

## COVER NOTE

## SEA ENVIRONMENTAL REPORT

### PART 1

**To**

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### PART 2

An SEA Scoping Report is attached for the plan entitled

Nestrans Regional Transport Strategy Re-refresh

The Responsible Authority is:

Nestrans

### PART 3

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## 1. Introduction

- 1.1. As part of the re-refresh of the Nestrans Regional Transport Strategy (RTS), Nestrans have carried out a Strategic Environmental Assessment of the proposed changes. SEA is a systematic method for considering the likely environmental effects of certain plans, programmes or strategies (PPS) on the environment. SEA aims to integrate environmental factors into PPS decision-making; improve PPS and enhance environmental protections; increase public participation in decision-making; and facilitate openness and transparency of decision making.
- 1.2. SEA is required by the Environmental Assessment (Scotland) Act 2005. The key SEA stages include screening, scoping, environmental report, adoption and monitoring. In screening we aim to determine whether the PPS is likely to have significant environmental effects and whether an SEA is required. In scoping, we decide on the scope and level of detail for the Environmental Report, and how long we will consult with Consultation Authorities. In the Environmental Report, we publish the environmental effects of the PPS on the environment and show how we will mitigate significant adverse effects and enhance significant positive effects. Through a post-adoption statement we provide information on the adopted PPS; how the consultation processes have been taken into account; and methods for monitoring the significant environmental effects of the implementation of the PPS. We will also have to monitor significant environmental effects in such a manner that we can identify any unforeseen adverse effects at an early stage and undertake appropriate remedial action.
- 1.3. The SEA is a strategic assessment, and is therefore not required to carry out or replicate Environmental Impact Assessment (EIA) of individual schemes. It need only concentrate on the **significant** environmental impacts of the RTS, not ALL the possible impacts and environmental issues. The SEA directive stresses a **reasonable** approach to assessment, which takes into account issues such as resource and information available within the timescales allowed.
- 1.4. The proposed methodology for this assessment was set out in the scoping report and is in proportion to the scale of the re-refresh of the strategy that is being undertaken. The RTS review will consider the actions currently contained within the RTS and whether they need to be updated or new actions added. We will assess the strategic, policy and possible site-specific options of any actions that it is proposed are significantly amended and any proposed new actions. Actions contained within the existing RTS for which there is no change proposed, will not be re-assessed, as the assessment carried out in the SEA of the RTS in 2008 remains valid, although the results of the 2008 assessment will be presented.

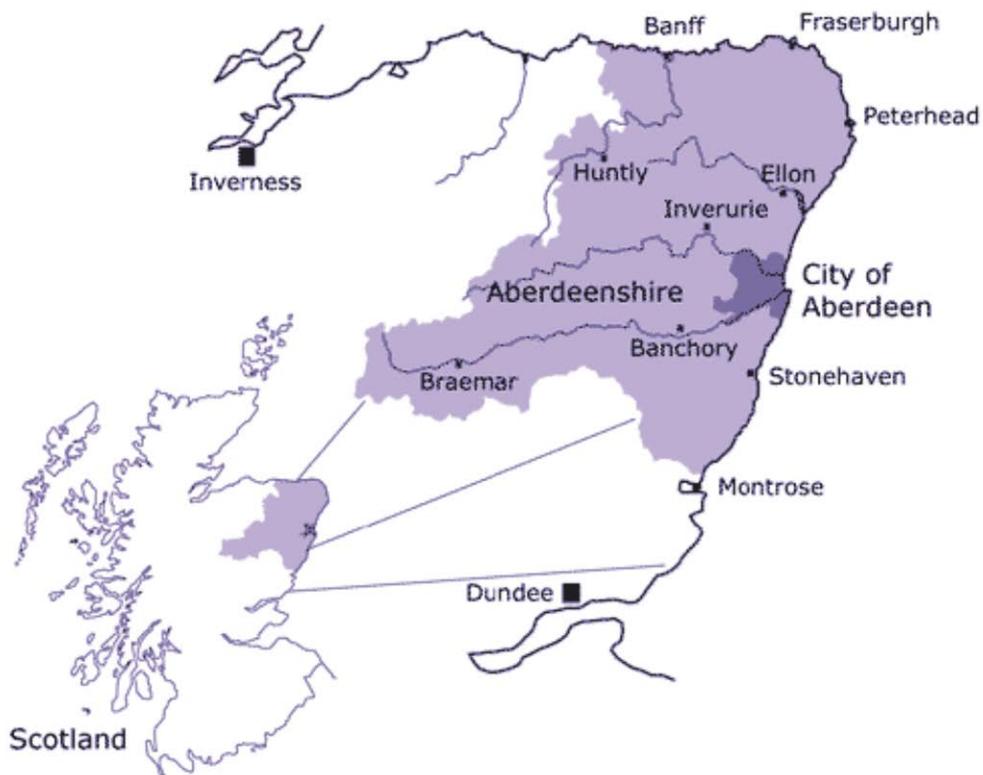
## 2. Key Facts

2.1. The key facts relating to the Nestrans RTS are set out in Table 2.1 below.

**Table 2.1: Key Facts relating to the Regional Transport Strategy**

Name of Responsible Authority	Nestrans
Title of the PPS	Regional Transport Strategy
What Prompted the PPS	The Regional Transport Strategy was adopted in 2008 under the Transport (Scotland) Act 2005.
Subject	Transport
Period Covered by the PPS	The current RTS covers the period from 2008 to 2021 but is being re-freshed to bring it in line with the timescales for the Structure Plan and emerging Strategic Development Plan (SDP) for the North East to 2035.
Frequency of Updates	This is the first update, 4 years since adoption.
Area covered by the PPS	Aberdeen City and Aberdeenshire Council areas
Purpose and/or objectives of the PPS	<p>The vision of the existing RTS is “A transport system for the North East of Scotland which enables a more economically competitive, sustainable and socially inclusive society”.</p> <p>The purpose of the strategy is to set the framework for the development of the transport network in the north east.</p>
Contact Point	<p>Kirsty Chalmers            Transport Executive (Strategy &amp; Delivery)            Nestrans            27-29 King Street            Aberdeen            AB24 5AA            Tel: 01224 625524            Email: kirchalmers@nestrans.org.uk</p>

**Figure 2.1: Nestrans Area**



### **3. The Regional Transport Strategy**

3.1. The Transport (Scotland) Act 2005 places a duty on Regional Transport Partnerships to draw up a strategy for transport in their region. NESTRANS (North East of Scotland Transport Partnership) is the transport partnership for the local authorities of Aberdeen City; and Aberdeenshire.

3.2. The Act calls for the strategy to make provision for the following matters:

- The respects in which transport in the region needs to be provided, developed or improved having regard to, among other things:
  - Future needs including those occasioned by demographic and land use changes.
  - What can be done, taking account of cost, funding and practicability.
- Meeting the needs of all inhabited places, in particular, those which the Partnership considers different from the remainder of the region by reason of their remoteness or the sparsity of their populations.
- Meeting the need for efficient transport links between heavily populated places
- How transport in the region will be provided, developed, improved and operated so as:
  - To enhance social and economic well-being.
  - To promote public safety, including road safety and the safety

of users of public transport.

- To be consistent with the principle of sustainable development and to conserve and enhance the environment.
  - To promote social inclusion.
  - To encourage equal opportunities and, in particular, the observance of the equal opportunities requirements.
  - To facilitate access to hospitals, clinics, surgeries and other places where a health service is provided.
  - To integrate with transport elsewhere.
- The order of priority in which different elements of the provision, development and improvement of transport should be undertaken.
  - How the Transport Partnership's functions will be exercised so as to fulfil its transport strategy and, if the Partnership considers that the conferring of further functions is necessary for that purpose, what those functions are.
  - How the Transport Partnership, so as to enable it to fulfil its transport strategy, will seek to influence its constituent councils or council in the performance of their functions relating to transport.
  - The measuring and monitoring of the achievement of the strategy.

3.3. The Regional Transport Strategy was submitted to Scottish Ministers in March 2007 and approved in spring of the following year. Although the RTS had been prepared to cover the period 2008-2021, the original guidance from the Scottish Government was that a review be conducted after five years. Subsequent guidance from the Scottish Government has however indicated that they will not be updating the National Transport Strategy and that they (and RTPs) should focus on delivery of the Strategic Transport Projects Review and RTS Delivery Plans respectively. They have, however, indicated that they are happy for RTPs and partner authorities to update or refresh their strategies if they so wish.

3.4. Nestrans and the Strategic Development Planning Authority (SDPA) held a joint workshop for local Councillors in Aberdeen City and Aberdeenshire on 25 March 2012 at which the question of the need for an RTS refresh was considered. Generally, there seemed to be a view that:

- focus should remain on delivery;
- that the general thrust of policy direction was unchanged since preparation of the existing RTS;
- that an update report should be prepared considering aspects that have changed since the existing RTS was agreed, including delays to the AWPR, different focus in Aberdeen City Centre, new Climate Change obligations and the difficulties with the global economy, impacting on expenditure, affordability of schemes and personal transport; and
- that the RTS should be better-aligned to the Structure Plan/Strategic Development Plan (SDP), both in terms of consistency of message and timeframe for planning.

3.5. A full SEA was undertaken of the Regional Transport Strategy when it was first developed in 2007. The scale of re-fresh that is being considered means that much of the appraisal work that was carried out for the SEA still remains valid. The scoping

report therefore outlined a method that focused on an appraisal of the proposed changes affecting the RTS since its publication in 2008.

### ***Vision and objectives of the NESTRANS RTS***

3.6. The vision for regional transport in the NESTRANS area, which has been subject to consultation and agreed with the RTP, is:

*“A transport system for the north east of Scotland which enables a more economically competitive, sustainable, and socially inclusive society.”*

3.7. A set of four strategic transport objectives and twelve operational transport objectives have been developed for the RTS. The objectives will be used to ascertain the success of different measures and packages in achieving what are the main aims of the Regional Transport Strategy.

**Table 3.1 NESTRANS RTS Objectives**

<b>Strategic Transport Objectives</b>	<b>Operational Transport Objectives</b>
<b>Economy</b>	
a) To enhance and exploit the north east’s competitive economic advantages, and reduce the impacts of peripherality.	i) To make the movement of goods and people within the north east and to/from the area more efficient and reliable. ii) To improve the range and quality of transport to/from the north east to key business destinations. iii) To improve connectivity within the north east, particularly between residential and employment areas.
<b>Accessibility and Social Inclusion</b>	
b) To enhance choice, accessibility and safety of transport for all in the north east, particularly for disadvantaged and vulnerable members of society and those living in areas where transport options are limited.	iv) To enhance travel opportunities and achieve sustained cost and quality advantages for public transport relative to the car. v) To reduce the number and severity of traffic related casualties and improve personal safety and security for all users of transport. vi) To achieve increased use of active travel and improve air quality as part of wider strategies to improve the health of north east residents.
<b>Environment</b>	
c) To conserve and enhance the north east’s natural and built environment and heritage and reduce the effects of transport on climate and air quality.	vii) To reduce the proportion of journeys made by cars and especially by single occupant cars. viii) To achieve targets for reductions in the environmental impacts of transport, which will be set out in the forthcoming National Transport Strategy. ix) To reduce growth in vehicle kilometres travelled.

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## Spatial Planning

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- d) To support a strong, vibrant and dynamic city centre and town centres across the north east.
- x) To improve connectivity to and within Aberdeen, especially by public transport, walking and cycling.
- xi) To improve connectivity to and within towns in Aberdeenshire, especially by public transport, walking and cycling.
- xii) To enhance public transport opportunities and reduce barriers to use across the north east, especially rural areas.
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## 4. The RTSs relationship with other plans and programmes and their environmental protection objectives

- 4.1. A review of other plans, policies and programmes relevant to the RTS was undertaken as part of the scoping report.

**Table 4.1 Other relevant PPS & environmental protective objectives of the RTS**

Name of plan, programme, strategy or environmental protection objective
<b>International Level</b>
The Habitats Directive 92/43/EEC
The Birds Directive 2009/147/EC
European Biodiversity Framework
Water Framework Directive 2000/60/EC
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
European Noise Directive (2002)
<b>National Level</b>
National Planning Framework for Scotland 2 (NPF2) (2009)
Scottish Planning Policy (SPP) (2010)
Scotland's National Transport Strategy (2006)
Strategic Transport Projects Review (2009)
Scottish Government Infrastructure Investment Plan (2011)
Cycling Action Plan for Scotland (2010)
The Government Economic Strategy (2007)
Scotland's Cities: Delivering for Scotland (2011)
Choosing Our Future: Scotland's Sustainable Development Strategy (2005)
Scottish Climate Change Delivery Plan (2009)
Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)
Towards a Low Carbon Economy for Scotland: Discussion Paper (2010)
The Scottish Historic Environment Policy (2011)
Designing Places: A Policy Statement for Scotland (2001)
Designing Streets (2010)
Scottish Executive (2006) People and Place: Regeneration Policy Statement
The Scottish Soil Framework (2009)
Scottish Landscape Forum' (2007) Scotland's living landscapes
Wildlife and Countryside Act 1981 (as amended)
The Nature Conservation (Scotland) Act 2004
Scotland's Biodiversity: It's in Your Hands. A strategy for the conservation and

Name of plan, programme, strategy or environmental protection objective
enhancement of biodiversity in Scotland (2004)
The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007
All Our Futures: Planning for a Scotland with an Ageing Population (2007)
Lets Make Scotland More Active: A strategy for physical activity (2003)
Equality Act 2010
'Making the Links: greenspace for a more successful and sustainable Scotland' (2009)
Water Environment (Controlled Activities) (Scotland) Regulations 2005
Water Environment and Water Services (Scotland) Act (WEWS) 2003
The Flood Risk Management (Scotland) Act 2009
SEPA Indicative Flood Map (2006)
Our Seas – a shared resource. High Level Marine Objectives (2009)
Marine (Scotland) Act 2010
Scotland's Zero Waste Plan (2010)
<b>Regional level</b>
Aberdeen City and Shire Structure Plan 2009
Nestrans Regional Transport Strategy 2021 (2008)
'Building on Energy Delivering the Vision for 2025' - The Economic Action Plan for Aberdeen City and Shire (2008)
Aberdeen City Community Plan and Single Outcome Agreement 2009-10
Aberdeenshire Community Plan 2011-2015 and Single Outcome Agreement (2012/13)
North East Scotland Local Biodiversity Action Plan (2000)
Forest and Woodland Strategy for Aberdeenshire and Aberdeen (2005)
Core Paths and Access Strategies <ul style="list-style-type: none"> <li>• Aberdeen City Council</li> <li>• Aberdeenshire Council</li> </ul>
Air Quality Action Plan for Aberdeen
North East Scotland Area Waste Plan (2003)
River Dee Catchment Management Plan (2007)
North East Scotland Area Management Plan (draft)
Tay Area Management Plan (draft)

4.2. The main issues for the RTS and the SEA, drawn from identifying common themes as part of this exercise are:

- Reduce the emissions of greenhouse gases.
- Promote mitigation and adaptation to the effects of climate change.
- Focus on the sustainable use of natural resources.
- Promote alternative, sustainable modes of transport and reduce congestion and traffic pollution through walking, cycling and public transport.
- Promote sustainable economic development and regeneration.
- Promote good design, safe environment, clean environment and good quality services.
- Improve the reliability, accessibility and range of modes and choices within the transport network.

- Address issues of access and scheme design to promote local services and retail facilities.
- Avoid adverse effects on biodiversity, including protected sites and species, but also in relation to wider ecological networks.
- Develop policies that maintain and enhance landscape character, including character of the built environment.
- Avoid adverse effects on the water environment or add to or create any significant flood risks.
- Encourage development to locate within transport corridors and near transport modes.
- Seek to optimise economic development.
- Reduce social exclusion and inequalities.
- Promote strategies that reduce road casualties.

## **5. Relevant aspects of the current state of the environment**

5.1. 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 Nestrans RTS 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 C.

