction of which could lead to water pollution. This objective therefore has a long-term positive impact on water. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for the bus could lead to car use continuing to increase. This could ultimately lead to a need for more transport infrastructure to cope with demand, the construction of which could potentially water contaminations. This will therefore have a negative impact on water. | - |
| Landscape | To conserve and support landscape character and local distinctiveness. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological | An increased mode share for public transport at the expense of the private car could reduce the need for construction of new, unsightly transport facilities such as roads and bridges. This objective therefore has a long-term positive impact on landscape. This is | + | Not achieving increased mode share for the bus could lead to car use continuing to increase. This may ultimately necessitate the construction of new roads and bridges to cope with demand | - |

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| | To protect and enhance the landscape. | features?<br><br>Reduce the amount or quality of public open space and green space in the City? | preferable to the alternative scenario which is anticipated to have a negative impact. | | which could have long-term negative impacts on the landscape. | |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Measures to increase public transport will have long-term positive impacts on the economy by reducing congestion and improving journey time reliability, enabling the more efficient movement of people and freight. Increased enforcement of bus lane violations will also contribute to this. Improvements to, and increase in the number of, public transport services, serving a range of destinations, will have a long-term positive impact on social inclusion by encouraging and facilitating greater use of public transport to access key services (including employment, education, healthcare) which will be of particular benefit to those without access to a car or who have given up driving (such as the elderly). This is preferable to the alternative scenario which is anticipated to have a strong negative impact. | ++ | Not achieving increased mode share for the bus could lead to car use continuing to increase, thus exacerbating congestion and contributing to journey time unreliability. Not tackling violations of the bus lanes could also contribute to this. Not seeking to increase and improve public transport services could see some locations remain fairly inaccessible to those without access to a private car, potentially contributing towards social exclusion, especially of the elderly who are typically more reliant on such services. This therefore has long-term negative impacts on the population. | -- |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | An increased mode share for public transport at the expense of the private car will have significant long-term benefits for human health. It will result in less pollution and emissions, thus reducing incidences of respiratory problems, and poor air quality which is known to reduce life expectancy. Improved public transport routes and services could also improve access to healthcare facilities and areas of open space by this mode. This is preferable to the alternative scenario which is anticipated to have a strong negative impact. | + | Not achieving increased mode share for the bus could see an increase in private car use, thus increasing emissions and contributing to poor air quality. Not seeking to increase and improve public transport services could see some locations (including healthcare facilities and outdoor access opportunities) remain fairly inaccessible to those without access to a private car, potentially contributing towards social exclusion, especially of the elderly who are typically more reliant on such services. This will therefore have long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Fewer motor vehicles in conservation areas and around distinctive cultural/historical sites could improve the setting and distinctiveness of these sites/areas, with a long term positive impact on cultural heritage. Improved public transport services and routeing could also facilitate access to important sites. This is preferable to the alternative scenario which is anticipated to have a negative impact. | + | Not achieving increased mode share for the bus could result in more people driving around such sites, thus detracting from their setting and contributing to their degradation as a result of increased pollution, which could have long-term negative impacts. | - |

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| | important features.<br><br>To promote access to the historic environment. | | | | | |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Improvements to public transport routes, services and infrastructure will have a long-term positive impact on our material assets, contributing to a safe environment with good quality services meeting the needs of the people of Aberdeen, enabling greater use of sustainable transport modes and improving opportunities for outdoor access by making such areas more accessible. | ++ | Failing to improve and increase public transport services deprives the people of Aberdeen of a useful asset and could lead to the overuse of existing assets, with a long-term negative impact. | - |

## Objective 33: Rapid Transit - To investigate ways of maximising connectivity between new developments by public transport and encourage a step change in the perception and provision of public transport in Aberdeen

**Action:**

- Work with Nestrans to undertake a study into future public transport options that will connect new housing developments with existing and future employment areas and other significant trip generators.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
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| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | Undertaking a study will in itself have no impact on biodiversity. Actual implementation of such a scheme could have impacts – specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable, however, to the scenario where no action is taken and conditions worsen. | 0 | Failing to take action could lead to an increase in car use to/from new sites. This will likely result in the need for new roads, with the potential to disturb habitats and their species. Noise and pollution from increased road traffic could also have long-term negative impacts on biodiversity. | - |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Undertaking a study will in itself have no impact on air quality. Actual implementation of such a scheme is likely to have impacts, although specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | It is likely that the private car will remain the dominant mode of transport between new developments. This will increase emissions, with long-term negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | Undertaking a study will in itself have no impact on climatic factors. Actual implementation of such a scheme is likely to have impacts, although specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | It is likely that the private car will remain the dominant mode of transport between new developments. This will increase emissions, with long-term negative impacts on the climate. | - |
| Soil | To reduce contamination, safeguard soil quantity and | Cause soil sealing and compaction? | Undertaking a study will in itself have no impact on soil. Actual implementation of such a scheme could | 0 | Failing to take action could lead to an increase in car use to/from new sites. | - |

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| | quality. | Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | have impacts – specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | | This will likely result in the need for new roads, with the potential for soil loss and contamination, thus a long-term negative impact would result. | |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | Undertaking a study will in itself have no impact on water. Actual implementation of such a scheme could have impacts – specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | Failing to take action could lead to an increase in car use to/from new sites. This will likely result in the need for new roads, with the potential for water contamination, thus a long-term negative impact would result. | - |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Undertaking a study will in itself have no impact on the landscape. Actual implementation of such a scheme would have impacts – specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | An increase in the number of roads required to serve new development will have a long-term negative impact on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | Undertaking a study will in itself have no impact on the population. Actual implementation of such a scheme could have impacts in terms of reducing journey times and congestion and improving social inclusion. Specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | This will limit the transport options open to residents/employees at new developments, potentially with negative impacts on the accessibility of these sites and leading to an increase in congestion. | - |
| Human Health | To protect and improve | Facilitate and/or encourage active travel? | Undertaking a study will in itself have no impact on health. Actual implementation of such a scheme would | 0 | Without intervention, it is likely that private car will be the dominant mode of | - |

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| | human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | have impacts in terms of improving air quality and accessibility. Specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | | access for such sites, which could have long-term health impacts in terms of reduced physical activity, an increase in harmful emissions and an increase in accidents and casualties. | |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Undertaking a study will in itself have no impact on cultural. Actual implementation of such a scheme could have impacts depending on the location of new infrastructure. Specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. | 0 | There is no impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Undertaking a study will in itself have no impact on material asset. Actual implementation of such a scheme would, however, significantly improve the transportation assets available to the people of Aberdeen. Specific proposals, once these have been worked up, would require to be subject to their own environmental assessment. This is preferable to the scenario where no action is taken and conditions worsen. | 0 | Failing to take action will limit the attractiveness of new developments, as well as people's options for accessing these. | - |

## Objective 34: Powered Two Wheelers - To improve conditions for motorcyclists on Aberdeen's roads, particularly in terms of rider safety

**Actions:**

- Implement road improvement and road safety schemes to increase the safety of motorcyclists on Aberdeen's roads.
- Continue to participate in initiatives such as Operation Zenith to raise awareness of motorcyclist safety.
- Ensure there is an adequate supply of motorcycle parking bays in areas where these are most needed.
- Undertake a review of trials that have taken place elsewhere in Britain where motorcyclists have been permitted to enter bus lanes to identify whether such an approach could be suitable for Aberdeen.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective is not anticipated to impact on biodiversity. | 0 | There are no impacts on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | Should conditions for motorcyclists improve, motorcycling's mode share could increase at the expense of the private car. This would have air quality disbenefits as motorcycles can release more oxides of nitrogen than cars. | - | If conditions for motorcyclists do not improve, motorcycling's mode share may fall, with long-term benefits for air quality through reduced emissions. | + |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | Should conditions for motorcyclists improve, motorcycling's mode share could increase at the expense of the private car. This would have benefits through a reduction in carbon dioxide emissions. This is preferable to the alternative scenario which may lead to an increase in climate-changing emissions. | + | If conditions for motorcyclists do not improve, motorcycling's mode share may fall. If trips are transferred to the car instead, this could result in an increase in climate-changing emissions with long-term negative impacts. | - |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air pollution resulting from motorcycle use may negatively impact upon soil. | - | This is unlikely to have a significant impact on soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact on water. | 0 | This does not impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact on the landscape. | 0 | This does not impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | Improved conditions for powered two wheelers could make this a more attractive mode, encouraging a transfer from the private car. This could have the effect of reducing congestion and improving journey time reliability, allowing the more efficient movement of people and goods. Enabling motorcycling could also contribute towards social inclusion, providing an alternative transport mode for those without access to a car, thus improving accessibility to key services. This will therefore have a long-term positive impact on the population. This is preferable to the alternative scenario which may lead to an increase in congestion and social exclusion. | + | Failing to improve conditions for powered two wheelers could make such modes more unattractive. If trips are transferred to the car instead, congestion and journey time unreliability could increase. This could also contribute towards social exclusion by making unattractive a transport option that could benefit those without access to or unable to afford a private car, thus preventing people accessing key destinations and services. This would have a long-term negative impact on the | - |