## **6. Environmental problems & likely evolution of the environment without the RTS**

6.1. Environmental problems that affect the RTS were identified through an analysis of baseline data relevant to Aberdeen City and Shire and previous SEAs. Many of the problems emerging from the analysis of baseline data and discussions are being addressed through local transport strategies and other plans including the Strategic Development Plan. The strategic problems relevant to this RTS, as well as the likely evolution of the environment without the plan are summarised in the table below. Without this PPS it is envisaged that current programmes and investment would be ongoing through the Local Transport Strategies for Aberdeen City and Aberdeenshire, however there would be a significantly reduced level of co-ordination between the two areas.

**Table 6.1 Environmental Problems & likely evolution of the environment without the RTS**

<b>Environmental Topic</b>	<b>Issues/Trends</b>	<b>Likely evolution without the RTS</b>	<b>Possible role of RTS</b>
Air Quality	<ul style="list-style-type: none"> <li>• Levels of NO2 and PM10 increasing and resulting in poorer air quality particularly in Aberdeen City, as a result of road transport, increasing traffic flows and congestion.</li> <li>• Increased area emissions of air pollutants in city/ town centres caused by increased development of city/ town centres for retail, business and leisure, without adequate provision of new public transport infrastructure.</li> <li>• Need to encourage more sustainable forms of transport.</li> </ul>	<ul style="list-style-type: none"> <li>• Without the plan air quality may continue to decrease in Aberdeen City and in Aberdeenshire towns.</li> <li>• Other PPS will affect air quality issues, particularly the local transport strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should identify means to reduce congestion, encourage alternatives to the private car and encourage the uptake of cleaner fuels, all of which would have a positive impact on air quality.</li> </ul>
Climatic Factors	<ul style="list-style-type: none"> <li>• Increases in greenhouse gas emissions from the transport network</li> <li>• The need to adapt to predicted climate change and its potential impacts (e.g. extreme weather events and sea level rises)</li> <li>• Continuing reliance on the private car and increasing travel distances.</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic growth is likely to continue in the coming years which, without significant uptake of alternative fuels, will result in increased carbon emissions.</li> <li>• Without a strong policy framework at a regional level, implementation of new technologies may not happen.</li> <li>• Actions and interventions will continue to be taken forward through local transport strategies, however in recent years a strategic approach to travel behaviour change has proven successful and this would be threatened if it is not backed by strategic policy.</li> <li>• Other PPS will affect climatic factors, particularly the location and spread of development.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS has a key role to play in the setting of policies and delivery of actions aimed at reducing car use, encouraging more sustainable modes of travel and facilitating the uptake of alternative fuels.</li> <li>• The RTS brings together a wide range of partners to deliver improvements and promote sustainable travel, through the Getabout brand.</li> </ul>
Biodiversity, flora & fauna	<ul style="list-style-type: none"> <li>• Potential disturbance to and loss of biodiversity from development of transport infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic growth is likely to continue and therefore congestion likely to increase. This can impact on biodiversity through</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should minimise the impact of the transport network on protected and non-protected designations and</li> </ul>

Environmental Topic	Issues/Trends	Likely evolution without the RTS	Possible role of RTS
	<ul style="list-style-type: none"> <li>• Continuing need to protect internationally, nationally and locally designated sites, and enhance where possible.</li> <li>• Decrease and/or fragmentation of semi-natural habitats.</li> <li>• Potential impacts on protected and non protected species from development.</li> <li>• Potential loss of green space, green linkages and wildlife corridors to developments.</li> <li>• Proximity of strategic transport routes to protected areas, including the River Dee SAC</li> </ul>	<p>increased disturbance, noise and emissions, particularly in areas that do not currently suffer from high levels of traffic.</p> <ul style="list-style-type: none"> <li>• Measures would continue to be implemented through the local transport strategies, however a regional approach to the impacts and potential solutions would not be achieved.</li> <li>• Impacts of specific interventions would continue to be fully assessed at the project level.</li> </ul>	<p>species.</p> <ul style="list-style-type: none"> <li>• The RTS can only indirectly influence the condition of designated and protected sites through partnership working and ensuring appropriate environmental assessment is undertaken at project level.</li> </ul>
Landscape	<ul style="list-style-type: none"> <li>• Potential removal or introduction of new visual elements into the landscape e.g. new carriageway or public transport infrastructure.</li> <li>• Access to areas of value for their landscape quality for leisure purposes.</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts of specific interventions would continue to be fully assessed at the project level, however there would not be a strategic overview of the cumulative impact.</li> <li>• Measures would continue to be implemented through the local transport strategies, however a regional approach to the impacts and potential solutions would not be achieved.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should take landscape setting into consideration when identifying the requirements for changes to the transport network.</li> <li>• The RTS should seek to minimise the impact of the transport network on areas designated for landscape or townscape protection.</li> <li>• The RTS should seek to improve accessibility across the region for those who do not have access to a car.</li> </ul>
Cultural Heritage	<ul style="list-style-type: none"> <li>• Potential disturbance to and loss or severance of features of cultural heritage importance.</li> <li>• Potential for increased visual intrusion, affecting the setting of a listed building, scheduled monument or conservation area;</li> <li>• Potential for increase in noise, vibration and disturbance which may affect both physical structure and enjoyment of sites by the public.</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic growth is likely to continue in the coming years which may result in increased negative impact.</li> <li>• Impacts of specific interventions would be fully assessed at the project level however there would not be a strategic overview of the cumulative impact.</li> <li>• Actions and interventions will continue to be taken forward by the local authorities through their Local Transport Strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should seek to minimise the impact of the transport network on sites of cultural importance, specifically scheduled ancient monuments, listed buildings, designed gardens and landscapes, sites of archaeological importance (including marine archaeology), townscapes, historic landscapes and the wider setting of the above.</li> <li>• The RTS plays a key role in the setting of policy and actions to reduce</li> </ul>

Environmental Topic	Issues/Trends	Likely evolution without the RTS	Possible role of RTS
			the reliance on private car, reduce the growth in traffic and reduce emissions.
Water	<ul style="list-style-type: none"> <li>• Water bodies in close proximity to main roads are at risk from pollution caused by the impacts of contaminated surface water run-off from roads.</li> <li>• Construction of new transport links adjacent to water bodies has the potential to disrupt water ecosystems or pollute during both the construction and operation stages.</li> <li>• The handling of surface water run off in terms of the quantities produced from roads, parking areas (including Park and Ride facilities being promoted) runways, etc., is an important environmental issue – both in terms of managing water quality as well as reducing peak water runoff levels and flooding.</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse effects on water quality from the existing road network would remain the same.</li> <li>• Actions and interventions will continue to be taken forward by the local authorities through their Local Transport Strategies.</li> <li>• Impacts of specific interventions would be fully assessed at the project level.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should minimise adverse impact on water quality from the transport network.</li> <li>• The RTS should not increase the risk of flooding events and should promote the use of Sustainable Urban Drainage Systems (SUDS) to reduce surface drainage on roads. In addition the implementation of SUDS can assist in the enhancement of biodiversity objectives in the SEA, through the creation of new habitats and wildlife corridor</li> </ul>
Soil	<ul style="list-style-type: none"> <li>• Loss of land to the development of transport infrastructure.</li> <li>• Contaminated land and its impacts on land use and soil quality. Need to prevent future land contamination.</li> <li>• Soil erosion is a continuing problem in Scotland and there are concerns about loss of soil organic matter and soil sealing by impermeable surfaces associated with buildings and roads. Loss of soil organic matter (which acts as a carbon store) will result in increased carbon dioxide emissions.</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts of specific interventions would be fully assessed at the project level.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should minimise adverse impact on soil quality and coverage.</li> </ul>
Population	<ul style="list-style-type: none"> <li>• The population is increasing and this trend is projected to continue. This may assist in economic growth and protection of existing</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing increases in population without investment in transport infrastructure, across all modes will affect the economy of</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should be co-ordinated with the Strategic Development Plan for the region which sets the</li> </ul>

Environmental Topic	Issues/Trends	Likely evolution without the RTS	Possible role of RTS
	<p>services but will impact on the built and natural environment.</p> <ul style="list-style-type: none"> <li>• Changing demographics – ageing population. This will impact on the provision of transport services as more and more people become eligible for free concessionary travel and also for the provision of more accessible infrastructure.</li> </ul>	<p>the region as well as quality of life of the population.</p>	<p>requirements for population and housing and the spatial plan for development.</p>
Human Health	<ul style="list-style-type: none"> <li>• Improving opportunities for active travel</li> <li>• Improving access to health and other socially necessary services by modes other than the car.</li> <li>• Improving access to open space and leisure opportunities</li> <li>• Increases in noise through rising traffic levels</li> <li>• Opportunity to reduce social exclusion.</li> <li>• Road safety.</li> </ul>	<ul style="list-style-type: none"> <li>• Actions and interventions would continue to be taken forward through local transport strategies, however without a regional approach to areas such as access to healthcare across the region, implementation would be less joined up and significant changes to provision would be likely be more difficult.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS has a key role to play in reducing social exclusion through improving accessibility and improving health through encouraging increases in active travel and improving access to open space and leisure and health facilities.</li> <li>• The RTS has a role to play in improving safety and security on the transport network.</li> <li>• The RTS has a role to play in supporting the development and delivery of Noise Management Areas and reducing noise from transport.</li> </ul>
Material Assets	<ul style="list-style-type: none"> <li>• Capacity and use of the existing road and rail infrastructure</li> <li>• Quality and maintenance of the existing road and rail infrastructure as well as other types of transport infrastructure including car parks and bus infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of the transport network falls under the responsibility of the local authorities and is dealt with through local transport strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• The RTS should be aware of any additional maintenance requirements created as a result of its actions.</li> </ul>

## 7. SEA Objectives

7.1. The initial SEA of the RTS set seven SEA objectives against which the RTS was assessed and these were identified in the scoping report. The original objectives and indicators have been reviewed and comments received on the scoping report taken into account. Minor changes have been made to ensure they are focussed and remain measurable.

7.2. The objectives and indicators that will be used in the assessment are identified in the table below.

**Table 7.1 SEA Objectives**

SEA topic	Objective	Indicator
Air quality	To protect and improve local air quality to create conditions to improve the health of the population.	<p><b>NO<sub>2</sub></b>: Annual mean</p> <p><b>PM<sub>10</sub></b>: Annual mean</p> <p>Likely change in flow of traffic on trunk roads and routes with a higher proportion of buses and HGVs.</p> <p>Source: Local Authority Air Quality Monitoring Reports and Scottish Transport Statistics</p>
Greenhouse gas emissions	To help tackle climate change by reducing the effects of CO <sub>2</sub> emissions from road transport during the life of the plan, and helping to meet Scotland's targets to reduce emissions of greenhouse gases.	<p>Predicted emissions of CO<sub>2</sub> from road transport.</p> <p>Source: DEFRA</p>
Biodiversity	To protect, maintain and enhance biodiversity, avoiding damage to designated wildlife sites, geological sites, protected species & habitats and irreversible losses.	Number of designated sites likely to be affected by RTS strategies and the change in the condition of their notified features.
Cultural heritage	To preserve and enhance (where appropriate) historic buildings, archaeological sites and other culturally and historically important features and their settings.	The potential for significant effects (direct or indirect) on listed buildings, scheduled monuments, Historic Gardens and Designed Landscapes and archaeological sites as well as other culturally and historically important features.
Water	To protect, maintain and improve the quality of all water bodies and wetlands in the region and to protect against the risk of flooding.	<p>Water bodies (including rivers, coastal &amp; estuary waters and wetlands) where quality may be affected by RTS strategies and their quality as monitored by SEPA.</p> <p>Flood risk areas affected by RTS strategies.</p>
Soils	To reduce contamination and safeguard soil quality and quantity.	<p>Presence of contaminated land in relation to RTS strategies.</p> <p>Potential for loss of greenfield / brownfield land and proportion available for re-use as a result of RTS strategies.</p>

SEA topic	Objective	Indicator
Population and human health	To create conditions to improve health and reduce health inequalities (as identified in the air quality objective above)	See air quality objective above.
	To reduce the number of casualties from road traffic accidents.	Number and severity of road traffic accidents

## 8. Assessment of environmental effects

### Assessment of alternatives

- 8.1. A range of alternatives were developed and assessed as part of the development of the RTS in 2008 and the accompanying SEA. As the purpose of the review is not to change the direction of the RTS but rather to incorporate developments in the wider policy framework within which the RTS sits and better align it with the Strategic Development Plan, it is not proposed that the objectives or the general direction of the RTS will change as a result.
- 8.2. It was therefore proposed in the scoping report that the assessment of the alternative options contained within the original SEA of the RTS remains valid. Full details of the assessment of the alternative strategy options can be found in the Environmental Report that accompanies the 2008 RTS, available on the Nestrans website at <http://www.nestrans.org.uk/regional-transport-strategy-and-supporting-documents.html>

### Assessment of the preferred strategy package

- 8.3. A full SEA of the elements of the preferred strategy package was carried out during the development of the original RTS in 2008. As it is not proposed to significantly change the strategy, but rather update it to reflect recent changes in policy and to better align it with the Strategic Development Plan, the original SEA assessment has been included below and updated where the actions of the RTS have been significantly amended or new actions have been added (actions that have been re-assessed are highlighted in bold italics). This method also allows an understanding of the cumulative impacts of the RTS as a whole and this is addressed later in this chapter.

#### ***Sub-Strategy 1: The External Connections Strategy***

- 8.4. This category of measures and activities within the NESTRANS RTS is aimed at improving the connectivity of the north east region with the rest of Scotland, UK and Europe. It focuses on travel by air, rail, road and sea.
- 8.5. There are significant negative environmental impacts associated with expanding the **air network** and providing the infrastructure to cater for an increased volume of flights. These impacts will primarily result in increased carbon dioxide emissions, resulting from an increased volume of aircraft movements and a decrease in local air quality from the resulting increase in emissions. However, air travel continues to be important for the economic development of the north east of Scotland. This is reflected by an objective of the RTS, “to enhance and exploit the north east’s competitive economic advantages, and reduce the impacts of peripherality”. The policies on air travel are primarily aimed at increasing the opportunities for business air travel, as opposed to low-cost passenger air travel.

- 8.6. An Environmental Impact Assessment has been carried out on the extension of the runway at Aberdeen Airport and the first part of the extension has now been delivered. This SEA therefore reiterates the findings of that EIA, which concluded that a longer runway would result in greater efficiency amongst airlines, enabling the use of larger more fuel-efficient aircraft, and higher loadings of existing aircraft. It is not clear however if this SEA included an assessment of the proposed extension against the indicator of greenhouse gas emissions / climate change.
- 8.7. **Sea connections** are a crucial part of the transport network in the north east. The movement of goods by sea has the lowest ecological footprint of any mode. Research has suggested the ecological footprint of various modes for freight as follows<sup>1</sup>:
- Air freight – 0.315 global hectares (gha)/per year/tonne km
  - Road freight – 0.075 gha/per year/tonne km
  - Rail freight – 0.014 gha/per year/tonne km
  - Sea freight – 0.006 gha/per year/tonne km
- 8.8. Enhancing short sea shipping services by increasing the number and frequency of sailings and routes available will have a slight negative impact on noise, greenhouse gas emissions and local air quality through an increased number of ferry trips using diesel fuelled vessels. There is also likely to be slight negative impacts on water quality and marine biodiversity as a result of this increased movement of vessels in the sea. Transport by sea carries an associated contamination risk from accidental spills, leakage of fuel and lubricants, anti-foulant paint and refuse. Such impacts would have possible knock-on effects on biodiversity and fisheries and may also affect bathing waters. However, these potential negative impacts need to be balanced with the potential removal of freight from road and rail, both of which have a greater ecological footprint than sea freight.
- 8.9. It has not yet been determined what new or enhanced ferry infrastructure may be required as a result of the proposals in the RTS. The construction and operation of new ferry infrastructure has the potential to have significant environmental effects on the marine environment. This can include impacts on marine hydrology and the potential for changes in deposition of sediments, with knock on effects on biodiversity and sometimes fisheries. There will also be environmental impacts if increased dredging to keep navigational channels clear is required. As construction within the water will be required for proposals such as new harbours or breakwaters, a detailed environmental impact assessment will be required in order to fully understand the potential impact on marine biodiversity and marine archaeology. The construction of new harbour infrastructure could also have a negative impact on landscape if not done sensitively.
- 8.10. **Travel by rail** is generally recognised to be one of the most environmentally friendly forms, and rail provides an important strategic link from the north east to the rest of Scotland and the UK. The impacts of encouraging longer and more frequent trains could be negative for the environmental category of noise. This is particularly important if there are people living in close proximity to the relevant stations. However, improvements to rail services on commuter and regional services will make rail a more attractive option, encouraging mode shift and providing positive health and social impacts by improving the accessibility of the region as a whole.
- 8.11. The preferred package includes a policy to support **strategic road schemes**, to address journey reliability. In 2011, the Scottish Government included dualling of the A96 from Aberdeen to Inverness in its Infrastructure Investment Plan. This national project has therefore been recognised within the RTS re-refresh. This project will have significant

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<sup>1</sup> Atkins 2000, Peel Holdings 2000, referenced in Towards a Sustainable London: Reducing the Capital's Ecological Footprint, Phase 1 Report, 2003

environmental impacts which will require to be fully assessed as the Scottish Government taken this forward.

**Table 8.1 Assessment of RTS components: External connections**

		SEA Topic area									Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
Policy	Measure and activity	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health	
EC1: Rail	Rail links and services	?	+	?	?	0	0	0	0	+	Rail in general promotes modal shift from car and potentially air travel if long distance, so positive impacts through reducing greenhouse gas emissions. Improvements to existing network as opposed to new infrastructure so minimal environmental impacts. High Speed Rail is not currently anticipated to extend past the central belt of Scotland.
<b>EC2: Strategic roads</b>	Strategic roads	-	-	-	?	?	-	?	?	+	This is a strategic policy to promote and support the development of the strategic road network, so environmental impacts of individual projects will be assessed as they are developed. The dualling of the A96 is part of wider Scottish Government policy and will be assessed as part of national strategies, however it is likely to have significant negative impacts, particularly on noise, carbon emissions, air quality and landscape however will have a positive impact on health by improving the safety of the road. The severity of many of these impacts will depend on the design of the improvements and whether they follow the existing road alignment or a new line. A full environmental impact assessment will be required for this project.
EC3: Coach	Inter-regional bus and coach travel	0	0	0	0	0	0	0	0	+	The proportion of trips undertaken by coach is small and therefore the impact of supporting the continuation and development of these services is minimal.
<b>EC4: Sea</b>	Connections by sea	-	?	?	-	-	?	0	0	?	Overall neutral assessment for sea connections in terms of shipping and unknown in terms of infrastructure. Sea freight has the lowest ecological footprint of any mode. Potentially negative impacts on air and greenhouse gas emission; impacts on water from oil emissions, spills, and dumping; negative on marine life especially mammals from marine noise pollution and risk of collision. Neutral impact on coastal environments from fast ferry wash. Unknown impacts from new/amended coastal infrastructure as insufficient detail. The relevant Harbour Boards are taking forward plans for expansion and environmental considerations will need to be a key part of their decision making process. This is reflected in the RTS.
EC5: Air	Aberdeen Airport - Air routes and frequency of services	?	--	?	0	0	-	0	?	?	Assessment based on findings of Environmental Statement into Runway Extension (see next measure), although increase in absolute number of flights and air miles will have negative impact on greenhouse gas emissions.
	Aberdeen Airport - runway extension	0	?	0	-	0	-	0	?	?	The first phase of the extension has now been completed. The proposal has been subject to an Environmental Statement which concluded that overall there was no significant environmental impacts, and any negative impacts would be mitigated. However, assessment did not appear to cover health, greenhouse gas emissions

		SEA Topic area									Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
Policy	Measure and activity	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health	
	Aberdeen Airport – Support for key aviation routes	0	0	0	0	0	0	0	0	0	or material assets. This policy seeks to continue and retain existing service levels for the benefit of communities and the economy in the North East.

Key: ++ significant positive impact; + slight positive impact; 0 neutral impact; ? unknown impact; - slight negative impact; -- significant negative impact.

## Sub-Strategy 2: The Internal Connections Strategy

- 8.12. Measures and activities in this category focus on improving the capability of the transport network.
- 8.13. The preferred package includes a number of measures to address the capacity and safety of the **road network**. It identifies some key routes where work may be required, at a strategic level. There are potential negative environmental impacts in relation to road schemes for noise, greenhouse gas emissions and local air quality, primarily due to increases in traffic levels as a result of journeys becoming more reliable and consistent. New road schemes will also have a negative impact on landscape through construction of a new feature in the landscape. Landscape impacts can also arise from lighting associated with new transport routes, particularly in remote rural settings.
- 8.14. A number of the proposed schemes are located in the vicinity of areas protected for their natural or cultural heritage, including areas of European, national and regional importance, and there is the potential for some negative impact on flora and fauna and cultural heritage. As the alignments and details of many schemes have not yet been identified, the precise impacts are unknown however there is scope to ensure that, where possible, such areas are avoided. Mitigation measures can also be introduced to minimise the impact on these aspects of the environment and these are discussed in chapter 9. A particular point to note is the consideration of any intervention in the vicinity of the River Dee SAC which is protected for its freshwater pearl mussels, atlantic salmon and otters. The bridge itself is also designated as a listed building. Any intervention in this area will require a full STAG appraisal, including appraisal of environmental impacts. A full EIA and Appropriate Assessment will also likely be required.
- 8.15. Whilst travel by road can be environmentally damaging, it is also essential for certain trips. Moreover, improvements to the road network enhance journeys for all road users, including cyclists, motorcyclists, public transport users and freight, as well as car users. The region's road network provides an important link to the rest of Scotland and the UK. A key objective of the NESTRANS RTS is "to enhance and exploit the north east's competitive economic advantages, and reduce the impacts of peripherality" – it is felt by Nestrans that improving strategic roads is critical to achieving this objective.
- 8.16. The proposal to focus on **prioritised maintenance** aims to ensure activity is focused where most needed, particularly to serve the needs of pedestrians, cyclists and public transport users. Re-surfacing projects could have implications for noise, as the smoothness of road surfaces has a notable impact on traffic noise. The unevenness of road surfaces can also, if severe, cause large tyre and suspension movements which can affect the handling of vehicles, with an adverse effect on road safety.
- 8.17. There can be negative environmental implications on soil and water when salt is used during the winter to prevent the formation of frost and ice on the roads and footpaths. The use of salt can damage plants and trees on the verge, and the runoff can cause water pollution and change the properties of soil.
- 8.18. Both Aberdeen City and Aberdeenshire Councils have a policy on the use of recycled materials in road maintenance, and this will be beneficial to the environment in terms of minimising the use of finite resources.
- 8.19. As has been discussed against the External Connections sub-strategy, **rail** is a preferable mode in environmental terms to car and road-freight transport.

- 8.20. Promoting bus services across the North East will generally have a positive impact on the environment, through modal shift and reduction in emissions from private vehicle trips.
- 8.21. There are some potential negative impacts from the promotion of buses, which need to be considered. More frequent **buses** could have negative impacts on noise. These large vehicles, which are frequently slowing down and speeding up, emit higher levels of noise than normal traffic, which is more noticeable to human ears, causing higher annoyance. The same applies to improvements to bus stations, stops and other measures which encourage higher bus use. However, at the same time, if these bus improvements cause modal shift away from car use, these measures would hold positive air quality benefits. There is not enough detail available at present to give any more accurate measure of the extent of the positive or negative impacts on noise and air quality.
- 8.22. Bus Rapid Transit systems will be considered as part of the RTS. However, these proposals are long term, and whilst there may be environmental impacts from land take of any new infrastructure, care will be taken to minimise the impact on any designated areas identified by this SEA process.
- 8.23. Measures to increase the uptake of alternative fuel options for public transport across the region, will help to reduce the impact of increasing levels of bus services on local air quality and greenhouse gas emissions, this is dealt with in more detail under the strategic policy framework.
- 8.24. The key benefit from Park and Ride schemes is in reduction of congestion, and local air quality improvements as a consequence, particularly in the city centre where there are designated Air Quality Management Areas. There would however be the direct land take and physical impact of the Park and Ride facilities themselves, which can be considerable. Planning permission has already been granted for the site on the A96 and a planning application has been submitted for the site on the A90(S). Have environmental impact assessments been done?
- 8.25. The proposal for mini-hubs will have a much reduced impact on the environment in terms of land take and physical impact in comparison to larger park and ride sites however care should nonetheless be taken in the identification of any future sites to ensure they do not encroach on environmentally sensitive designated areas or areas of cultural importance.
- 8.26. There is unlikely to be much negative environmental impact directly from investment in **transport information and ticketing** systems which promote sustainable travel choices – moreover, promoting sustainable travel should have an overall positive environmental impact through reducing vehicular kilometres and resulting emissions.
- 8.27. Similarly, proposals to improve **interchange** facilities for public transport users will promote sustainable travel choices. In built-up areas, such as Aberdeen City Centre, care will have to be taken to minimise the impact on any buildings of cultural or historical importance.
- 8.28. Encouraging non-motorised transport, that is **walking** and **cycling**, and reallocating road space to non-motorised modes can improve physical fitness and therefore makes a positive contribution to human health. However, care will have to be taken to ensure that any road space freed up by modal shift is not filled by additional vehicular traffic. The Cycling Action Plan for Scotland contains a target of 10% of trips by cycling by 2020 and this is reflected in the RTS. If achieved, this would be a significant increase in the numbers of people cycling and will have a positive impact on noise and air quality. It is recognised in the RTS that this is a challenging target but any mode shift towards cycling and walking will have positive impacts. It is unlikely to make a significant difference to climate change on its own as will still be a smaller proportion of overall travel, however is a positive step towards reducing

emissions. In terms of the physical impact of building work, we cannot yet say whether there will be any impact on biodiversity and the natural environment, as the precise locations of many new lanes and routes are not yet specified in detail. Many of the measures to support pedestrians occur in urban areas where there will be minimal environmental impacts (e.g. Guild Street and Union Street in Aberdeen City Centre).

- 8.29. Proposals to enhance public transport **access to Aberdeen Airport** are positive in that they will aim to reduce vehicle miles by private car travel and reduce congestion in and around the airport. Any improvements to station facilities will be at the existing Dyce railway station.
- 8.30. Proposals for **freight** could result in negative environmental impacts as, in the main, they are focussed on facilitating the movement of freight both within the region and to elsewhere. Much of this freight will be on the road network (opportunities for shifting it to other modes are limited) and, if volumes of freight increase, this could have negative impacts on road safety, noise and local air quality. However, this is balanced with increasing opportunities for rail freight, which could result in the removal of vehicle kilometres from the road network.

**Table 8.8:1 Assessment of RTS components: Internal Connections Strategy**

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
<i>IC1: Rail</i>											
<b>Local rail services</b>	0	0	+	?	?	?	0	+	+	Overall positive as promoting modal shift through more reliable public transport, and reducing harmful emissions, thus impacting on air quality, greenhouse gases and health. Would involve increased frequency of services but on existing lines and therefore impact would be minimal as also resulting in mode shift away from private car travel.	
<b>Feasibility of new lines and new stations</b>	--	0	+	?	?	?	?	+	++	Would have a negative impact on noise along any new routes and at new stations however overall positive as would provide a significant opportunity for mode shift through enhanced public transport opportunities, reducing harmful emissions and improving health and access to health facilities. A detailed assessment of impacts would be carried out as part of the process to develop such proposals.	
<i>IC2: Road improvements</i>											
<b>Strategic roads (capacity improvements)</b>	?	?	?	?	?	?	?	?	?	All proposals to be developed – assessment of impacts will be carried out on specific projects. Areas to highlight at this stage are potential impacts on Sites of Regional Importance in the vicinity of some proposed improvements e.g. A96 west of Inverurie/east of Huntly, and A90- between Ellon and Peterhead	
<b>Strategic roads (safety priorities)</b>	?	?	?	?	?	?	?	?	?	All proposals to be developed – assessment of impacts will be carried out on specific projects. Areas to highlight at this stage are potential impacts on Sites of Regional Importance in the vicinity of some proposed improvements e.g. A96 west of Inverurie/east of Huntly, and A90- between Ellon and Peterhead	
<b>Addressing the cumulative impacts of development through a Strategic Transport Fund (road measures)</b>	?	?	?	?	?	?	?	?	?	The detail of all proposals is still to be developed but improvements will generally be on the existing road network which will limit environmental impacts. By improving the flow of traffic there is likely to be a positive impact on air quality, however there is the	

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
											<p>potential that more reliable journey times will result in increased levels of traffic if the benefits of the improvement and other infrastructure schemes are not 'locked in' for sustainable modes.</p> <p>The Bridge of Dee area is identified as one of the areas that will require intervention. The existing bridge is a Category A Listed Building and the River Dee is an SAC area so the potential for negative environmental impact in this area is significant. As no option has been identified at the RTS stage it is not however possible to fully assess the likely impact. A full STAG appraisal of the options for this area is currently being undertaken, including environmental appraisal of the options being considered. A full Environmental Impact Assessment will also likely be required on any preferred option to be taken forward. This is reflected in the RTS.</p>
Car share lanes	?	+	+	0	0	0	0	0	+	+	Overall positive as reducing number of vehicles on the road, and reducing vehicle trips by 4-30%. However, some evidence HOVs can detract from bus use, so this will need to be monitored.
Prioritised maintenance	0	0	0	0	0	0	0	+	+	+	Overall neutral impact as promoting efficient use and maintenance of authority assets and improving road safety.
<i>IC3: Bus improvements</i>											
Bus Quality Improvements	0	+	++	0	0	0	0	0	++	++	Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips. Insufficient information to assess any detailed impacts from new or amended infrastructure.
Improving reliability	0	+	++	?	?	?	?	0	++	++	Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips.

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
											Insufficient information to assess any detailed impacts from new or amended infrastructure – some new carriageway may be created, so individual environmental impacts should be considered at the appropriate stage.
Bus rapid transit	0	+	+	?	?	?	?	?	+		Overall positive as promoting modal shift through more reliable public transport, thus reducing vehicle emissions and impacting on air quality, greenhouse gases and health. Any new land take would most likely be on land adjacent to existing carriageways and allocated for transport development in the development plan. More detailed assessment of impacts required on a project basis.
Park and Ride	0	+	++	?	?	-	?	+	+		More detailed assessment of impacts required on a project basis. Positive impact on reducing traffic volumes and congestion, particularly in the city centre where there are Air Quality Management Areas. Potential negative impacts from generation of net additional vehicle kms. Negative impacts from land take of P&R. Positive impacts from improving accessibility.
Information	0	+	++	0	0	0	0	0	++		Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips.
<b>Addressing the cumulative impact of development through a Strategic Transport Fund (bus measures)</b>	0	+	++	0	0	0	0	0	++		Overall positive as promoting travel by sustainable modes (bus) from new developments. Aim to reflect changing trip patterns and linking new developments to employment destinations.
<i>IC4 Demand Responsive Transport</i>											
Demand responsive transport	0	0	0	0	0	0	0	0	++		Overall neutral as DRT journeys make up a very small proportion of trips. Significant positive impact on health and wellbeing by filling gaps in the transport network and providing access to key services and facilities, such as health services, and can help reduce

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
											isolation.
Community transport	0	0	0	0	0	0	0	0	0	++	Overall neutral as community transport makes up a very small proportion of trips. Significant positive impact on health and wellbeing as provides transport for those who find it difficult to use scheduled public transport services and therefore provide access to key services and facilities, such as health services, and can help reduce isolation.
Taxis	0	0	0	0	0	0	0	0	0	++	Overall neutral as proposal is not to significantly change the number of taxis operating but rather to make sure they are operated to meet the needs of customers. Significant positive for population as taxis are a key part of the transport network.
<i>IC5: Transport Interchange</i>											
Aberdeen City Centre Interchange	0	+	+	0	0	0	0	+	+	+	Improving the attractiveness of public transport, particularly waiting facilities will encourage mode shift and have a positive impact on greenhouse gas emissions and local air quality. Any improvements would likely be to existing infrastructure as significant improvements have recently been made through the Union Square development and therefore limited impacts. Positive impacts from improving accessibility.
Aberdeenshire Towns	0	0	+	?	?	?	0	+	+	+	More detailed assessment of impacts required on a project basis. Potential positive impact on reducing congestion at localised level and in Aberdeen if mode shift on journeys into the city centre is achieved. Potential negative impacts from generation of net additional vehicle kms to any park and ride or mini-hub sites. Negative impacts from land take of new interchanges if on greenfield land. Positive impacts from improving accessibility.
<b>Ticketing</b>	0	++	++	+	+	+	+	0	++	++	As a policy to promote use of public transport as opposed to the private car, this has an overall positive impact on the environment through reduction in emissions from private vehicles, and reduction in the

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
<i>IC6: Walking and Cycling</i>											need for future road infrastructure.
<b>Pedestrian environment</b>	0	0	+	0	0	0	0	?	++	Overall positive as facilitating increased levels of walking, accessibility and pedestrian safety.	
Low speed zones	0	+	+	0	0	0	0	0	++	Overall positive as promoting safety and slower speeds (reduced emissions).	
<b>Cycling Network</b>	0	0	+	0	0	0	0	0	++	Overall positive as facilitating increased levels of cycling, promoting modal shift and physical activity.	
<i>IC7: Aberdeen Airport Surface Connections</i>											
<b>Bus and rail services to the airport</b>	0	+	+	0	0	0	0	0	+	Overall positive as promoting modal shift through more reliable public transport, thus reducing vehicle emissions and impacting on air quality, greenhouse gases and health.	
<i>IC8 Port surface connections</i>											
Access to port facilities	-	-	-	0	0	0	0	+	+	Potential for some negative impacts due to increased levels of freight traffic to and from the port if connections are improved, however improved connections from the ferry terminal to bus and rail stations will improve access for passengers.	
<i>IC9: Freight</i>											
Rail freight	?	++	++	?	?	?	?	?	+	Rail freight has less environmental impact than road freight and therefore makes a positive contribution to the environment. Details of specific improvements to freight facilities are not detailed at this stage and individual environmental assessments may be required.	
HGV priority	?	?	?	0	0	0	0	0	?	HGVs may inhibit bus flow but impact should be minimised by choice of route. Potential for improvements to air quality if HGVs are provided with routes free from congestion, however impacts need to be monitored during trial, and therefore it is not possible to conclude on assessment here.	