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| | | needs? | | | population. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Safer conditions for motorcyclists will reduce casualties and fatalities resulting from road accidents and collisions. Mode transfer from car to motorcycle could, however, increase emissions that are harmful to human health. The objective will therefore have a mixed impact on health. Any review into allowing motorcycles into bus lanes would have to consider the safety implications for pedal cyclists who are also permitted to use these lanes. Overall, though, this is preferable to the alternative scenario where motorcycling becomes increasingly unsafe. | +/- | Not improving safety for motorcyclists could see an increase in accidents and injuries involving these vulnerable road users, potentially resulting in more fatalities. This obviously has a strong negative impact on health.<br><br>. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This objective is not anticipated to impact upon cultural heritage. | 0 | This does not impact on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Safer conditions for motorcyclists will contribute to the development of a 21st Century transport system that meets the needs of all the people of Aberdeen. | + | This is unlikely to impact on material assets. | 0 |

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| | opportunities and rights. | | | | | |

**Objective 35: Road Improvements - To implement a programme of road improvement schemes to complement the AWPR in order to facilitate a restructuring of the roads hierarchy, minimising through traffic in the City Centre whilst reducing congestion, improving connectivity and addressing air quality concerns.**

**Actions:**

- Ensure the successful and timely completion of all new road and road improvement projects approved by the Council in the current Non-Housing Capital Programme.
- Continue to progress urban infrastructure projects aimed at removing pinch points throughout the City.
- Ensure that such projects prioritise the benefits delivered to sustainable modes of transport.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. | 0 | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. Removing pinch points in the City can benefit air quality by reducing journey times and congestion. Maximising the benefits for sustainable modes of transport can also encourage greater use of such modes, which will benefit air quality if trips are transferred from the private car. This is preferable to the alternative scenario which is likely to have a negative impact. | + | Not looking to address pinch points will exacerbate congestion, while not maximising the benefits for sustainable transport modes could see more people choosing to drive, both of which will have negative impacts on air quality. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport?<br><br>Reduce congestion? | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. Removing pinch points in the City can benefit the climate by reducing journey times and congestion hence limiting emissions. Maximising the benefits for sustainable modes of transport can also encourage greater use of such modes, which will have benefits if trips are transferred from the private car. This is preferable to the alternative scenario which is likely to have a negative impact. | + | Not looking to address pinch points will exacerbate congestion, while not maximising the benefits for sustainable transport modes could see more people choosing to drive, both of which will have negative impacts on climactic factors. | - |

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| | | Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. | 0 | There are unlikely to be any impacts on soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments. | 0 | There are unlikely to be any impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective largely relates to a series of projects already approved by the Council which have or will be subject to their own environmental assessments.. | 0 | There are unlikely to be any impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their | This objective largely relates to a series of projects already approved by the Council. Removing pinch points and maximising benefits for sustainable modes of transport (hence encouraging usage of these modes) will reduce congestion and allow greater journey time reliability, with minor benefits. This is preferable to the alternative scenario which is likely to have negative impacts. | + | Failing to address pinch points or to maximise the benefits for sustainable modes of transport could result in increased congestion and journey time unreliability with long-term negative impacts. | - |

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| | | needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | Removing pinch points will reduce congestion, thus reducing the volume of harmful emissions released into the air. Maximising the benefits to active forms of transport could encourage more people to walk and cycle. This will have long-term positive impacts on health and is preferable to the alternative scenario where negative impacts are predicted. | + | Failing to address pinch points or to maximise the benefits for sustainable modes of transport could result in increased congestion and fewer people walking and cycling, with long-term negative impacts on health. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | Reduced congestion and more people travelling by sustainable modes will have long-term positive impacts on cultural heritage through reducing the impact of air pollution on vulnerable sites. This is preferable to the alternative scenario where negative impacts are predicted, | 0 | Failing to reduce congestion or to encourage sustainable travel could have long-term negative impacts on cultural heritage through increasing air pollution around vulnerable sites. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure.<br><br>Protect and enhance outdoor access | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | New and improved roads add to our material assets, with long-term positive impacts. | + | Failing to improve the road network could lead to the long-term deterioration of our material assets. | - |

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| | opportunities and rights. | | | | | |

## Objective 36: Intelligent Transport Systems (ITS) - To expand the use of ITS to manage traffic flow in order to improve the efficiency of the transport network in the City.