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
<i>IC10 Powered two wheelers</i>											
Powered Two Wheelers	0	?	+	0	0	0	0	0	-	Potentially negative impacts overall as whilst emissions lower than cars per vehicle/km, additional risk of death or injury to riders and passengers is likely to outweigh any health benefits to third parties. Also more likely to abstract public transport passengers than car users.	

Key: ++ significant positive impact; + slight positive impact; 0 neutral impact; ? unknown impact; - slight negative impact; -- significant negative impact.

### **Sub-Strategy 3: The Strategic Policy Framework**

- 8.31. The policy framework sets the boundaries and context for all other strategic measures. It is intended to set the key cross cutting themes of the RTS and to define the overall strategic thrust of the RTS. The framework is intended – over the life of the RTS - to change how people travel, how often they travel and how safely they travel.
- 8.32. Travel Plans are a measure to promote sustainable travel choices. They are often categorised as a 'soft measure', which includes promotional activities to support walking, cycling and public transport as a whole. Benefits include increases in bus use, walking and cycling (with associated health gains). Depending on the extent of these initiatives, the soft measures could have a positive air quality and social impacts.
- 8.33. Promoting active travel can play a significant part in wider efforts to improve the health of the population and will need to form a significant part of the strategy if national targets for increasing the number of journeys made by bike to 10% are to be achieved. Increasing the number of trips by walking and cycling will also have positive impacts for air quality by reducing the number of car trips for short journeys.
- 8.34. Changing choices through incentives and partnerships is a cross-cutting theme, including measures concerned with enforcement and commitment of funding to achieve the RTS objectives. They include working with bus operators and investigating subsidies or incentives to make public transport use more attractive to existing and new users. To reduce the impact of vehicle emissions, it is proposed to explore and encourage the use of alternative fuels for the public transport sector.
- 8.35. Enforcement measures are primarily focused on two key areas – reducing emissions, promoting safety for all road users, the latter through effective enforcement of parking regulations and speed limits. These latter measures are unlikely to cause any significant change to the environment, as they do not seek to actually remove any traffic, although enforcing emission standards for public transport will have a positive impact on the environment.
- 8.36. Demand management measures have the potential to improve carbon emissions and air quality by reducing overall traffic volumes. They would also help to maximise the potential environmental benefits arising from mode shift, through effective management of the additional capacity released on the road network. Such measures would ensure that spare capacity created by mode shift does not encourage an overall growth in traffic. In the NESTRANS region, a parking strategy will be developed to assist with demand management.

**Table 8.3 Assessment of RTS components: Strategic Policy Framework**

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
<i>TC1: Travel plans and awareness</i>	0	+	++	0	0	0	0	0	0	+	Overall positive as aimed at promoting modal shift from private car to walking, cycling and public transport, thus reducing damaging impacts of private car travel.
<i>TB2 Promoting active travel</i>	0	++	++	0	0	0	0	0	0	++	Overall positive as increasing active travel will promote mode shift, reduce emissions and improve the health of the population.
<i>TB3 Improving safety</i>	0	0	0	0	0	0	0	0	0	++	Overall neutral as primarily support of educational and promotional messages (other measures to improve safety are covered under the internal connections strategy). Significant positive on population and health if the number and severity of casualties is reduced.
<i>IE1: Changing Choices through Incentives and Partnerships</i>											
Bus Incentives - to reduce the cost of bus fares	0	+	++	0	0	0	0	0	0	++	Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips.
Bus Partnerships – to improve and extend bus services	0	+	++	0	0	0	0	0	0	++	Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips.
<i>IE2: Using enforcement</i>											
Enforcement of vehicle exhaust emissions - in city centre and elsewhere to ensure UK and European air quality standards are achieved	0	+	+	0	0	0	0	0	0	++	Overall positive as reducing emissions from vehicles, with impacts on local air quality, cumulative impacts on greenhouse gas emissions at regional level, and reduced impacts on health (e.g. respiratory illness).
Enforcement of speed	0	+	+	0	0	0	0	0	0	++	Overall positive as promoting safety and slower speeds (reduced emissions).

Action	SEA Topic area									Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health	
<b>Bus lane enforcement</b>	0	+	+	0	0	0	0	0	+	Overall positive as speeding up and improving the flow of bus journeys thus reducing stop / start movements which increases emissions and also making bus a more attractive option and contributing to encouraging mode shift.
<i>IE3: Parking</i>										
Parking Strategy for North East	+	+	+	0	0	0	0	+	+	The strategy aims to support economic vitality and increase travel by sustainable modes, primarily through management of existing car parking provision, enforcement, new technologies and planning policy, rather than new infrastructure. This will have a positive impact on reducing the impact of cars in the city and town centres, improving health but will have neutral impact on other aspects of the environment.
Enforcement of parking	0	+	++	0	0	0	0	0	++	Overall positive as promoting modal shift through increased use of public transport (buses), and improving accessibility. Cumulative impact on emissions at regional level, through reduced car trips.
Small vehicle & HOV parking incentives	0	+	+	0	0	0	0	0	++	Overall positive as promoting higher car occupancy and low emission vehicles, thus reduced vehicle emissions per individual travelling. Insufficient information to assess impacts of any new or amended infrastructure, although unlikely to be major infrastructural requirements.
<i>CR1 Carbon reduction and air quality</i>										
<b>Alternative fuels – incentives</b>	0	++	++	0	?	?	0	+	+	Overall positive impact as reducing use of fossil fuels and resulting harmful emissions. However, questions over potential negative impacts on biodiversity from growth of energy crops.
<b>Noise</b>	++	0	+	0	0	0	0	0	++	Positive in terms of identifying, managing and reducing the impact of noise on human health. Potential positive for air quality as well if linked to

Action	SEA Topic area										Comments and overall assessment (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects) and proposed changes to the strategy
	Noise	Greenhouse gas emissions	Air quality	Water, geology and soils	Biodiversity	Landscape and visual amenity	Cultural heritage	Material assets	Population and Health		
<i>E1 Consultation and engagement</i>	0	0	0	0	0	0	0	0	0	0	reducing traffic levels in management areas. No real environmental impact.

Key: ++ significant positive impact; + slight positive impact; 0 neutral impact; ? unknown impact; - slight negative impact; -- significant negative impact.

## Cumulative assessment

8.37. It is normally desirable to demonstrate how the packages of measures within a strategy perform cumulatively against the SEA objectives. The individual measures within the three sub-strategies are however of an extremely varied nature which makes this task difficult to present whilst also providing a meaningful assessment. It has therefore been concluded that instead of presenting this in tabular form the key areas of potential impact be summarised.

8.38. It should be noted that the Nestrans RTS is a high-level strategy document, and most schemes or initiatives will have to undergo further detailed appraisal work before a decision is made on whether to implement them. Such appraisal will also most likely include an Environmental Impact Assessment where EIA (Scotland) Regulations 1999 apply to a particular project or scheme.

8.39. To conclude, the key areas of potential impact from the RTS are as follows:

- Positive impacts:

The RTS includes a large number of actions and measures to increase the proportion of trips undertaken by sustainable modes (bus, rail, walking and cycling), particularly in areas currently affected by congestion and poor air quality. New actions, added to the RTS in this re-refresh include investigating the potential for further stations and new rail lines, strategic bus priority and bus frequency improvements, enhanced measures to increase the number of trips by bike, measures to enforce the operation of bus lanes, support for encouraging the uptake of alternative fuels and support for demand management measures to lock in the benefits of other schemes.

- Unknown impacts:

As many of the proposed measures in the RTS are outline at this stage, and specific details such as routings are unspecified, there are unknown physical impacts from some proposed schemes, particularly those which will result in new or extended infrastructure. In relation to new actions added as a result of the re-refresh, this includes strategic road improvements to mitigate the cumulative impact of development. All these areas will have to be fully considered in line with the principles of STAG (Scottish Transport Appraisal Guidance) which includes appraisal of environmental impacts, in order to identify a preferred option before they can be taken forward.

- Negative impacts:

Potentially negative impacts could arise from new road infrastructure and expanded air services in particular. However, the impacts of these projects need to be seen in terms of the overall impacts of the preferred package as a whole, which will reduce congestion and promote sustainable modes. Where proposals for road improvements are made, these are balanced with proposals to lock in the benefits of reducing congestion for public transport, cyclists and pedestrians. An action has been added as part of the re-refresh, to ensure that all new developments and transport infrastructure improvements take consideration of and make provisions for pedestrians and cyclists as an integral part of the design process. Furthermore, efforts to mitigate negative impacts will be made, as discussed in Section 6.

## Overall assessment

8.40. Given the assessment of RTS actions against the objectives and topic areas set within the SEA, and the outline nature of many of the proposals which negates more detailed impact assessment, we conclude at this stage that the RTS will have no major, identifiable detrimental impacts on the environment. Some negative or uncertain impacts have been identified in this section, and the following section seeks to explore how these could be mitigated.

## 9. Mitigation / prevention measures

### Role of mitigation in SEA

9.1. One of the key purposes of the SEA process is to ensure environmental protection is an integral part of the plan making process. A principal way of achieving this is by incorporating mitigation measures into the policies and proposals of the plan as it develops.

9.2. The SEA Regulations specify the Environmental Report must contain a description of:

*'The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.'*

9.3. However, given the nature of the interactions between transport policies and proposals and the environment, it is unlikely that there will be many significantly adverse impacts. The analysis in **Section 6** generally concurs with this, finding mainly some uncertain effects. The lack of detail regarding the extent and location of many of the measures meant it was not possible to identify any significant impacts.

9.4. Despite this, it is possible to consider ways in which the policies and proposals that may be put forward in the RTS could be changed in order to lessen any adverse environmental effects that they might have, or indeed help to secure environmental improvements. This can be done in three main ways:

- **Avoidance or prevention:** This involves modifying the alternative options for the RTS. One or more elements of an alternative can be refined further in order to avoid particular environmental effects. The STAG appraisal process provides a mechanism for the development and appraisal of options and alternatives to identify a preferred option and this includes consideration of environmental impacts.
- **Reduction:** When all alternative options or approaches to avoiding an effect have been examined, ways of reducing the extent or magnitude of the effect need to be considered. This could focus on timing or phasing of RTS measures to reduce adverse effects. An example would be re-timing of all maintenance works outside of peak periods, to reduce carbon dioxide emissions associated with congestion.
- **Offsetting or compensation:** If no opportunities are available to either avoid or reduce adverse effects, remedial measures can be taken. This could be financial compensation for the loss of, or damage to, environmental resources, although the scope for this might be limited in the context of an RTS. However, it can also

include replacing the resource. This could be by providing a comparable or similar resource somewhere else, although this may not be an appropriate response if resources are unique or irreplaceable.

- 9.5. Promoting policies and proposals that enhance the environment may also become an end in itself. For example, a program of street works might be extended to include the removal of unnecessary street railings and obstacles to enhance the setting of historic buildings or areas.
- 9.6. Specific measures that might be applied to reduce the environmental effects of transport, and that may be appropriate to incorporate into the RTS policies and proposals are considered in the following paragraphs under specific topic headings.

### **Recommendations for mitigation**

#### **Noise**

- 9.7. Reducing noise effects from existing traffic flows is quite difficult. Traffic management can help, but traffic flows have to be reduced by more than 50% to have any real effect on noise levels. Reducing speed limits in residential areas is another, perhaps more effective, option. Noise barriers or mounds can be provided to protect homes and schools, but these can only be provided where there is space to do so. Secondary glazing can be provided for homes and other sensitive buildings, but the Councils do not have legal powers to do this to resolve noise problems that already exist.
- 9.8. A practical measure that can be effective is the use of low-noise road surfaces, such as porous asphalt or 'whisper' concrete. The use of these can be considered as replacement materials for an on-going maintenance programme. However, there are budget implications of this, as these materials tend to be less durable than those that they replace.
- 9.9. For new highways and railway schemes, noise impacts will be assessed specifically as part of the Environmental Impact Assessment (EIA) process that is part of consent requirements. Noise barriers/mounds and/or secondary glazing have to be provided to mitigate effects if noise levels are predicted to exceed specified levels in nearby residential buildings under the provisions of the Land Compensation (Scotland) Act 1973. Alternatively, alignments can be adjusted to reduce noise to acceptable levels for people living nearby.
- 9.10. As identified in the strategy itself, the Environmental Noise Directive requires noise levels of road traffic to be assessed and the Scottish Government and local authorities are working to identify candidate Noise Management Areas and quiet areas for protection. This work will help inform the development of options and avoidance or reduction of impact.

#### **Local Air Quality**

- 9.11. In order to make a 'significant' difference in air quality, traffic flows would need to drop at least 10% (unless the road has particularly high flows, or there are particular sensitivities, such as traffic congestion, change to the speed limit or the presence an Air Quality Management Area).

9.12. The key ways in which local air pollution may be tackled through transport policy measures are:

- Reducing emissions at source, through use of fuel-efficiency, filtering technologies or use of alternative fuels;
- Reducing levels of traffic overall, or at specific locations where air quality is an identified problem; or
- Reducing congestion and high traffic speeds, again focusing on areas where air quality is particularly poor.

9.13. In the context of the RTS, there are a myriad of measures that may be considered to achieve one or other of these ends, many of which are already included as policies within the RTS:

- Measures developed under the provisions of the Road Traffic Reduction Act 1997 and other traffic regulation to reduce traffic;
- Promoting the use of cleaner fuels;
- Declaring 'Low Emission Zones', where only vehicles meeting stringent emission standards are allowed to enter;
- Declaring 'Home Zones', where road space is shared between motor vehicles and other road users with the needs of pedestrians and cyclists made a priority, and "Clear Zones" which tackle town centres;
- Access restrictions to certain areas to discourage car access, provided there are alternative routes available;
- Traffic calming measures to reduce traffic speeds and aggressive driving;
- Reallocation of road space to favour pedestrians and cyclists, with results similar to 'Home Zones' and traffic calming;
- High occupancy vehicle lanes, which only cars carrying two or more people are permitted to use, to encourage car sharing;
- Vehicle restricted areas, banning all (or specific classes of) vehicles from entering;
- Parking controls, as a means of general trip-end restraint, or to remove the problem of vehicles 'cruising' slowly when searching for spaces;
- Adjusting automated traffic control systems to avoid congestion, particularly in areas where air quality is poor;
- Speed limits on roads where traffic speeds are very high and air quality is poor as a consequence;
- Promoting the use of public transport generally to effect a modal shift and reduce road traffic levels overall;
- Testing cars at the roadside to ensure compliance with emission standards; and
- Mode-specific measures such as rail park and ride; bus priority, information and interchange; bus park and ride; freight quality partnerships to encourage action to reduce emissions; promoting walking and cycling; safe routes to schools; and providing secure parking for motorcycles.

9.14. Measures can also be adopted to avoid stationary vehicles with engines running, e.g. reducing congestion, or requiring taxis and buses have engines turned off at ranks or stands.

- 9.15. Significant reductions in traffic flows are usually necessary to provide any significant effect on air quality, and on this basis individual measures are not likely to be particularly effective. However, a range of measures developed as part of a coherent and targeted strategy may together achieve the required improvements.

### **Climate Change**

- 9.16. Measures to reduce the level of greenhouse gas emissions from transport essentially focus on reducing the amount of travel, or improving the fuel efficiency of vehicles. Consequently, most of the measures listed in the section above in relation to the improvement of local air quality may also provide benefits in terms of reducing greenhouse gas emissions.
- 9.17. In addition, longer term measures to reduce the need to travel through better integration of transport and land use planning, and a focus on access to facilities rather than mobility as an end in itself are available to help reduced greenhouse gas emissions overall.

### **Townscape and Landscape**

- 9.18. In built-up areas, care should be taken to avoid effects on designated areas such as Conservation Areas, or direct effects on buildings/structures listed for their architectural significance, or the setting of these. Similarly, the best mitigation for effects on the natural landscape features is to ensure, as far as is reasonably practical, that the policies and proposals of the RTS do not directly affect protected areas or resources that have been designated on the basis of the quality of the landscape.
- 9.19. Where such effects are unavoidable, it is important that the design of measures respects and takes account of their setting. For major schemes, this will be addressed through the EIA process.

### **Heritage**

- 9.20. All efforts should be taken to make sure that the policies and proposals of the RTS should not adversely affect heritage resources, such as Conservation Areas, buildings/structures listed for their historical interest, historic landscapes, or archaeological resources.
- 9.21. If such effects are unavoidable, the advice set out in Scottish Planning Policy and supported by Planning Advice Note (PAN) 2 'Planning and Archaeology' and PAN 71 'Conservation Areas' should be followed to devise appropriate mitigation. The general preference is for historic and archaeological resources to be recorded and preserved in situ, although excavation and removal may be an option if there is a risk that the resource may be lost or destroyed otherwise.

### **Biodiversity, Flora and Fauna**

- 9.22. The key principles for mitigating adverse effects on biodiversity are to control the sources of impacts, or the exposure of ecological receptors to them. This can take a wide range of forms, but due to the limited effectiveness of many ecological restoration measures, every effort should be made to avoid significant adverse impacts on biodiversity before resorting to other measures. Some adverse effects might be avoided through changes to the RTS, such as adding, deleting or refining

specific policies or proposals, or by bringing forward new alternatives. Where impacts cannot be avoided, it may be possible to limit damage. In some cases biodiversity may recover spontaneously if affected by policies or proposals of the plan, and no "mitigation" other than time is required. In other cases, mitigation could be put into effect through provisions in later plans, requirements to carry out EIA for specific types of projects, etc...

- 9.23. Landscape works, including habitat creation and restoration are often promoted to mitigate adverse ecological impacts. However they are often ineffective or take a long time for satisfactory results to be achieved. Therefore, the guiding principal here should be that compensation should only be used as a last resort, if loss of habitats or species is unavoidable. Mitigation banking can also be considered, where equivalent replacement habitat (in terms of both quantity and quality) to compensate for the loss or damage to any natural or semi-natural habitat.
- 9.24. In general terms, the most important consideration for developing the RTS will be to ensure, as far as is reasonably practical, that policies and proposals do not directly effect protected areas that have been designated on biodiversity grounds (e.g. Wetland areas or Sites of Special Scientific Interest) or habitats where protected species of flora or fauna have been identified. Any developments likely to have significant effects on sites designated under the Habitats and Birds Directive will require the Appropriate Assessment, which may not necessarily be EIA. Any developments likely to affect European Protected Species will require to have surveys completed and mitigation identified prior to consent being issued by the responsible authority. Consideration at the earliest stage of access corridors for wildlife (as well as people) through major transport developments should be considered.
- 9.25. If effects are unavoidable, commitments should be made to developing appropriate assessment and management procedures to minimise the loss or damage to biodiversity resources, and to re-instate or replace these as appropriate. This would be achieved through the EIA process that forms part of consent processes for major schemes, Appropriate Assessments, or through management commitments on smaller proposals.
- 9.26. Taking account of biodiversity issues in developing traffic management and maintenance programmes in the RTS is particularly important. Measures to reduce noise and air pollution from traffic, as discussed above, can help reduce effects on biodiversity also. In addition, care must be taken over specifying the use of herbicides and pesticides in maintenance work, as also should be the case in the use of de-icing salts and other chemicals. In all cases, the potential toxic effects on flora and fauna should be considered, and measures taken to ensure that no important or protected species are likely to be damaged as a result of their use.

### **Soil and Water**

- 9.27. It is anticipated that the physical impacts on water and soil from RTS policies and proposals will be taken into account during the planning and detailed design stages. Clearly, geotechnical, hydro-geological and hydro-technical studies will be undertaken for any schemes that involve civil engineering works, and will identify any specific potential problems that may arise. More generally, avoiding watercourses and areas designated for the protection of aquifers will be prudent, as will taking account of the potential to affect sites with historic contamination due to previous land uses.
- 9.28. A particular concern is flood risk, and any works that are proposed should not increase the risk of flooding. The Scottish Environmental Protection Agency (SEPA) now is

likely to require that a flood risk assessment is undertaken as part of the planning process for any major scheme. Sustainable Urban Drainage Systems (SUDS) should be considered as a means of reducing surface drainage on roads and thus reducing flooding.

- 9.29. Maintenance programmes within the RTS should also take account of the handling and treatment of contaminated run-off from road surfaces. Drainage systems should be sufficient to cope with the volume of run-off, and include features such as traps or balancing ponds to ensure contaminated water does not cause ground or water pollution. Maintenance regimes should also include routine inspection and cleaning of these features to make sure that they remain effective.

### Material Assets

- 9.30. Aberdeen City and Aberdeenshire Councils are responsible for road maintenance and both have existing policies on the use of recycled materials in road maintenance and the construction of transport schemes. This is an issue that primarily falls to the two Councils and should be dealt with in detail through the Local Transport Strategies.

## 10. Monitoring

### Indicators

- 10.1. At the scoping stage of the SEA of the original RTS developed in 2008, objectives and indicators were developed. These have been reviewed and amended slightly as part of this SEA and in response to comments received from the consultation authorities at the scoping stage. An annual monitoring report of the RTS objectives is produced every year and incorporates indicators for air quality, road traffic volumes, carbon emissions and road traffic accidents.
- 10.2. The RTS monitoring report is produced annually and will be updated again in May 2013. A copy of the most recent version of the RTS monitoring report can be found at <http://www.nestrans.org.uk/rtm-monitoring-report.html>

**Table 10.1 SEA objectives and indicators**

SEA topic	Objective	Indicator	Data
Air quality	To protect and improve local air quality to create conditions to improve the health of the population.	<p><b>NO<sub>2</sub></b>: Annual mean</p> <p><b>PM<sub>10</sub></b>: Annual mean</p> <p>Likely change in flow of traffic on trunk roads and routes with a higher proportion of buses and HGVs.</p> <p>Source: Scottish Transport Statistics and Nestrans annual monitoring report</p>	<p><b>NO<sub>2</sub></b>:</p> <p>24 mg per m<sup>3</sup> (2005)</p> <p>22 mg per m<sup>3</sup> (2010)</p> <p><b>PM<sub>10</sub></b>:</p> <p>19 mg per m<sup>3</sup> (2005)</p> <p>13 mg per m<sup>3</sup> (2010)</p> <p><b>Traffic flows (7 day annual average):</b></p> <p>A90 at Stonehaven</p> <p>24,743 (2005)</p> <p>26,704 (2011)</p> <p>A90 at Bridge of Don</p> <p>16,750 (2005)</p> <p>16,875 (2010)</p>
Greenhouse gas emissions	To help tackle climate change by reducing the effects of CO <sub>2</sub> emissions from road transport during	Predicted emissions of CO <sub>2</sub> from road transport (per capita)	<p><b>Per capita emissions from road transport (t)</b></p> <p>2005 – 2.3 tCO<sub>2</sub></p>

SEA topic	Objective	Indicator	Data
	the life of the plan, and helping to meet Scotland's targets to reduce emissions of greenhouse gases.	Source: Department of Energy and Climate Change	2010 – 2.0 tCO <sub>2</sub>
Biodiversity	To protect, maintain and enhance biodiversity, avoiding damage to designated wildlife sites, geological sites, protected species & habitats and irreversible losses.	Number of designated sites likely to be affected by RTS strategies and the change in the condition of their notified features.	Monitoring will need to be carried out at project level
Cultural heritage	To preserve and enhance (where appropriate) historic buildings, archaeological sites and other culturally and historically important features and their settings.	The potential for significant effects (direct or indirect) on listed buildings, scheduled monuments, Historic Gardens and Designed Landscapes and archaeological sites as well as other culturally and historically important features.	Monitoring will need to be carried out at project level
Water	To protect, maintain and improve the quality of all water bodies and wetlands in the region and to protect against the risk of flooding.	Water bodies (including rivers, coastal & estuary waters and wetlands) where quality may be affected by RTS strategies and their quality as monitored by SEPA.  Flood risk areas affected by RTS strategies.	Monitoring will need to be carried out at project level
Soils	To reduce contamination and safeguard soil quality and quantity.	Presence of contaminated land in relation to RTS strategies.  Potential for loss of greenfield / brownfield land and proportion available for re-use as a result of RTS strategies.	Monitoring will need to be carried out at project level
Population and human health	To create conditions to improve health and reduce health inequalities (as identified in the air quality objective above)  To reduce the number of casualties from road traffic accidents.	See air quality objective above.  Number and severity of road traffic accidents  Source: Road Casualties Scotland	Fatal & Serious casualties  2001-2005 average: 255.6  2007-2011 average: 320

## **11. Next steps**

- 11.1. The draft RTS along with this environmental report and an equalities impact assessment will be made available to the general public as well as the statutory consultation bodies (SEPA, Scottish Natural Heritage and Historic Scotland), in accordance with the SEA guidance. Aberdeen City and Aberdeenshire Councils will also be given a formal opportunity to comment as will members of the North East Transport Consultative Forum.
- 11.2. Consultation will run for a period of 6 weeks during April / May 2013 following which comments and responses will be considered and fed into the development of the final strategy.
- 11.3. Following consultation, the proposed final RTS Re-fresh will be submitted back to the Nestrans Board in summer 2013 for their approval before being submitted to Scottish Ministers.
- 11.4. An SEA Post-Adoption Statement will be prepared once the RTS has been approved by Scottish Ministers.

## Appendix A: Analysis of Comments from Consultation Authorities on the Scoping Report

**Table A1: Comments received and responses**

Consultation Authority	Issue	Concern / Comments	Action proposed
Historic Scotland	Scope of assessment	Note that cultural heritage has been scoped into the assessment. In view of the information contained within the scoping report, content that the historic environment is included in the assessment.	Noted
Historic Scotland	Consultation	A consultation period of at least 6 weeks is preferred.	Consultation will be for 6 a 6 week period
Historic Scotland	PPS content	Consider that the proposed approach to focus on the proposed changes to the RTS is appropriate.	Noted
Historic Scotland	PPS context	The 2009 version of SHEP has now been superseded. The current version SHEP (December 2011) includes amendments to take account of marine historic environment policy; provision of the Marine Scotland Act 2010 and the provision of the Historic Environment (Amendment) (Scotland) Act 2011.	Noted. This has been updated
Historic Scotland	SEA objectives	Welcome that the SEA objective proposed encompasses both designated and non-designated heritage assets however it focuses on direct impacts only. Historic environment policy recognises the value of the setting of heritage assets and consequently it is recommended that the objective should reflect this.	The objective has been amended.
Historic Scotland	SEA objectives	Amendment of the cultural heritage objective to include enhancement (where appropriate) in addition to protection, would help to focus the assessment on the identification of positive as well as adverse effects.	The objective has been amended.
Historic Scotland	SEA objectives	You may wish to consider developing more focussed SEA assessment criteria to support the objectives; this is likely to facilitate a more informative and useful assessment.	The criteria have been reviewed and amended where appropriate.
Historic Scotland	Monitoring	In relation to the cultural heritage indicator it is recommended that this is widened to reflect the scope of the objective.	This has been amended.
Historic Scotland	Baseline data	The baseline information relating to cultural heritage should also include the four inventory battlefields in Aberdeenshire (Alford, Barra, Gyvie and Harlaw).	These have been included
SEPA	General	Generally content with the scope and level of detail proposed for the Environmental Report	Noted
SEPA	Relationship with other PPS	Consider that the review is very thorough and includes the relevant PPS for the SEA topics within SEPA's remit.	Noted
SEPA	Relationship with other PPS	With reference to section 1.2, it is important that the assessment identifies routes that have elevated numbers of buses and / or HGVs.	This has been taken into consideration in the indicators for air quality.
SEPA	Environmental problems	We consider that the environmental problems described generally highlight the main issues of relevance for the SEA topics within our remit.	Noted
SEPA	Air quality	The air quality objectives and limit values for nitrogen dioxide are being exceeded in Aberdeen, but the impact on health is not acknowledged in Table 4.2 on page 12 of the scoping report. Reference should also made to noise from increased traffic	The health impacts have been acknowledged through a change to the SEA objective for air quality. The requirement for noise mapping arising from the Environmental Noise Directive has also been added to the

			review of other PPS.
SEPA	Flood risk	We would also like to see a greater emphasis on the need to reduce flood risk as part of the RTS. In addition to flood risk, we would also like to see more reference to SUDS to reduce surface drainage on roads, and this reducing flooding.	The issue of flooding has been added to table 6.1 and included within the objective for water. SUDS are also identified under mitigation measures.
SEPA	Alternatives	SEPA are satisfied with the alternatives outlined.	Noted
SEPA	Scope	Based on the information provided to date SEPA consider that the assessment could be more focused by reconsidering those SEA receptors to be scoped in to the assessment.	This has been reviewed and amended.
SEPA	Air quality	In terms of local air quality, table 5.1 should also identify routes with higher than normal numbers of HGVs and / or buses, as these vehicles emit very high levels of nitrogen dioxide that can have a disproportionate impact on air quality.	This has been added as an indicator for the objective on air quality.
SEPA	Human health	In terms of population and human health, we welcome the reference in table 5.1 to changes in levels of pollutants and the impact on human health. This has not been highlighted in other sections of this document.	This link has been strengthened throughout the document, including in the SEA objective for air quality and in the RTS.
SEPA	Water	The water objective should be amended to include wetland protection, in line with the Water Framework Directive.	This has been included in the objective.
SEPA	Baseline	The section "Regional and Local" does not contain a reference to the Air Quality Action Plan that has been developed.	This has been added to the review of relevant PPS.
SEPA	Air quality	Appendix 7.2.1 states that nitrogen dioxide is reducing at monitoring sites in the city. This is misleading – there are locations where there has been no change in the measured concentrations of NO2 and some have recorded increased.	This has been amended.
SEPA	Air quality	Appendix 7.2.1 does not include reference to the EU limit values as prescribed in the Air Quality Standards (Scotland) Regulations 2002	These are included.
SEPA	Air quality	Reference to national exceedences of NO2 are misleading as it only represents automatic monitoring devices that are too large for the worst affected locations. Passive diffusion tube data are not reported but local authority monitoring has shown widespread exceedences resulting in the designation of 20 AQMAs across Scotland.	This information has been incorporated into the baseline.
SEPA	Human health	The baseline recognises that noise can have a detrimental impact on human health but it fails to acknowledge that the air quality objectives and limit values for air quality are being breached at numerous locations across Aberdeen.	The links between air quality and human health have been recognised in the baseline and the RTS.
SEPA	General	Please remember that a summary of the likely changes to the environment if the RTS refresh is not implemented should be provided in the ER.	This is provided in Table 6.1
SEPA	General	The environmental assessment should be carried out on all aspects of the RTS that are amended and likely to result in significant environmental effects.	Noted
SEPA	General	We would recommend that enough information and justification is provided in the ER to allow the consultation authorities to understand how the results of the assessment were reached.	Noted. An explanation of the assessment is provided in the assessment table.
SEPA	General	We welcome the consideration of cumulative effects, especially as the SEA will only assess the new or amended actions of the RTS.	Noted.
SEPA	General	The Environmental Report should identify any changes made to the plan as a result of the ER.	Noted.
SNH	Scope	Content with the general approach taken in the scoping report although the links between open space provision, landscape and public health could be strengthened.	This link has been strengthened in the issues table and also in the baseline table of the ER
SNH	Scope	Section 5.2 - Suggest that the biodiversity text is amended to "the examination of likely effects	This has been noted and is reflected

		on designated sites and protected species and habitats”	in the objective for biodiversity as table 5.1 is not replicated in the ER.
SNH	Assessment	Section 5.3 - It would be useful for this section to include an assessment of any change in the condition of the notified features of designated sites.	This has been reflected in the indicator for biodiversity.
SNH	Baseline	Make clear the duty placed on <u>all</u> public bodies to avoid deterioration of the qualifying species or habitats of any Natura site, including SACs such as the River Dee.	This has been added to the baseline under biodiversity.
SNH	Other PPS	The Conservation Regulations should be moved to the International heading.	Noted and moved.
SNH	Other PPS	The Wildlife and Countryside Act covers the protection of species and designated sites.	Amended
SNH	Baseline	App 7.2.4 – suggest that a new column is added to this table to include the condition of designated sites (SACs, SSIs).	It is not felt practical to include the condition of each different site and category for all the different qualifying features here, however all these will be considered in the assessment where appropriate.