**Actions:**

- The Council will use Intelligent Transport System (ITS) technology to improve network efficiency and manage traffic flow through transport corridors.
- The Council will further develop ITS to give priority to particular types of vehicles or road user, where appropriate.
- Provide reliable travel information to road users, so that they can make informed decisions before and during their journey.
- The Council will continue to explore opportunities to improve road safety and offer advice.
- The Council will explore opportunities to update the travelling public on environmental conditions within the city centre.
- The Council will further develop a Journey Time Monitoring System.
- The Council will look to develop back office systems that mean all ITS systems will be connected through a common database.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | This will have minimal impacts on biodiversity. | 0 | There are no impacts on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | ITS can have long-term positive impacts on air quality. More efficient traffic flow results in less congestion and emissions from vehicles. Any measures that encourage a switch from car travel to alternative modes will result in improved air quality. This is preferable to the alternative scenario which is predicted to have negative impacts. | + | Not utilising ITS to their full capabilities could reduce the likelihood of people switching from car to an alternative mode, and could cause congestion to exacerbate, which could have long-term negative impacts on air through increased emissions. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by motorised form of transport? | ITS can have long-term positive impacts on the climate. More efficient traffic flow results in less congestion and emissions from road vehicles. Any measures that encourage a switch from car travel to alternative modes will result in less pollution, fewer emissions and a cleaner environment. This is preferable to the alternative scenario which is predicted to have negative impacts. | + | Not utilising ITS to their full capabilities could reduce the likelihood of people switching from car to an alternative mode, and could cause congestion to exacerbate, which could have long-term negative impacts through increased emissions. | - |

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| | | Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | Air quality improvements arising from this objective will have a positive impact on soil resulting from less air pollution. This is preferable to the alternative scenario which is predicted to have negative impacts. | + | Any deterioration in air quality attributable to not using ITS could have negative impacts on soil through increased air pollution. | - |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | This objective is not anticipated to impact on water. | 0 | There is no impact on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | This objective is not anticipated to impact on the landscape, although ITS units will have to be sited sensitively. | 0 | There is no impact on the landscape. | 0 |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially for those without a private car? | Greater use of ITS will reduce congestion and allow greater journey time reliability. This will have long-term positive impacts and is preferable to the alternative scenario where the projected impacts are negative. | + | Failing to utilise and expand ITS will erode any potential congestion and journey time benefits, with negative impacts on the population. | - |

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| | | Support an ageing population by providing appropriate transport facilities to meet their needs? | | | | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | A more efficient traffic flow results in fewer harmful emissions with long-term health benefits. This is preferable to the alternative scenario where the projected impacts are negative. | + | Failing to utilise and expand ITS will prevent the Council using such technology to combat congestion and encourage transfer of trips to non-car modes. This Could ultimately have long-term negative impacts through encouraging inactivity and increasing the emission of harmful substances. | - |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | This objective is not anticipated to impact on cultural heritage, although ITS units will have to be sited sensitively. | 0 | There are no impacts on cultural heritage. | 0 |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of existing infrastructure. | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of way? | Greater use of ITS will contribute to the development of a fit for purpose transport system that meets the needs of the people of Aberdeen and encourages sustainable lifestyles. This represents an intensification of ITS activity, with the potential for greater benefits than the business as usual scenario. | ++ | This will not have a significant impact on material assets. | 0 |

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| | Protect and enhance outdoor access opportunities and rights. | | | | | |

**Objective 37: Public Realm and Sustainable Urban Mobility Plan (SUMP) - To improve the public realm by prioritising pedestrians, cyclists and public transport with consequent traffic circulation (to enhance environment, aesthetic quality and air quality of the City) for the benefit of shoppers, visitors and residents.**

**Actions:**

- Adopt the transport elements of the City Centre Masterplan and SUMP currently being developed.
- Increase the pedestrian experience in the core City Centre area and increase space for pedestrians.
- Improve access to the City Centre.
- Increase space for other uses (e.g. street cafes, events).
- Reduce the detrimental impact of motor vehicles on the City Centre environment.