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

**Table B1: Links to other PPS & Environmental Protection Objectives**

Name of PPS / Environmental protection objective	Main requirements of the PPS	Relationship with PPS
<b>INTERNATIONAL</b>		
<b>Nature Conservation</b> <ul style="list-style-type: none"> <li>The Habitats Directive 92/43/EEC</li> <li>The Birds Directive 2009/147/EC</li> <li>European Biodiversity Framework</li> <li>The Conservation (Natural Habitats, &amp;c.) Regulations 1994 (as amended)</li> </ul>	Protection of habitats and species. Protection of wild birds and their habitats. Promotes the conservation and sustainable use of biological diversity.	Plan should protect identified habitats and species. Strategies and policies should not hinder protection, management and control of species and should support the conservation and sustainable use of biological diversity. Places a duty on all public bodies to avoid deterioration of all qualifying species or habitats.
<b>Water</b> <ul style="list-style-type: none"> <li>Water Framework Directive 2000/60/EC</li> </ul>	Safeguards the sustainable use of water systems; Supports the status of aquatic ecosystems and environments; Addresses groundwater pollution; flooding and droughts; river basin management planning.	The RTS should avoid adverse effects on the water environment or add to or create any significant flood risks.
<b>EU White Paper on Transport</b>	Defines a policy agenda for the next decade with the following four vision statements: <ul style="list-style-type: none"> <li>Growing transport and supporting mobility whilst reducing emissions;</li> <li>An efficient core network for multimodal intercity travel.</li> <li>Global level playing field for long-distance travel and inter-continental freight</li> <li>Clean urban transport and commuting.</li> </ul>	The RTS should be in line with the wider policies. Carbon reduction in particular is a key issue and will have implications for strategies at national, regional and local level.
<b>Noise</b> <ul style="list-style-type: none"> <li>The Environmental Noise Directive (2002/49/EC)</li> </ul>	Aims to define a common approach intended to avoid, prevent or reduce on a prioritised basis, the harmful effects, including annoyance, due to exposure to environmental noise. It requires noise levels from road traffic, railways, major airports and industry to be assessed.	The Scottish Government is working with local authorities to identify candidate Noise Management Areas in medium and large cities across Scotland, including Aberdeen. Noise from road traffic will be a key factor and the RTS should support the development and implementation of an action plan.
<b>NATIONAL</b>		
<b>Planning</b> <ul style="list-style-type: none"> <li>National Planning Framework for Scotland 2 (NPF2) (2009)</li> <li>Scottish Planning Policy (SPP) (2010)</li> <li>Designing Streets</li> </ul>	Guides Scotland's development to 2030, Sets out strategic development priorities to support the Scottish Government's central purpose of sustainable economic growth. Sets out the main purpose and tasks for land use planning, development planning and control for Scotland.	In relation to transport, the framework recognises that investment will be needed to enhance essential transport infrastructure, support urban expansion, improve access to facilities and services, facilitate sustainable economic growth and strengthen international gateways. There is also

Name of PPS / Environmental protection objective	Main requirements of the PPS	Relationship with PPS
	Highlights the importance of street design issues to raise the quality of design in urban and rural development.	significant emphasis on reducing carbon emissions and achieving a shift to more active and sustainable modes. The relationship between transport and land use is central to this agenda. The RTS should support this wider policy framework.
<b>Transport</b> <ul style="list-style-type: none"> <li>• Scotland's National Transport Strategy (2006)</li> <li>• Strategic Transport Projects Review (2009)</li> <li>• Cycling Action Plan for Scotland</li> <li>• Scottish Government Infrastructure Investment Plan</li> </ul>	<p>Sets out a long term vision for transport. Identifies reduction of emissions, improved quality, accessibility and affordability</p> <p>Sets out recommendations for land-based strategic transport interventions in Scotland's national transport network from 2012.</p> <p>Sets out a range of actions to achieve a target of 10% of journeys by cycling by 2020.</p> <p>Scottish Government's plans for infrastructure investment, including transport, over the coming decades. Builds on projects identified in the STPR with renewed commitment to a number of major schemes in the north east.</p>	The RTS has a strong relationship to these national strategies and should seek to contribute to the delivery of their objectives and targets. The Cycling Action Plan in particular emphasises the step change that is expected in the levels of cycling across Scotland. The IIP contains a number of major schemes relevant to the Nestrans area.
<b>Economy &amp; Sustainable development</b> <ul style="list-style-type: none"> <li>• The Government Economic Strategy (2007)</li> <li>• Choosing Our Future: Scotland's Sustainable Development Strategy (2005)</li> <li>• Scotland's Cities: Delivering for Scotland</li> </ul>	<p>Identifies strategic priorities critical to achieving sustainable economic growth.</p> <p>Sets out a vision and commitment to build a more sustainable Scotland.</p> <p>Recognises that good connectivity between cities and their regions is the key to widening the reach of cities as well as the importance of international connections. The importance of low carbon transport is also highlighted.</p>	The RTS should seek to integrate with the aims of the strategies and contain actions to reduce the need to use private transport and assist in the reduction of emissions as well as increasing connectivity both to/from and within the region. It should support sustainable economic growth whilst meeting the differing needs of a diverse population. The RTS should take into account the need to reduce impact on, and adapt to, climate change.
<b>Air &amp; Climate Change</b> <ul style="list-style-type: none"> <li>• Scottish Climate Change Delivery Plan (2009)</li> <li>• Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)</li> <li>• Towards a Low Carbon Economy for Scotland: Discussion Paper (2010)</li> </ul>	<p>Sets out high level measures required to meet Scotland's statutory climate change targets, to 2020 and in the long term.</p> <p>Provides a clear, long-term vision for improving air quality in the UK in line with the Environment Act (1995) setting out associated air quality objectives and policy options.</p> <p>Sets out the Scottish Government's plans to move towards a low carbon economy in Scotland.</p>	<p>The RTS should include measures to contribute to the reduction of greenhouse gases. This may include policies that:</p> <ul style="list-style-type: none"> <li>• promote sustainable alternatives to car and reduce congestion traffic pollution; and</li> <li>• promote the use of alternative fuels.</li> </ul> <p>Transport is a key cause of poor air quality and the RTS should recognise this impact and contain measures to reduce the impact and improve air quality.</p>

Name of PPS / Environmental protection objective	Main requirements of the PPS	Relationship with PPS
<b>Cultural Heritage &amp; Built Environment</b> <ul style="list-style-type: none"> <li>The Scottish Historic Environment Policy (2011)</li> <li>Designing Places: A Policy Statement for Scotland (2001)</li> <li>Scottish Executive (2006) People and Place: Regeneration Policy Statement</li> </ul>	<p>Provides a framework for more detailed strategic policies and operational policies in managing the historic environment. Sets out the overarching policy on design in order to make successful places.</p> <p>Sets out a forward-looking strategic framework and priorities for regeneration in Scotland encouraging proactive and integrated approaches.</p>	<p>The Plan should seek to reduce and avoid adverse impacts on cultural heritage and the built environment as a result of transport proposals.</p> <p>The plan should take account of changing regeneration priorities.</p>
<b>Landscape &amp; Soil</b> <ul style="list-style-type: none"> <li>The Scottish Soil Framework (2009)</li> </ul>	<p>The main aim of the Framework is to promote the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland.</p> <p>A key aspect is the protection of soil as an asset – for the future of the Scottish economy, as well as a contribution to challenges set by climate change.</p>	<p>The RTS should seek to avoid adverse impact on soil and landscape as a result of transport proposals.</p>
<b>Nature Conservation &amp; Biodiversity</b> <ul style="list-style-type: none"> <li>Wildlife and Countryside Act 1981 (as amended)</li> <li>The Nature Conservation (Scotland) Act 2004</li> <li>Scotland's Biodiversity: It's in Your Hands. A strategy for the conservation and enhancement of biodiversity in Scotland (2004)</li> <li>The Conservation (Natural Habitats, &amp;c.) Amendment (Scotland) Regulations 2007</li> <li>Scottish Landscape Forum' (2007) Scotland's living landscapes</li> </ul>	<p>Gives protection to wildlife (species and designated sites) and countryside from disturbance, injury intentional destruction or sale. Duties are placed on public bodies to further the conservation of biodiversity and sets out measures to protect and enhance the biological and geological natural heritage of Scotland.</p> <p>Protects individual sites and promotes conservation on a broader scale.</p> <p>Aims to halt loss and reverse decline of species and habitats. Includes measures for designated sites, habitats and species. Promotes good management of landscapes.</p>	<p>The RTS should avoid disturbance to wildlife and the countryside through the implementation of the plan.</p> <p>The RTS should maintain, conserve, promote and protect biodiversity, habitats and species.</p>
<b>Population &amp; Human Health</b> <ul style="list-style-type: none"> <li>All Our Futures: Planning for a Scotland with an Ageing Population (2007)</li> <li>Lets Make Scotland More Active: A strategy for physical activity (2003)</li> <li>Equality Act 2010</li> <li>'Making the Links: greenspace for a more successful and sustainable</li> </ul>	<p>Provides a strategic approach which considers how best to respond to and plan for a Scotland with an ageing population.</p> <p>Aims to increase and maintain the proportion of physically active people in Scotland setting out targets to 2022.</p> <p>Sets a framework which protects individuals from unfair treatment and promotes a fair and more equal society.</p> <p>Sets out the key actions that are needed to ensure that greenspace delivers for people, communities and places across the whole of</p>	<p>The RTS should consider the needs of an ageing population into its strategic actions.</p> <p>The RTS should increase opportunities for provision of cycling and walking infrastructure to promote active transport and physical activity. The plan will consider the needs of the society in the region.</p> <p>The RTS should take account of its potential role in the delivery of and access to greenspace networks, particularly</p>

Name of PPS / Environmental protection objective	Main requirements of the PPS	Relationship with PPS
Scotland' (2009)	urban Scotland.	those that can also act as cycling and walking facilities.
<b>Water</b> <ul style="list-style-type: none"> <li>• Water Environment (Controlled Activities) (Scotland) Regulations 2005</li> <li>• Water Environment and Water Services (Scotland) Act (WEWS) 2003</li> <li>• The Flood Risk Management (Scotland) Act 2009</li> <li>• River Basin Management Plan for Scotland (2009)</li> <li>• SEPA Indicative Flood Map (2006)</li> <li>• Our Seas – a shared resource. High Level Marine Objectives (2009)</li> <li>• Marine (Scotland) Act 2010</li> </ul>	<p>Protects the water environment that integrates the control of pollution, abstractions, dams and engineering activities in the water environment.</p> <p>Ensures that all human activity that can have a harmful impact on water is controlled.</p> <p>Creates a framework in which organisations involve in flood risk managed can coordinate actions to delivery sustainable and modern approaches to flood risk management.</p> <p>Details the strategy for River Basin Management Planning in Scotland.</p> <p>Provides an estimate at the national scale of areas at risk from river and coastal flooding (areas with a 0.5% (1 in 200) or greater probability of being flooded in any given year) and is to be used as a strategic flood management tool.</p> <p>Expresses outcomes for the UK marine area and underpins the development of the joint Marine Policy Statement (MPS) (due for completion by 2011) and will guide development of national and regional marine plans.</p> <p>Provides a framework which will help balance competing demands on Scotland's seas and introduces duties for sustainable development, protection and enhancement of marine areas, mitigation of and adaptation to climate change, marine planning and conservation and measures to encourage economic investment.</p>	<p>The plan should not promote actions that would have adverse impacts on the water environment or risk failure of water bodies not achieving at least good ecological status by 2015.</p> <p>The RTS should not promote projects that will create flood risks (from the sea or rivers). The RTS should have regard for wider objectives for the marine environment when it comes to actions relating to shipping and harbours.</p>
<b>Waste</b> <ul style="list-style-type: none"> <li>• Scotland's Zero Waste Plan (2010)</li> </ul>	<p>The plan outlines Scotland's key objectives in relation to waste prevention, recycling and reducing the amount of waste sent to landfill on the journey to a Zero Waste Scotland. The plan proposes targets for Scotland's waste and delivering these targets will be supported by the land-use planning system.</p> <p>Provides a vision for Scotland where all waste is seen as a resource; Waste is minimised; valuable resources are not disposed of in landfills, and most waste is sorted, leaving only limited amounts to be treated.</p>	<p>The RTS should be aware of the implications of transporting waste and should support the Strategic Development Plan in ensuring that these considerations are taken into account in the location and operation of waste management facilities.</p>
<b>REGIONAL &amp; LOCAL</b>		
<b>Planning</b> <ul style="list-style-type: none"> <li>• Aberdeen City and Shire Structure Plan 2009 and emerging Strategic Development Plan</li> </ul>	<p>Guides the development of the Aberdeen City and Aberdeenshire region for the next 25 years. Sets the strategic context for Aberdeen and Aberdeenshire Councils Local Development Plans which in turn</p>	<p>The RTS should be compatible and support the existing structure plan, the emerging Strategic Development Plan and the Cairngorms National Park Plan which covers part of</p>