| Indicator | Objectives | Will the objective(s) and actions…? | Assessment – Preferred Option (with LTS) | Score | Assessment – Alternative Option (without LTS) | Score |
|---|---|---|---|---|---|---|
| Biodiversity (flora and fauna) | To conserve and enhance the integrity of ecosystems.<br><br>To prevent damage or disturbance to designated sites and protected species and habitats.<br><br>To maintain biodiversity, avoiding irreversible losses. | Cause disturbance or damage to any habitat or species?<br><br>Have any impact, either directly or indirectly, on the River Dee SAC?<br><br>Have any adverse impacts on any nationally or locally designated site? | City Centre improvements are unlikely to impact upon biodiversity to any significant extent as the area is already built-up. | 0 | There are no impacts on biodiversity. | 0 |
| Air | To improve air quality.<br><br>To limit air pollution to levels that do not damage human health or natural systems.<br><br>To limit air emissions to comply with air quality standards. | Lead to an increase or a reduction in vehicular traffic?<br><br>Result in the need for new construction?<br><br>Impact on any Air Quality Management Areas? | An improved City Centre environment will have a long-term positive impact on air quality. A more pedestrian-friendly experience, and the granting of priority to things other than motor traffic, could reduce the number of car trips made to the City Centre, currently an AQMA, thus reducing vehicle emissions and pollution. This is preferable to the alternative scenario where air quality is anticipated to worsen. | ++ | Failing to address the City Centre environment could result in a worsening of air quality if the impact of the private car is not addressed and emissions continue to increase. | - |
| Climatic factors | To reduce the cause and effects of climate change.<br><br>To limit or reduce the emissions of greenhouse gases. | Promote sustainable and active travel?<br><br>Promote the use of clean fuels/technologies?<br><br>Reduce the need to travel, especially by | An improved City Centre environment will have a long-term positive impact on the climate. A more pedestrian-friendly experience, and the granting of priority to things other than motor traffic, could reduce the number of car trips made to the City Centre thus reducing vehicle emissions and pollution. This is preferable to the alternative scenario where conditions are anticipated to worsen. | ++ | Failing to address the City Centre environment could result in an increase of climate-changing emissions if the impact of the private car is not addressed. | - |

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| | | motorised form of transport?<br><br>Reduce congestion?<br><br>Result in the development of peat rich soils? | | | | |
| Soil | To reduce contamination, safeguard soil quantity and quality. | Cause soil sealing and compaction?<br><br>Result on the release of substances that could potentially contaminate the soil?<br><br>Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health and the water environment? | City Centre improvements are unlikely to impact upon soil. | 0 | There are no impacts on soil. | 0 |
| Water | To ensure that the water quality and good ecological status of the water framework directive are maintained. | Result in the release of water-borne pollution into watercourses, groundwater or reservoirs?<br><br>Increase the amount of surface water run-off into water bodies?<br><br>Increase development that physically impacts on a watercourse or the coastline. | City Centre improvements are unlikely to impact upon water. | 0 | There are no impacts on water. | 0 |
| Landscape | To conserve and support landscape character and local distinctiveness.<br><br>To protect and enhance the landscape. | Detract from or harm the landscape setting of the City?<br><br>Impact on any landscape or geological features?<br><br>Reduce the amount or quality of public open space and green space in the City? | Public realm improvements would have a long-term positive impact on the City Centre landscape through the creation of a more attractive environment. This is preferable to the alternative scenario where conditions are anticipated to stay the same or even worsen. | ++ | Failing to address the public realm could have long-term negative impacts on the landscape. | - |
| Population | To promote economic growth and social inclusion. | Reduce congestion and allow for greater journey time reliability?<br><br>Enable the efficient movement of freight?<br><br>Promote social inclusion and improve accessibility to key destinations, especially | A more attractive City Centre could promote economic growth by encouraging more retail and leisure activity. Improving access to the City Centre will have long-term benefits for all members of society, especially those discouraged from using the City Centre at present because of accessibility problems. Increasing the accessibility of employment, retail and leisure opportunities in the City Centre will contribute towards | ++ | Failing to implement public realm improvements is likely to see a further decline in retail and leisure activity in the City Centre, with economic implications for the City Centre. If improvements are not made to improve the accessibility of the City Centre, people may be discouraged from travelling there. There | -- |