Name of PPS / Environmental protection objective	Main requirements of the PPS	Relationship with PPS
<ul style="list-style-type: none"> <li>Local Development Plans for Aberdeen City (2012) and Aberdeenshire (2012)</li> <li>Cairngorms National Park Plan (2012)</li> </ul>	<p>set the framework for land use development.</p> <p>Sets out what needs to happen over the period to 2021 to provide a transport system that ensures continued economic growth, improves accessibility and protects the environment and our quality of life in Aberdeen City and Shire.</p> <p>Guides the development of the Cairngorms National Park area to 2017</p>	<p>the Nestrans area. The RTS should seek to integrate with and complement the aims of the SDP and CNP in terms of supporting the level of development outlined, the provision of the necessary infrastructure and promotion of alternative modes to reduce the dependence on car and encourage uptake of alternative fuels.</p>
<p><b>Community Planning</b></p> <ul style="list-style-type: none"> <li>Community Plans and Single Outcome Agreements for Aberdeen City and Aberdeenshire</li> </ul>	<p>The Community Plans and Single Outcome Agreements set out the outcomes that partners hope to deliver for local communities. They aim to ensure that people are genuinely engaged in the decisions on public services made that affect them and involve a commitment from organisations to work together, not apart, in providing better public services.</p>	<p>Nestrans is a statutory community planning partner in both Aberdeen City and Aberdeenshire and is signed up to the delivery of the Single Outcome Agreements. The RTS should work towards the outcomes set in these documents, a number of which are directly related to the transport network.</p>
<p><b>Economic development</b></p> <ul style="list-style-type: none"> <li>'Building on Energy Delivering the Vision for 2025' - The Economic Action Plan for Aberdeen City and Shire (2008)</li> </ul>	<p>Sets out a 5 year life plan identifying actions to be undertaken towards the longer term economic ambitions for Aberdeen City and Shire.</p>	<p>The RTS should support sustainable economic growth and provide the policy framework for the necessary transport improvements to support this.</p>
<p><b>Nature Conservation &amp; Biodiversity</b></p> <ul style="list-style-type: none"> <li>North East Scotland Local Biodiversity Action Plan (2000)</li> </ul>	<p>Ensures the protection and enhancement of the biodiversity in the north east through the development of effective, local, working partnerships;</p> <p>Ensure that national targets for species and habitats, as specified in the UK Action Plan, are translated into effective local action.</p>	<p>The RTS should avoid adverse effects on biodiversity, including protected sites and species, but also in relation to wide ecological networks.</p>
<p><b>Population &amp; Human Health</b></p> <ul style="list-style-type: none"> <li>Core Paths and Access Strategies for Aberdeen City Council and Aberdeenshire Council</li> <li>Air Quality Action Plan</li> </ul>	<p>Core Paths Plans and Access Strategies look to promote themes of:</p> <ul style="list-style-type: none"> <li>Green spaces</li> <li>Human health and well being</li> <li>Accessibility</li> <li>Inclusion</li> <li>Biodiversity</li> </ul> <p>The Air Quality Action Plan outlines a range of actions and measures aimed to improve air quality in Aberdeen Cities three Air Quality Management Areas. Emissions are currently exceeding EU limits and an action plan is required to address this issue due to the impacts that poor air quality has on human health</p>	<p>The RTS should support the development of Core Paths Networks and the delivery of the Council's Core Paths Plans. It should also support and promote accessibility to the countryside, green spaces and other opportunities for leisure and cultural activities.</p> <p>The RTS should be line with the actions contained within the Air Quality Action Plan and support the delivery of this plan.</p>

## Appendix C: Baseline data, targets & trends for the Nestrans region

### Table C1: Air Quality, Noise and Carbon Emissions

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Carbon dioxide (CO <sub>2</sub> ) emissions	<p>In 2010 road transport accounted for 19% of total carbon dioxide emissions within the scope of local authorities (from road transport, industry and commercial and domestic sources) in Aberdeen City and 30% in Aberdeenshire.</p> <p>This equates to per capita emissions from road transport of 1.4t CO<sub>2</sub> in Aberdeen City and 2.5t CO<sub>2</sub> in Aberdeenshire.</p>	<p>The UK has both international (Kyoto Protocol) and domestic (Climate Change (Scotland) Act 2009) targets to reduce greenhouse gas emissions.</p> <p>Scotland' targets to reduce emissions of greenhouse gases:</p> <ul style="list-style-type: none"> <li>• At least 80 per cent lower than the baseline by 2050</li> <li>• Interim target for 2020 of at least 42 per cent lower than the baseline</li> </ul> <p>The Scottish per capita emissions from road transport in 2010 was 1.7t and accounted for 23% of total emissions within the scope of influence of local authorities</p>	<p>Although total carbon dioxide emissions from road transport have increased since 2005, when looking at emissions per capita there have been reductions (-13% since 2005 for Aberdeen City and Aberdeenshire).</p> <p>The percentage of total carbon emissions from road transport has remained relatively static.</p>	<p>A growth in population will impact on the volume of the number of trips and volume of traffic in the region. Without management of this growth, encouragement of mode shift and take up of alternative fuels, these figures will increase and national targets for emissions reductions will become increasingly challenging.</p>	<p><i>Source:</i> Department of Energy and Climate Change</p> <p>Carbon dioxide emissions within the scope of influence of local authorities (previously NI 186)</p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Air Quality	<p>Aberdeen City Council has designated 3 Air Quality Management Areas:</p> <ul style="list-style-type: none"> <li>▪ City Centre (originally declared in 2001, last amended in 2005, including Union St, Market St, Virginia St, Commerce St and parts of Holburn St, Guild St and King St)</li> <li>▪ Anderson Drive (declared in 2008, incorporating the whole of Anderson Drive and the Haudagain roundabout)</li> <li>▪ Wellington Rd (declared 2008 from Queen Elizabeth II Bridge to Balnagask Rd)</li> </ul> <p>Annual mean concentrations of NO<sub>2</sub> exceeded national objectives on Market Street, Union Street and Wellington Rd in 2012</p> <p>In 2011 the annual mean standard of NO<sub>2</sub> in Union St was 44 micrograms per cubic metre (<math>\mu\text{g m}^{-3}</math>), in Market St 40 <math>\mu\text{g m}^{-3}</math>, and on Wellington Rd 51 <math>\mu\text{g m}^{-3}</math></p>	<p>Air quality objectives set at a national and European level are:</p> <p>40 <math>\mu\text{g m}^{-3}</math> for Nitrogen Dioxide and 18 <math>\mu\text{g m}^{-3}</math> for Particulates.</p> <p>In 2011 the Scottish annual mean objective for particulates was not met at 21 of 53 automatic monitoring sites.</p> <p>The Scottish annual mean objective for Nitrogen Dioxide was not met at 12 of the 58 monitoring sites in Scotland in 2011. However passive diffusion tube monitoring at local authority level has shown widespread exceedences of the annual mean target resulting in designation of 20 AQMAs in Scotland.</p>	<p>Nitrogen dioxide emissions at monitoring sites in the city have shown a slight reduction overall in recent years however there are locations where there has been no change and some locations have recorded an increase.</p> <p>Particulates emissions also fluctuate across the different locations.</p> <p>There are no air quality management areas in the Shire.</p>	<p>There is an increasing need to increase energy efficiency and reduce our reliance on private transport to improve air quality, greenhouse gas emissions and health.</p> <p>Traffic growth may be a constraining factor in the future.</p> <p>Growth in commuter traffic, particularly as a result of increased residential development across the region and in neighbouring local authority areas will have a significant impact on air quality.</p>	<p>Scottish Government 'Key Scottish Environmental Statistics'  <a href="http://www.scotland.gov.uk/Publications/2012/08/2023">http://www.scotland.gov.uk/Publications/2012/08/2023</a></p> <p>Aberdeen City Council Air Quality Updating and Screening Assessment (2012)  Aberdeenshire Council (2005) <i>Local Air Quality Management Progress Report</i>  Aberdeenshire Council (2011)</p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	<p>principally from HGVs and buses.</p> <p>Monitoring of particulates in 2011 showed that the annual mean standard for PM10s was <math>22 \mu\text{g m}^{-3}</math> on Union Street, <math>22 \mu\text{g m}^{-3}</math> on Market St and <math>24 \mu\text{g m}^{-3}</math> on Wellington Rd, exceeding the national objectives.</p> <p>NO2 is the main air quality issue monitored in Westhill, Inverurie, Peterhead, Stonehaven, and Mintlaw, although no air quality management areas are currently designated in Aberdeenshire. The highest annual mean concentration of NO2 were recorded in Inverurie at <math>33 \mu\text{g m}^{-3}</math> (2010)</p>				
Noise	Currently no quantified information available.			The Environmental Noise Directive requires noise levels from road traffic, railways, major airports and industry to be assessed due to their impact on human health. The Scottish Government is working with local authorities to identify candidate Noise Management Areas in medium and large cities across Scotland, including Aberdeen. In addition to identifying areas where noise is an issue, there is also a requirement to	

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
				identify quiet areas for protection. The Scottish Government is leading this in terms of guidance and co-ordination across Scotland however local authorities have a responsibility to identify candidate Noise Management Areas and develop Noise Management Plans.	

**Table C2: Water**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Ground water and river levels	<p>Scottish Water are currently permitted to abstract up to 145 megalitres per day (MLD) from the River Dee, however, the average amount taken is around 90MLD. It is not anticipated that this license will reduce the permitted abstraction level prior to 2014.</p> <p>Data on ground water in Scotland was not available.</p>	By the 2080s, summer precipitation decreases of 10-20% under the low emissions (Global Sustainability), and 20-30% under the high-emissions World Markets scenario are predicted in the north of Scotland.	<ul style="list-style-type: none"> <li>• Rainfall levels are predicted to decline during the summer months, which may affect a rivers yield rate, but this will be less severe further north.</li> <li>• Rainfall in winter months is predicted to increase.</li> <li>• Increase in water consumption from industrial consumers and from increased residential development.</li> <li>• Increase in leakages from pipe infrastructure as it 'ages' however Scottish Water continue to make progress on leakage reduction.</li> </ul>	Predicted increases in rainfall may increase the risk of flooding events. It is important that the transport network does not increase this risk and that it is resilient to it.	<p>Aberdeen City (2007) State of the Environment Report  <a href="http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?IID=15960&amp;SID=883">http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?IID=15960&amp;SID=883</a></p> <p>Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Quality of water bodies (Ground water)	2010: high status – 0 2010: good status – 42 2010: moderate status – 0 2010: poor status – 8 2010: bad status – 0	The Water Framework Directive states that all water bodies are of good ecological status, or similar objective, by 2015.	Currently there are 121 water bodies achieving 'good' or 'high' standards, representing 46% of the total. 34% of water bodies are in the 'moderate' category and 21% are of 'poor' or 'bad' quality.	It is important that RTS interventions do not prevent water bodies in the Nestrans area achieving at least 'good' ecological status in order for the area to reach the targets.	Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i>
Quality of water bodies (Coastal)	2010: high status – 6 2010: good status – 8 2010: moderate status – 1 2010: poor status – 0 2010: bad status – 0	Same as above	Same as above	Same as above	Same as above
Quality of water bodies (Transitional)	2010: high status – 4 2010: good status – 1 2010: moderate status – 1 2010: poor status – 0 2010: bad status – 0	Same as above	Same as above	Same as above	Same as above
Quality of water bodies (Loch)	2010: high status – 0 2010: good status – 1 2010: moderate status – 0 2010: poor status – 2 2010: bad status – 1	Same as above	Same as above	Same as above	Same as above
Quality of water bodies (River)	2010: high status – 5 2010: good status – 54 2010: moderate status – 87 2010: poor status – 31 2010: bad status – 12	Same as above	Same as above	Same as above	Same as above

**Table C3: Soil**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Land contamination	<p>There are no statutorily identified contaminated sites in Aberdeen, although there are 900 potentially contaminated sites, which are being considered for investigation.</p> <p>There are 4 statutorily identified contaminated sites in Aberdeenshire. Aberdeenshire Council's Contaminated Land Strategy is currently under review.</p> <p>In Aberdeenshire, there are other potentially contaminated sites, including landfill sites, former gasworks, stations and goods yards, petrol stations and garages, distilleries, smithy's and infilled Coastal.</p>	<p>The total number of sites affected by contamination within Scotland is difficult to judge accurately as individual local authorities use a variety of assessment methods. However, it is estimated that approximately 67,000 sites (82,034 hectares) could be affected by land contamination.</p>	<p>Although only 4 contaminated sites are on the public register in the North East, this may increase as many sites are still to be investigated. Legal regime is in place to deal with contaminated sites therefore this position should improve in the future.</p>	<p>Contaminated land places financial and technological constraints on development. These constraints may dictate the type of development: the feasibility of remedial works may determine that a site is only suitable for industrial use; the cost of remedial works may determine that high density development is the only viable economic option.</p> <p>Contaminated land impacts on the water environment, i.e. Coastal surface and coastal waters, and the wider environment including for instance local ecology.</p>	<p>Aberdeen City Council (2001) <i>Contaminated Land Inspection Strategy</i>  <a href="http://www.aberdeencity.gov.uk/web/files/Pollution/ContaminatedLandInspectionStrategy.pdf">http://www.aberdeencity.gov.uk/web/files/Pollution/ContaminatedLandInspectionStrategy.pdf</a></p> <p>Aberdeenshire Council (2009) <i>Public Register of Contaminated Land</i>  <a href="http://www.aberdeenshire.gov.uk/environmental/strategy/PublicRegisterofContaminatedLandAug2009.pdf">http://www.aberdeenshire.gov.uk/environmental/strategy/PublicRegisterofContaminatedLandAug2009.pdf</a></p> <p>SEPA (2009) <i>Dealing with Land Contamination in Scotland: A review of progress 2000-2008</i>  <a href="http://www.sepa.org.uk/land/land_publications.aspx">http://www.sepa.org.uk/land/land_publications.aspx</a></p>
Prime agricultural land (Grades 1 to 3.1)	<p>Aberdeenshire's prime agricultural land is concentrated in central and southern Aberdeenshire. Grade 2 near Laurencekirk (approx 950ha)</p> <p>Aberdeen contains very little prime agricultural</p>	<p>Net loss of Scottish agriculture land from roads, housing and industry has doubled from 588ha in 1989 to 1,402ha in 2003.</p>	<p>Climate change could increase the level of prime agricultural land in Scotland, however this may cause conflicts with sites of high biodiversity value, sensitive or designated sites.</p>	<p>Potential impacts of climate may constrain prime agricultural land available in the future.</p> <p>Prime agricultural land may require further protection from development as demand for development rises and as land for food production rises.</p>	<p>Scottish Executive Statistics (2005): Economic Report on Scottish Agriculture  <a href="http://www.scotland.gov.uk/Publications/2005/06/2290402/05121">http://www.scotland.gov.uk/Publications/2005/06/2290402/05121</a></p> <p>Scottish Government (2009): The Scottish Soil Framework  <a href="http://www.scotland.gov.uk/Publications/2009/05/20145602/6">http://www.scotland.gov.uk/Publications/2009/05/20145602/6</a></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	land (300ha).				
Total municipal waste arising (tonnes):	Aberdeen City: 2005/06 – 140,064 2006/07 – 141,296 2007/08 – 138,459 2008/09 – 132,078  Aberdeenshire: 2005/06 – 155,123 2006/07 – 143,342 2007/08 – 153,731 2008/09 – 150,372		There has not been a substantial fall in municipal waste sent to landfill in Aberdeen City compared with Aberdeenshire.  Municipal Waste recycling is falling in Aberdeen City in contrast with Aberdeenshire.	The location and number of sites for municipal waste, recycling and composting and the volume of waste produced will have an impact on the number of heavy goods vehicle movements on the region's road network and the distance that they are required to travel. Increasing populations and increasing volumes of waste will therefore impact on the transport network and emissions.	Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i>  Scotland's Zero Waste Plan (2010)  SEPA (2008) Waste Data Digest 10  SEPA (2007) Waste Data Digest 9  SEPA (2006) Waste Data Digest 8  SEPA (2005) Waste Data Digest 7
Industrial waste arisings (tonnes):	North East Scotland	Scotland	There has been an improvement in the amount of waste composted in both districts.		
Construction and demolition waste arisings (tonnes):	2005 – 300,000 2006 – 420,000 2007 – 430,000 2008 - 315,525	2005 – 2,350,000 2006 – 2,720,000 2007 - 2,760,000 2008 - 2,206,017	At both regional and national level there have been reductions in the amount of C&D waste and Commercial waste but there has been an increase in industrial waste.		
Commercial waste arisings (tonnes):	2005 – 621,254 2006 – 493,590 2007 - 526,013 2008 - 437,146	2005 – 6,412,378 2006 – 6,010,193 2007 - 6,212,857 2008 - 5,492,158			
	2005 – 710,000 2006 – 580,000 2007 – 650,000 2008 - 672,986	2005 – 6,060,000 2006 – 4,920,000 2007 - 5,330,000 2008 - 5,600,647			
Soil Erosion	From Berwick to Aberdeen, the coastline is eroding, but is stable where there are rocky coasts or coastal defences. From Aberdeen to Inverness the coastline is largely eroding, but parts are being replenished	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.	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.	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/	Aberdeen City (2007) State of the Environment Report <a href="http://www.aberdeencity.gov.uk/nms/runtime/saveasdialog.asp?IID=15960&amp;SID=883">http://www.aberdeencity.gov.uk/nms/runtime/saveasdialog.asp?IID=15960&amp;SID=883</a>  SEPA (2006) State of Scotland's Environment Report 2006 <a href="http://www.sepa.org.uk/science_and">http://www.sepa.org.uk/science_and</a>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	with sand and gravel from larger rivers.	Precipitation will be greater in the west due to the west-east precipitation gradient.		upland Coastal. RTS interventions should not exacerbate coastal soil erosion.	_research/data_and_reports/state_of_the_environment.aspx

**Table C5: Biodiversity (natural heritage designations)**

		Aberdeenshire*		Aberdeen City	
		Number of sites	Area (hectares)	Number of sites	Area (hectares)
International	Ramsar	3	1,051	0	n/a
	Special Areas of Conservation (SAC)	8	5,545	1	155
	Special Protection Areas (SPA)	7	2,227	0	n/a
National	Sites of Special Scientific Interest (SSCI)	69	15,655	4	47
	National Nature Reserve (NNR)	2	1,072	0	n/a
Local	Sites of Interest of Natural Science (SINCS)	79	n/a	16	n/a
	Local Nature Reserve (LNR)	2	28	4	126
	Scottish Wildlife Trust Reserves	4	n/a	0	n/a
	District Wildlife Site	0	n/a	70	n/a
	RSPB Reserves	3	n/a	0	n/a
	Ancient Woodland	2,584	45,000	140	n/a

Source: SNH 2009

\* Excluding Cairngorms national park

The environment of the north east is an important resource and is recognised internationally for its value. However, biodiversity and habitats can be vulnerable to the potentially harmful effects of development and so the policies and allocations that result from the Regional Transport Strategy must focus on maintaining and improving natural, built and cultural assets.