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| | | for those without a private car?<br><br>Support an ageing population by providing appropriate transport facilities to meet their needs? | social inclusion. This is preferable to the alternative scenario where conditions are anticipated to worsen. | | could therefore be long-term negative impacts. | |
| Human Health | To protect and improve human health.<br><br>To ensure that the transport system is safe and secure.<br><br>To retain and improve quality, quantity and connectivity of publicly accessible open space | Facilitate and/or encourage active travel?<br><br>Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality?<br><br>Decrease noise and vibration?<br><br>Reduces the likelihood of transport-related road accidents and casualties?<br><br>Improve access to healthcare facilities?<br><br>Improve access to and quality of open space? | An improved public realm that looks to minimise the impact of vehicular traffic could encourage more walking and cycling in the City centre, with long-term health benefits. Less vehicular traffic in the City Centre will also reduce levels of harmful emissions and pollution, decrease noise from transport sources and reduce the likelihood of transport-related accidents and casualties. This is much preferable to the alternative scenario which is likely to result in a strong negative impact. | ++ | A City Centre with an environment unwelcoming to pedestrians and cyclists will fail to encourage use of these healthy modes of transport. If efforts are not made to reduce traffic in the City Centre, the AQMA will remain in place and air quality (and noise) could potentially worsen. Increasing car traffic in the City Centre could also result in more accidents and injuries experienced by the travelling public. There will therefore be long-term negative impacts on health. | -- |
| Cultural Heritage | To protect and enhance the historic environment.<br><br>To preserve historic buildings, archaeological sites and other culturally important features.<br><br>To promote access to the historic environment. | Impact on any historic buildings / sites or conservation areas, or on the setting of such sites?<br><br>Improve access to sites of historic and/or cultural interest? | An improved public realm in the City Centre could improve the setting and accessibility of areas and buildings of historic and/or cultural importance, many of which are located in and around the Centre, with long-term positive impacts on cultural heritage. This is preferable to the alternative scenario where poor conditions could remain or even worsen. | + | Failing to implement public realm improvements could see a decline in the City Centre as an historic place to spend time in. Not implementing accessibility improvements could make certain historical areas/buildings inaccessible to certain groups. This will have a long-term negative impact. | - |
| Material Assets | Promote a safe and clean environment with good quality services.<br><br>Promote the sustainable use of natural resources and material assets.<br><br>Promote effective use of | Provide adequate transport facilities that meet the needs of the people of Aberdeen?<br><br>Allow for the sustainable use of resources?<br><br>Promote the provision of safe pedestrian and cycle access links?<br><br>Destroy or sever any core path or right of | An improved public realm in the City Centre will contribute to the provision of facilities that meet the needs of the people of Aberdeen and will provide a safer pedestrian and cycle environment. An improved public realm could become a valuable asset for the people of Aberdeen to be proud of. | ++ | Failing to implement public realm improvements and improve accessibility could contribute towards the long-term decline of our material assets. | - |

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| | existing infrastructure.<br><br>Protect and enhance outdoor access opportunities and rights. | way? | | | | |

## Appendix E: Cumulative Effect Assessment

| LTS Vision, Aims and Objectives | Vision | Aims | Support | Maintenance | Management | SusDev and Travel | Improvements/Additions | Cumulative Effects | Comments |
|---|---|---|---|---|---|---|---|---|---|
| **Biodiversity** | ++ | 0/++ | -/+ | -/+ | 0/++ | 0/++ | -/+ | -/++ | Implementation of the LTS will have largely positive impacts on biodiversity, although some impacts may be negative and result in disbenefits.<br><br>In terms of positive impacts, the LTS primarily seeks a reduction in road traffic and an increase in the use of sustainable modes of transport. This should have multiple benefits for biodiversity, namely:<br>• Reduced land take from transport by reducing the need for construction of large-scale transport facilities such as roads and bridges to cope with growing demand for motorised transport. This will reduce the likelihood of damage and disruption to protected/vulnerable habitats and species;<br>• A reduction in environmental pollution, noise and artificial light which can negatively impact upon vulnerable species;<br>• Reduced run-off from roads into soil and watercourses.<br><br>Other potentially positive impacts include:<br>• Protection to habitats and species afforded by maintenance and flood prevention schemes; and<br>• Benefits to nocturnal species through a reduction in street lighting, especially overnight.<br><br>In addition, a specific biodiversity objective seeks to minimise the impact of transport by committing the Council to protecting, restoring or enhancing habitats and species during implementation of transport schemes, avoiding severance of habitats, and creating new habitats where necessary and appropriate.<br><br>Those impacts identified as potentially negative and which will require mitigation, are:<br>• Disruption to aquatic species from an increase in shipping and harbour activity;<br>• Short-term disruption (in terms of additional noise and pollution) resulting from road maintenance works, including winter maintenance; and<br>• Possible disruption to species and their habitats through an increase in cycle routes and cycling through areas of natural beauty and greenspace. |

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| **Air** | ++ | ++ | -/+ | -/++ | -/++ | ++ | -/++ | -/++ | Implementation of the LTS will have largely positive impacts on air quality, although some impacts are potentially negative and could lead to disbenefits.<br><br>Road transport is currently the main contributor to poor air quality in Aberdeen. The LTS seeks to address this by reducing the need to travel, reducing reliance on the private car, reducing road traffic in favour of cleaner modes of transport and reducing congestion. For journeys where the motor car is the preferred mode of transport, the Strategy seeks to promote car sharing, the use of Car Clubs and the use of low emission vehicles, all of which will serve to reduce the impact of transport on air quality. The Strategy also states that mitigation measures will be required for any transport schemes that could negatively impact upon air quality.<br><br>Those impacts identified as potentially negative for air quality and which will require mitigation, are:<br>• An increase in shipping and subsequent traffic around the Harbour, currently within an AQMA;<br>• Congestion and traffic displacement resulting from road improvement and maintenance schemes;<br>• Reducing vehicle speeds which can cause an increase in certain emissions;<br>• An increase in car usage resulting from reduced street lighting discouraging walking and cycling during hours of darkness; and<br>• An increase in motorcycle use which could lead to an increase in certain harmful emissions. |
| **Climatic Factors** | ++ | ++ | -/+ | -/++ | -/++ | ++ | 0/++ | -/++ | Implementation of the LTS will, on the whole, have a long-term positive impact on climatic factors, although some impacts may potentially be negative.<br><br>Transport emissions, particularly $CO_2$, are a significant contributor to climate change. The LTS seeks to reduce the need to travel, to reduce reliance on the private car, to reduce road traffic in favour of cleaner modes of transport, to reduce congestion and to encourage more responsible vehicle use (car sharing, Car Clubs, low emission vehicles). Should the Strategy be successful in achieving these aspirations, climate-changing emissions would significantly reduce.<br><br>In addition, the LTS contains a specific objective on climate change adaptation and mitigation, which looks to reduce emissions and to develop climate-resilient infrastructure. Use of low carbon technologies for street lighting will also play a part in reducing emissions.<br><br>Those impacts identified as potentially negative and which will require mitigation, are:<br>• An increase in shipping and activity around the harbour which could increase emissions;<br>• Congestion and traffic displacement resulting from road improvement and maintenance schemes;<br>• Reducing vehicle speeds which can cause an increase in certain emissions; and<br>• An increase in car usage resulting from reduced street lighting discouraging walking and cycling during hours of darkness. |

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| **Soil** | + | +/0 | -/+ | +/- | -/+ | + | -/+ | -/+ | Although the majority of LTS objectives have a neutral impact on soil, some positive and negative impacts are anticipated. In terms of the positives, there will be long-term benefits relating to reduced land take resulting from the LTS's support for brownfield development and the promotion of non-car modes of transport which should reduce the need for large-scale transport schemes (particularly new roads). Reduced run-off from roads to soil is also anticipated to result from improved road maintenance and improved flood defences. There is also a commitment to incorporate SUDS in any new road or road improvement schemes. Measures to improve air quality in the LTS will also positively impact on soil, through reducing the impacts of air pollution. Potentially negative impacts relate to the risk of soil contamination from transport improvement and maintenance schemes, which should be overcome by mitigation. |
| **Water** | + | +/0 | -/+ | +/- | 0 | -/+ | +/0 | -/+ | Although the majority of LTS objectives have a neutral impact on water, some positive and negative impacts are anticipated. In terms of the positives, a decrease in motorised traffic (as aimed for by the LTS) would reduce the need for new transport facilities. Improved and properly-maintained roads can likewise reduce run-off. There is also a commitment to incorporate SUDS in any new road or road improvement schemes. In terms of negative impacts, it is recognised that maintenance, improvement and flood prevention schemes could result in the release of pollutants into watercourses during construction, although this can be overcome by careful mitigation. In addition, increases in shipping and water freight to and from Aberdeen could lead to an increase in water pollution. |
| **Landscape** | + | +/0 | +/0 | -/++ | -/+ | -/++ | +/0++ | -/++ | The impact on the landscape of implementation of the LTS is mixed, although more positive than negative impacts are anticipated.<br><br>The LTS's primary aspiration is to discourage private car use and encourage and facilitate the use of alternative modes. The main long-term positive anticipated from this is a reduced need for construction of new roads and bridges which may otherwise be inevitable with continually increasing car usage and which could lead to an unsightly urban landscape. A reduction in traffic, coupled with urban realm improvements, including reducing the impact of parking, and the implementation of SUDS would contribute towards a more aesthetically pleasing landscape, less troubled by the presence of vehicles and congestion. Improvements in street lighting can also contribute to improving the landscape setting, while road maintenance and flood prevention schemes serve to offer protection to the landscape.<br><br>In terms of potentially negative impacts, these include:<br>• Flood defences detracting from areas of natural beauty; and<br>• An increase in unsightly traffic management and speed reduction features leading to a cluttered urban environment.<br>There may also be some more short-term negative impacts on the landscape arising from maintenance works leading to an unsightly environment, although such activities are obviously temporary. |