There are many nature designations of international, national and local importance throughout the region that must be protected and improved. There is a requirement on all public bodies to avoid the deterioration of the qualifying species or habitats of any Natura site, including SACs such as the River Dee.

New development has the potential to put pressure on built, natural and cultural sites, consequently development must be appropriately planned to ensure that there is no loss or damage to these important assets. It is important to note that a designated site may be protected by more than one designation.

**Table C6: Human Health**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/ constraints	Data source(s)
Quality and availability of public open space in urban and rural areas	<p>The Aberdeen City audit identified 3,471 hectares of open space (not including private gardens or sites under 0.2 hectares). The quality of open space varies across the city with public parks and gardens rating the highest and allotments and business amenity open space scoring the lowest rating.</p> <p>Data for Aberdeenshire Councils Open Space Audit was not available.</p>		<p>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.</p>	<p>Open space networks can also be used as transport corridors for walking and cycling which should be encouraged through the RTS. The detail of these networks lies with the two local authorities, however the RTS should encourage measures that increase opportunities for walking and cycling and access to open spaces to improve the health of the population</p>	<p>Aberdeen City Council (2010) Open Space Audit</p>
Quality of life in currently deprived areas	<p>The 2009 Scottish Index of Multiple Deprivation (SIMD) found that the strategic development plan area has 42 datazones classified as the 20% most deprived by the Scottish government, representing 7.5% of the total.</p> <p>Deprivation is concentrated in Aberdeen City with 13% of all datazones being classified as in the most deprived 20%, while although only 2% of Aberdeenshire is in this group, these are</p>	<p>Aberdeenshire has most of its datazones in the least deprived in terms of SIMD ranks. Aberdeenshire has Scotland's least deprived datazone in Banchory.</p> <p>The 25% most deprived datazones in Aberdeen City all rank in the 30% most deprived nationally.</p>		<p>Poor access to services in rural areas. Centralisation of service provision has and will continue to affect marginalised areas. Pockets of deprivation through low job opportunities and income could be adversely affecting people's mental health. Transport provision has a key role to play in</p>	<p>Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/ constraints	Data source(s)
	concentrated in the coastal towns of Fraserburgh and Peterhead. In Aberdeen the zones are situated in the North and South of the city.			addressing some of these inequalities.	
Physical activity	Only 39% of adults in the NHS Grampian region are meeting recommended levels of physical activity in 2011	38% of Scottish adults are meeting recommended levels of physical activity in 2011.	Due to differences in reporting of figures it is not possible to compare with figures before 2008. There has however been no significant change in this trend since 2008.	Low levels of physical activity and the resulting health impacts have significant implications for the overall health of the population. Active modes of travel (walking and cycling) have a significant role to play in encouraging more active lifestyles.	Scottish Health Survey Annual Report 2011.
Road safety	<p>The 2006-2010 average annual road traffic casualties are shown below:</p> <p>Aberdeen Fatal: 5 Serious: 82 Slight: 398 All: 485</p> <p>Aberdeenshire Fatal: 29 Serious: 189 Slight: 621 All: 839</p>	<p>There are five national targets for casualty reductions in Scotland by 2020:</p> <p><b>186</b> people were killed in 2011, <b>36 per cent</b> below the 2004-08 baseline average level (target of 40%).</p> <p><b>1,873</b> people were seriously injured in 2011, <b>28 per cent</b> below the 2004-08 baseline average level (target of 55%)</p> <p><b>On average 5</b> children were killed between 2009 and 2011: <b>65 per cent</b> below the 2004-08 average (target of 50%).</p> <p><b>203</b> children were seriously injured in 2011: <b>38 per cent</b></p>	When compared to the 2005-09 annual average for Aberdeen City and Shire, this is a 6% reduction in fatal casualties, 3% increase in serious and 18% reduction in slight across the north east.	Increasing levels of traffic across the region may increase the risk of road traffic collisions and casualties. In some areas however, increasing traffic volumes which slow the speed of traffic could actually help reduce the severity of accidents. The RTS should actively aim to reduce the number and severity of road accidents.	<p>Nestrans annual monitoring report 2012</p> <p>Key Reported Road Casualties Scotland 2011</p> <p><a href="http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/j230656-01.htm">http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/j230656-01.htm</a></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/ constraints	Data source(s)
		below the 2004-08 average (target of 65%)			
Noise and air quality	<p>Aberdeen Airport noise indicators (2006)  Number of air traffic movements: 116, 971  Area/Pop in 57dB LAeq: 9.4km<sup>2</sup> / 6450  Night movements: N/A  Number of noise related enquiries: 82  Number of noise related enquirers: 34</p> <p>The Scottish Government undertakes noise mapping for the main transportation road and rail links in Scotland.</p> <p>Information on air quality is provided above, however the impacts of poor air quality on the health of the population make it relevant under this heading also.</p>		<p>Road traffic noise is the most prevalent source of ambient noise, alongside railways and Aberdeen Airport. Noise emissions from road traffic vehicles are not expected to reduce significantly in the near future.</p> <p>For trends in air quality, see Table C1</p>	<p>A Strategic Noise Action Plan has been prepared for Aberdeen Airport under the European Directive on Environmental Noise (2002/49/EC)</p> <p>An Air Quality Action Plan has been developed for the Air Quality Management Areas in Aberdeen.</p> <p>Worsening noise and air quality will have negative impacts on the health of the population.</p>	<p>Scottish Government noise mapping <a href="http://www.scottishnoisemapping.org/default.aspx">http://www.scottishnoisemapping.org/default.aspx</a></p> <p>Aberdeen Airport Noise Action Plan 2008-2013 <a href="http://www.aberdeenairport.com/about-us/community-matters/noise-action-plan">http://www.aberdeenairport.com/about-us/community-matters/noise-action-plan</a></p>

**Table C7: Population**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Life expectancy at birth	<p>Aberdeen: Men 75.4 years Women 80.4 years</p> <p>Aberdeenshire: Men 77.5 years Women 81.1 years</p>	<p>Scotland: 75.0 years for men and 79.9 years for women</p>	<p>Compared with 10 years ago in 1996-1998: Life expectancy at birth for Scotland has increased by 2.6 years for men (from 72.4 years to 75.0 years) and 1.9 years for women (from 78.1 years to 79.9 years); The gap between men and women continues to close, dropping from 5.6 years to 4.9 years over the period; There are no areas that have experienced a drop in life expectancy The gap between men and women is closing in relation to life expectancy at birth.</p>	<p>Aging population will create demand for provision of transport services including accessible vehicles and ability to drive.</p>	<p>General Register Office for Scotland (2009) <i>Life Expectancy for Administrative Areas within Scotland, 2006-2008</i></p>
Healthy life expectancy at birth	<p>Aberdeen Men 67.8 years Women 72.1</p> <p>Aberdeenshire Men 70.8 years Women 74.5</p>	<p>Scotland Men 66.3 years Females 70.2 years</p>	<p>The gap between men and women is closing in relation to healthy life expectancy at birth.</p>	<p>A population that lives longer but lives healthier will not require as much assistance as a population that lives longer but lives unhealthily.</p>	<p>Scottish Public Health Observatory <a href="http://www.scotpho.org.uk/home/PopulationDynamics/hle/hle_data/hle_scotland.asp">http://www.scotpho.org.uk/home/PopulationDynamics/hle/hle_data/hle_scotland.asp</a></p>
Population Change	<p>Aberdeen City 1998 – 215,650 2004 – 205,490 2008 - 210,400</p> <p>Aberdeenshire 1998 – 226,220 2004 – 231,570 2008 - 241,460</p> <p>Region:</p>	<p>Scotland  1998 – 5,077,070 2004 – 5,078,400 2008 - 5,168,500</p> <p>The population change in the Nestrans area has increased at a rate (3.35%) double to that of the Scottish average (1.77%) in the</p>	<p>The population of Aberdeen City declined between 1998 and 2004, but over the first half of the period, however this trend has reversed, and since 2004 both the City and the Shire populations have been increasing.</p>		<p>General Register Office for Scotland <a href="http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html">http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html</a></p> <p>Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	1998 - 438,689 2004 - 434,160 2008 - 448,693	last ten years.			
Population Structure	As at June 2008, the average age was: Aberdeen – 38 (m) 40 (f) Aberdeenshire – 39 (m) 41(f)	In line with much of Scotland the population structure of Aberdeen City and Shire has aged over the last ten years.	The 2008 based projections (probable) suggest that by 2033 the population of the region area will increase by 14%. The number of people of pensionable age will increase by 32% much in line with Scottish figures. The population of working age is projected to rise by 11.4%, well above the Scottish figure of 2.2%. Additionally, while at a Scottish level the number of under 15's is projected to decline by 1.5% over the period, in Aberdeen City and Shire this age group could increase by 4.1%.	A rapidly aging population has significant implications for both service provision and the economic performance of the region, and results in the need to attract and retain people of working age to the region.  Aberdeenshire has the largest projected rise in the pensionable age group in Scotland and this will have major implications for the region.  Transport services will likely have to become more accessible to cater for the needs of an ageing population.	General Register Office for Scotland <a href="http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html">http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html</a>  Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i>
Change in households  <b>Household growth</b>	Aberdeen City  1991 - 89,949 2001 - 95,265 2003 - 96,944 2008 - 97,424  2001 – 2008 – 2,159 % change – 2.3%  Aberdeenshire (inc Cairngorms National Park)  1991 - 80,473	Scotland  1991 – 2,042,809 2001 – 2,125,577 2003 – 2,195,033 2008 – 2,211,025  2001-2008 – 85,448 % change – 4.0%	During the last decade there has been a sustained increase in numbers of households and a significant fall in average household size. This is a trend that is expected to continue, with average household size dropping to under two in the Nestrans area by 2021.	Decreasing household size and increasing number of households will result in constraints in the level of houses that can be built to demand. If this trend continues there may be serious issues in relation to infrastructure requirements. This trend is also likely to have an impact on the number of cars in the region and therefore traffic volumes.	General Register Office for Scotland <a href="http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html">http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html</a>  Aberdeen City and Shire SDPA (2010) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
<b>Forecast household size</b>	<p>2001 - 87,077 2003 - 90,902 2008 - 92,317</p> <p>2001 – 2008 – 5,240 % change – 6.0%</p> <p>Aberdeen City and Shire (inc Cairngorms National Park)</p> <p>1991 - 170,422 2001 - 182,342 2003 - 187,846 2008 - 189,741</p> <p>2001-2008 – 7,399 % change – 4.1%</p> <p>Aberdeen City forecast household size:</p> <p>2006 – 2.00 2011 – 1.93 2016 – 1.86 2021 – 1.82 2026 – 1.78 2031 – 1.74</p> <p>Aberdeenshire forecast household size:</p> <p>2006 – 2.36 2011 – 2.30 2016 – 2.23 2021 – 2.16 2026 – 2.09 2031 – 2.03</p> <p>Aberdeen City and Shire forecast household size:</p>			<p>The location of new development will have a significant impact on the way in which people travel and the distances they travel.</p>	

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	2006 – 2.18 2011 – 2.12 2016 – 2.04 2021 – 1.99 2026 – 1.94 2031 – 1.89				

**Table C8: Cultural Heritage**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Built and Cultural Heritage Designations	<p>Aberdeen City</p> <p>Listed buildings – 1,212 Listed buildings at risk – 26 Conservation Areas – 11 Scheduled Ancient Monuments – 44 Archaeological Sites and Monuments Record – 699 Gardens and designed landscapes - 1</p> <p>Aberdeenshire</p> <p>Listed buildings – 3,715 Listed buildings at risk – 228 Conservation Areas – 49 Scheduled Ancient Monuments – 581 Archaeological Sites and Monuments Record – 17,631 Gardens and designed landscapes – 27 Inventory battlefields – Alford 1645; Barra 1308; Fyvie 1644 and Harlaw 1411</p> <p>Aberdeen City and Shire</p> <p>Listed buildings – 4,927 Listed buildings at risk – 254 Conservation Areas – 60</p>			<p>Development is putting pressure on these features. There is also a threat of adverse impacts to and the loss of unknown or locally known (and not formally designated) architectural and archaeological remains from new development, including transport infrastructure.</p> <p>New development has the potential to put pressure on, or be constrained by, built and cultural sites. Consequently development must be appropriately planned to ensure that there is no loss or damage to these important assets.</p>	<p>Aberdeen City and Shire SDPA (2009) <i>Aberdeen City and Shire Structure Plan Monitoring Report</i></p>

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
	Scheduled Ancient Monuments – 625 Archaeological Sites and Monuments Record – 18,330 Gardens and designed landscapes – 28 Inventory battlefields - 4				

**Table C9: Landscape**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Landscape character	There are 42 landscape character areas in Aberdeenshire, including 9 within the CNP.  In Aberdeen there are 27 landscape character areas.	The four Landscape Character Assessments that cover the North East provides a brief overview of past land use practices and discusses potential land uses for existing landscapes.	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) <i>National programme of landscape character assessment: Banff and Buchan</i> , Review No 37. Scottish Natural Heritage (1996) <i>Cairngorms landscape assessment</i> , Review No 75. Scottish Natural Heritage (1996) <i>Landscape character assessment of Aberdeen</i> , Review No 80 Scottish Natural Heritage (1998) <i>South and Central Aberdeenshire: landscape character assessment</i> , Review No 102.

**Table C10: Material Assets**

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Road network and condition	<p>Road lengths 2010</p> <p>Aberdeen City: Trunk Roads Motorway – 0km A Roads – 29km Local Authority Roads A Roads – 58km B Roads – 42km C Roads – 93km Unclassified – 714km Total 936km</p> <p>Aberdeenshire Trunk Roads Motorway – 0km A Roads – 177km Local Authority Roads A roads – 687km B roads – 800km C roads – 1,536km Unclassified – 2,406km Total – 5,606</p> <p>Road condition: In 2010/11, 35% of local authority roads in Aberdeen City were classed as Red or Amber in the Road Condition Survey and require some kind of maintenance. In Aberdeenshire, this figure was 28%.</p>	<p>Across Scotland as a whole, 38% of the local authority road network is classed as amber or red in the Scottish Road Condition Survey and requires some form of maintenance.</p>	<p>A number of harsh winters in recent years have accelerated the deterioration of roads infrastructure and significantly increased the funding requirements for maintenance. This combined with public spending cuts and restricted Council budgets has led to an overall deterioration of roads infrastructure which will likely continue if severe winters become more common.</p>	<p>Although road maintenance is an issue for the local authorities and their Local Transport Strategies, the RTS should have cognisance to the ongoing maintenance implications of any new infrastructure.</p>	<p>Scottish Transport Statistics</p>