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| **Population** | ++ | ++ | 0/++ | -/++ | 0/++ | 0/++ | 0/++ | -/++ | The impact of the LTS on the population is anticipated to be mostly positive, although some potentially negative impacts have been identified.<br><br>In terms of the economy, long-term benefits will result from reduced congestion and improved journey time reliability. Benefits will also accrue from City Centre regeneration proposals (including an improved transport environment) and the more efficient use of car parking spaces at key destinations.<br><br>In terms of accessibility and social inclusion, the LTS will bring long-term benefits by raising awareness of, and facilitating travel by, walking, cycling, public transport, community and social transport, car sharing and car clubs to ensure that all people can access the destinations and services they need, and that transport is convenient, safe and inexpensive. Responsible management of blue badge parking spaces will also improve accessibility for those with disabilities.<br><br>Potentially negative impacts identified are:<br>• Delays and congestion resulting from improvement and maintenance schemes, albeit these are short- short term; and<br>• Social exclusion resulting from reduced levels of street lighting which could discourage some people, especially the more vulnerable members of society, from travelling during the hours of darkness. |
| **Human Health** | + | ++ | -/++ | -/++ | -/++ | ++ | -/++ | -/++ | The impact of the LTS on health is anticipated to be mostly positive, although some potentially negative impacts have been identified.<br><br>Long-term positive impacts will result from the Strategy's aspirations to encourage more walking and cycling and to reduce car use which will facilitate an increase in physical activity, improve air quality and reduce noise, thus improving the health and wellbeing of the population. Improving access to the outdoors and to healthcare facilities has obvious health benefits, while reduced traffic, reduced speeds, road and bridge maintenance activities, accident and flood prevention schemes and a more secure night-time environment will improve the safety of the travelling public, reducing the number of transport-related accidents and injuries and reducing incidences of assault and abuse. Road maintenance can also successfully reduce noise, with resulting mental health benefits.<br><br>Potentially negative impacts, identified, which will require mitigation, are:<br>• A decline in air quality around the Harbour area resulting from increased shipping;<br>• An increase in road accidents and poor perceptions of safety as a result of reduced levels of street lighting;<br>• An increase in congestion during road maintenance works and the displacement of traffic to alternative streets, with road safety and health implications; and<br>• A decline in air quality resulting from increased motorcycle use. |

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| **Cultural Heritage** | + | 0/+ | 0/+ | -/+ | -/++ | ++ | 0/+ | -/++ | The impact of the LTS on cultural heritage is anticipated to be mostly positive, although some potentially negative impacts have been identified.<br><br>In terms of positive impacts, these largely relate to the traffic reduction aspirations outlined in the LTS and are therefore long-term impacts. Less traffic around historically and/or culturally important sites will improve the setting of such sites, ensuring views are not blighted by parked cars, traffic or congestion, and will reduce emissions and pollution around such sites, which are known to cause deterioration and damage to ancient buildings and monuments. Noise will also reduce, allowing people to better enjoy the experience of being in and around important buildings and sites. The setting of such sites may also be enhanced by improvements to street lighting, while valuable assets will be protected by an increase in flood defences. Accessibility improvements in accessibility will also have long-term benefits in allowing more people to reach and enjoy such sites.<br><br>In terms of possible negative impacts, these relate, in the short term, to an unsightly environment around such sites as a result of transport improvement and maintenance activities, albeit this is a temporary situation. In the longer term, an increase in traffic management features in certain areas, for example conservation areas, could undermine the distinctiveness of such sites, while an intensification of maintenance activities around such sites could increase vibrations, potentially leading to damage. |
| **Material Assets** | ++ | 0/++ | ++ | 0/++ | 0/++ | ++ | 0/++ | 0/++ | Implementation of the LTS is anticipated to have an overwhelmingly positive impact on material assets. This is largely because the Strategy outlines a range of improvements and additions to the City's transport network which will benefit members of the travelling public and contribute to the development of a fit-for-purpose, safe and clean 21st Century transport system. |
| **Key** | ++ strong positive; = positive; 0 neutral; - negative; --strong negative | | | | | | | | |

## Appendix F: Compatibility Assessment

**Key:**

| | |
|---|---|
| ? | Uncertain |
| X | Potentially incompatible |
| ✓ | Compatible |

**Aims:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | | ✓ | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ | ✓ |
| 3 | ✓ | ✓ | | ✓ | ✓ |
| 4 | ✓ | ✓ | ✓ | | ✓ |
| 5 | ✓ | ✓ | ✓ | ✓ | |
| | 1 | 2 | 3 | 4 | 5 |

**Objectives:**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3 | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4 | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 6 | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 7 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 8 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ? | ? | ✓ | ✓ | ✓ | ✓ | ✓ |
| 9 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 11 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 12 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 13 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 14 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 15 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 16 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 17 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 18 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 19 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 20 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 21 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 22 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 23 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 24 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 25 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 26 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 27 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 28 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 29 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 30 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 31 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| 32 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| 33 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| 34 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| 35 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 36 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 39 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |