

# Appendix 2

## Environmental Baseline

MORAY COUNCIL LOCAL TRANSPORT STRATEGY  
ENVIRONMENTAL REPORT  
APPENDIX 2 – ENVIRONMENTAL BASELINE INFORMATION

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## **1.0 INTRODUCTION TO THE BASELINE INFORMATION**

This Appendix seeks to provide an overview of the environmental baseline against which potential environmental impacts are measured. The process of data collection, collation and refinement is an ongoing process and will be reviewed again following the submission of the environmental report and the responses from the Consultation Authorities (SNH, SEPA and Historic Scotland) and from wider consultation with the public and other interested parties. This appendix focuses on the information relevant to the assessment of the environmental impacts of implementing the Local Transport Strategy.

### **1.1 Content of the Appendices**

The appendices cover each individual SEA topic in turn. This additional information includes extracts from information sources and supporting figures.

### **1.2 General Overview of Study Area**

The region of Moray is in the north east of Scotland bordered by Highland to the west and Aberdeenshire to the south and east. The northern boundary is contiguous with the coastline of the North Sea.

The majority of Moray's 86,750 population live in and around the towns of Elgin, Forres, Keith, Buckie and Lossiemouth, each with its own strong local identity.

Moray connects with other parts of Scotland, Europe and beyond through the trunk road and rail networks. The two trunk roads in the area are the A96 (Aberdeen to Inverness) and the A95 (Keith to Aviemore). The Aberdeen to Inverness rail line includes stations at Elgin, Forres and Keith. The two nearest airports are Inverness and Aberdeen. The Study Area is shown in Figure 1.1

The Moray region benefits from high quality physical attributes. The Local Transport Strategy in its current form has considered the environment through its vision, objectives and Action Plans. The environmental baseline provides a benchmark for the current environmental 'capacity' of the Strategy area and will inform any monitoring and future plan updates.

## 2.0 BIODIVERSITY AND NATURE CONSERVATION

Moray Region benefits from a wealth of natural heritage and areas of importance to nature conservation. The Local Transport Strategy in its current form has considered biodiversity and nature conservation within its objectives, proposed paths and management proposals.

### 2.1 Baseline

There are a number of sites designated for their importance to nature conservation and biodiversity. These include:

- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)
- Ramsar Sites
- SSSI's
- Sites of Interest to Natural Science (SINS) (42 Sites of Interest to Natural Science (SINS) within Moray)
- Semi-Natural Ancient Woodland Inventory
- Ancient Woodland
- National Nature Reserve
- Local Nature Reserve
- Tree Preservation Orders (TPOS)

These sites are shown on Figure 1.2

### 2.2 Relevant Designations and Guidance

#### ***The Conservation (Natural Habitats Etc) Regulations 1994***

These regulations transpose EC nature conservation directives into UK law

#### ***Scottish Office Circular 6/1995 (and update June 2000)***

This circular provides guidance on assessing the significance of any project on a Natura 2000 Site i.e. a SPA or SAC.

#### ***Nature Conservation (Scotland) Act 2004***

Passed by the Scottish Parliament on 5 May 2004 and effective from November 2004, it introduces a wide range of protection and enforcement measures to safeguard and enhance wildlife. In addition to new measures to protect wildlife and habitats under this Act, biodiversity is identified as a responsibility of public bodies and they have a duty to conserve biodiversity whilst exercising their functions.

#### ***United Kingdom Biodiversity Action Plan (UKBAP)***

This Plan implements the Government's commitment to the Earth Summit in Rio de Janeiro in 1992. It identifies priority habitats and species for the UK.

#### ***Local Biodiversity Action Plans***

North East Scotland Local Biodiversity Action Plan details the species and habitats of conservation concern within the study area.

#### ***Protected Sites***

In the absence of European and UK designated sites, regional protection is provided by the non-statutory Wildlife Sites and Sites of Importance for Nature Conservation.

### **Protected Species**

There is a legal obligation to ensure that species-specific surveys are undertaken to ensure that no wildlife laws are broken by the Local Transport Strategy proposals. Protected species include Bats, Otter, Water Vole, Badger and Great Crested Newts. The relevant legislation for these species are as follows:

#### **United Kingdom**

- Badger: Appendix III of Bern Convention of the Conservation of
- European Wildlife and Natural Habitats; Protection of Badgers Act 1992; Wildlife & Countryside Act 1981, Schedule 5.
- Water Vole: Wildlife & Countryside Act 1981 Section 9 (4a, 4b).
- Great Crested Newt: Wildlife and Countryside Act 1981, Schedule 5.

#### **European**

- Otter: Appendix III of Bern Convention of the Conservation of European Wildlife and Natural Habitats; Annexes 2 & 4 of EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora; Wildlife & Countryside Act 1981, Schedules 5 & 6; CITES 1;
- Great Crested Newt: European law through Annexes 2 and 4 of the EU Habitats and Species Directive, the Bern Convention and the Conservation (Natural Habitats, etc.) Regulations 1994; Wildlife & Countryside Act 1981, Schedules 5 & 6.
- Bats: Appendix II of Bern Convention of the Conservation of European Wildlife and Natural Habitats; Appendix II of Bonn Convention on the Conservation of Migratory Species of Wild Animals; Annexe 4 of EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora; Wildlife & Countryside Act 1981, Schedules 5&6.

## **2.3 Appropriate Assessment**

European Directive 92/43/EEC (The Habitats Directive) requires competent authorities to carry out a Natura Assessment /Appropriate Assessment (AA) of plans and projects that, either alone or in combination with other plans and projects, are likely to have a significant effect on European designated sites.

The Conservation (Natural Habitats &c) Regulations, 2007 will therefore apply to the preparation of the Local Transport Strategy. The regulations require that where an authority concludes that a development proposal is likely to have a significant effect on a European site, even if the development is outwith the European site boundary, an appropriate assessment of the implications for the nature conservation interests of the site must be undertaken.

### **2.3.1 Requirement for Appropriate Assessment**

The Draft Local Transport Strategy has the potential to impact upon a number of designated sites including the following Natura 2000 sites (European Protected Sites):

<b>Special Area of Conservation (SAC)</b>	<b>Special Protection Areas (SPA)</b>
Cairngorms	Cairngorms
Creag Nan Gamhainn	Darnaway And Lethen Forest
Culbin Bar	Loch Spynie
Hill Of Towanreef	Moray And Nairn Coast
Ladder Hills	Tips Of Corsemaul And Tom Mor

<b>Special Area of Conservation (SAC)</b>	<b>Special Protection Areas (SPA)</b>
Lower Findhorn Woods	
Lower River Spey - Spey Bay	
Moidach More	
Moray Firth	
River Spey	

Natura 2000 sites are shown on Figure 1.3.

### 2.3.2 Assessment Method

SNH advised Moray Council that the Strategy could have a significant effect on Natura sites, particularly the River Spey Special Area of Conservation (SAC).

The AA follows the format used in previous assessments of Moray PPS:

- Moray Council Local Plan Assessment of Natura 2000 sites April 2007
- Moray Council Structure Plan Assessment of Natura 2000 sites December 2006

Each of the Strategy components were screened to identify any with potential for likely significant adverse impact on Natura sites. Components with no impact on Natura 2000 sites were 'screened out' of the assessment. Those components of the Strategy with the potential to have a significant adverse impact on Natura sites were subject to a full Appropriate Assessment

## 2.4 Potential Impacts

Potential impacts of the implementation of the Local Transport Strategy on the biodiversity of the region include:

### *Special Area of Conservation – Habitats*

- Direct and Indirect impacts if land take is required to implement provision of new or upgraded infrastructure
- Direct and indirect impacts on sensitive habitats resulting from increased recreational pressure and trampling of vegetation.
- Impacts arising from management/maintenance of transport infrastructure e.g. use of herbicides, erosion caused by machinery, removal of vegetation along edges of roads/rail network to maintain accessibility, contamination due to spillages of chemicals, fuel oils used by maintenance contractors.

### *Special Protection Area – Species*

- Direct and Indirect impacts if land take is required to implement provision of new or upgraded infrastructure
- Disturbance of qualifying species of the SPA resulting from increased construction/maintenance e.g. bridge strengthening
- Impacts arising from management/maintenance of paths e.g. use of herbicides, erosion caused by machinery, removal of vegetation along edges of paths to maintain accessibility, contamination due to spillages of chemicals, fuel oils used by maintenance contractors. These factors can all damage the supporting habitats of the qualifying species.

### *Sites of Special Scientific Interest (SSSI)*

Natura 2000 sites are often also designated nationally under the Wildlife and Countryside Act as Sites of Special Scientific Interest or SSSI. Consideration must be given to the impacts on the qualifying interests of the site as a SSSI and thus ensure that impacts are mitigated.

### *European Protected Species*

Many of the Natura sites assessed as part of the Appropriate Assessment are also important for supporting populations of European Protected species (EPS). Impacts on EPS are considered within the AA where appropriate e.g. in relation to the River Spey SAC.

## **2.5 Mitigation**

- SNH will be consulted on all proposals to manage or develop infrastructure that may have a significant effect on Natura 2000 sites or SSSI's.
- There is a need for consultation with SNH on some of the action plan schemes to ensure that there are no impacts on protected species. Surveys for protected species and specific mitigation may be required.
- Management of infrastructure should ensure levels of biodiversity are maintained and enhanced.
- Maintenance of infrastructure should adhere to good working practice in relation to use of chemicals, dealing with spillages etc should they occur. SEPA Guidance should be followed for work in and around water courses.
- Moray Council will need to ensure that procedures are in place to identify potential impacts on European Protected Species (EPS). Licences will be required if baseline surveys indicate the presence of EPS on potential route alignments.
- Good level of biodiversity supported by existing paths should be maintained and encouraged as far as possible through conservation of existing habitat. Planting schemes should adhere to native seed sources where possible to enhance the natural biodiversity of the area and to ensure that the verges act as a habitat to encourage local species.
- Actions with the potential to impact on the water environment should be mindful of the additional requirements in relation to ecological sensitivity e.g. protection species and sites.
- Bats often use bridges and other built structures as roosts and breeding sites and any maintenance or replacement of these structures will require to be surveyed for the presence of these species

### 3.0 POPULATION & HUMAN HEALTH

#### 3.1. Population

Data obtained as part of the 2001 census and, accessed through Scottish Census Results OnLine (SCROL), shows that Moray has a higher than national average economically active population at 63%. The census data also shows that the percentage of households with at least one car is 7% higher than the Scottish average of 43.35%. The population of Moray is concentrated around the towns of Elgin, Forres, Keith, Buckie and Lossiemouth.

#### 3.2 Health

Overall, the population of Moray benefits from better health than in Scotland as a whole evident in the figures from the Scottish Census given below.

General Health	Moray	Scotland
Total resident population	86940	5062011
- % Good	71.78	67.91
- % Fairly good	20.92	21.94
- % Not good	7.3	10.15
Other Health Facts	Moray	Scotland
Average age of a person with good health	33.71	32.86
Average age of a person with a limiting long term illness	58.87	57.94
Average age of carer	48.14	47.83
Percentage of economically inactive people who are permanently sick/disabled	14.5	21.25
Percentage of households with one or more carers resident	14.29	16.84

Source: SCROL ([www.scrol.co.uk](http://www.scrol.co.uk))

#### 3.3 Potential Impacts

- Health and population impacts / benefits from improved pedestrian access routes and increased physical activity
- Local communities will benefit from increased accessibility within settlements and between settlements.
- Increased physical activity can result in improved human health, and in turn can also lessen the use of vehicles. Transport emissions are associated with increased mortality due to the physical effects of prolonged exposure to pollutants such as carbon monoxide, oxides of nitrogen, benzene (carcinogen), particulates (PM10) and sulphur dioxide.

#### 3.4 Mitigation

- Design of transport infrastructure should ensure that access is maintained to pedestrians, cyclists and other road users during and after construction.
- Changes to pedestrian routes, road layouts and crossings should be clearly signed to ensure accessibility is not compromised.
- Road design should, where viable include segregated cyclepaths and pedestrian footpaths to aid accessibility.



Changes to road layouts, traffic movements and maintenance of the transport network all have potential implications for health and road safety. These impacts can be mitigated through general measures such as:

- Planning road works and road maintenance in liaison with the local community such that disruption and noise impacts are minimised.
- Ensuring safe and well-signed alternative routes and pedestrian crossings etc are provided.
- Diversions due to roadworks and maintenance should be considerately located to ensure that local routes e.g. through settlement/school areas are not adversely affected. Diversions should be clearly signed.
- Noise impacts of all alterations to the transport network should be minimised to reduce disruption.

## **4.0 GEOLOGY, GEOMORPHOLOGY AND SOILS / LAND USE**

### **4.1 Baseline**

The solid geology of the study area is comprised of Devonian Red Sandstone with areas of marine metamorphic and igneous rock. The drift geology is a mix of boulder clay and sands and gravels.

There are 3 sites designated for geology in Moray:

- Cutties Hillock SSSI
- Findrassie SSSI
- Spynie Quarry SSSI

### **4.2 Potential Impacts**

- Impacts on protected sites with interest for geology / geomorphology designations
- Land take for engineering interventions

### **4.3 Mitigation**

- Avoiding land take from statutory and Non-Statutory designated sites of geological/geomorphological interest and balancing where possible amounts of cut and fill.
- Dealing with contaminated land is a sustainable way as per best practice guidance.
- Minimising land take impact on land productivity in the area via loss of prime agricultural land (1, 2, and 31 as classified by the Soil Survey of Scotland).
- Land use for core paths and rights of way should be maintained where possible and alterations/mitigations implemented where any adverse impact is likely.

## 5.0 WATER ENVIRONMENT

Overall Scotland's water environment is in a good condition but a wide range of problems exist at local levels. The SNIFFER Strategic Environmental Assessment Website: Guidance on Air, Soil and Water<sup>1</sup> provides information on the water environment in Scotland whilst specific data for Moray is available on SEPA's own website<sup>2</sup>.

- Approximately 40% of Scottish water bodies are at risk of failing to meet environmental standards set out in the Water Framework Directive
- Transitional waters are most at risk followed by lochs, groundwaters and rivers.
- Quality of coastal waters is high and improving further.

### 5.1 Baseline

#### *Water Framework Directive*

Consideration must be given to the Water Framework Directive (2000/60/EC)(WFD) transposed into Scottish law in 2003 through the Water Environment and Water Services (Scotland) Act 2003 (WEWS Act). This places importance on surface and groundwater quality. Activity that may pollute watercourses, engineering or altering watercourses or abstractions are regulated by SEPA under the Act.

#### *Surface Water*

Surface water conditions within Moray have been assessed by sourcing data from SEPA. SEPA databases contain data on water quality through a grading systems. These systems are used to classify all surface water bodies within Scotland. The main rivers within Moray are:

- River Spey
- River Lossie
- River Isla
- River Findhorn
- River Avon
- River Deveron

#### *Standing Water*

With Moray, there are various bodies of standing water, varying from upland lochs to reservoirs. These include:

- Loch Dallas
- Lochindorb
- Glenlatterach Reservoir
- Clunas Reservoir
- Loch Spynie – SPA and Ramsar Site

#### *Water Quality*

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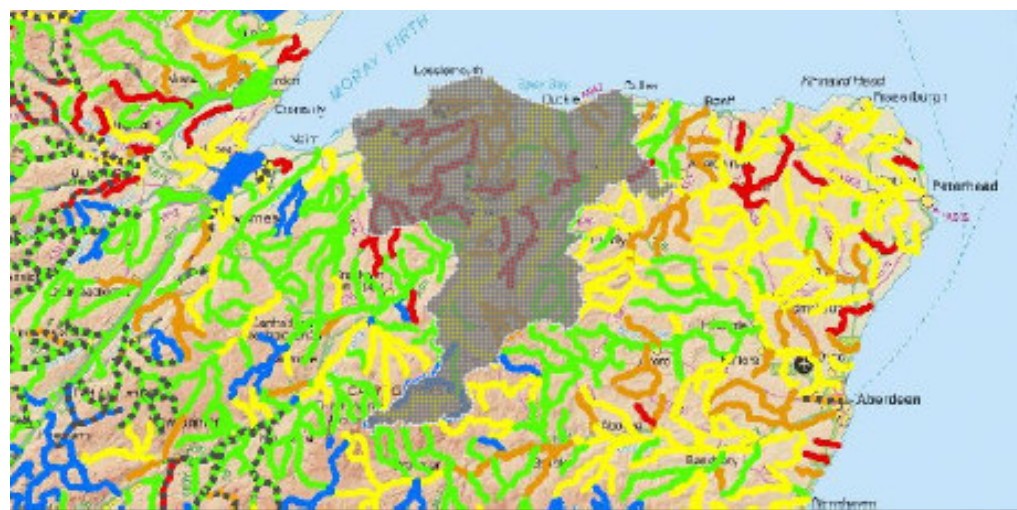
<sup>1</sup> [www.seaguidance.org.uk](http://www.seaguidance.org.uk)

<sup>2</sup> <http://www.sepa.org.uk>

SEPA's scheme for the classification of the water quality of Scotland's surface waters (including coastal waters) and groundwater has recently been adjusted to be in line with the rest of the UK and Europe, as described in the Scotland River Basin Management Plan (and Solway Tweed River Basin Plan for the southernmost part of Scotland). The classification takes into account the natural variation in the make-up of water ecosystems, subdividing these into 15 river, 10 loch, 5 estuary, 9 coastal and 8 aquifer types.

Indicators of ecological condition for rivers include the status of water plants/communities, fish, insects and other invertebrates, levels of nutrients, oxygen, acidity, temperature, toxic pollutants, condition of beds, banks and shores, continuity for fish migration and water flows and levels. Rivers, lochs and estuaries are assessed as having either High, Good, Moderate, Poor or Bad condition.

- █ High
- █ Good
- █ Moderate
- █ Poor
- █ Bad



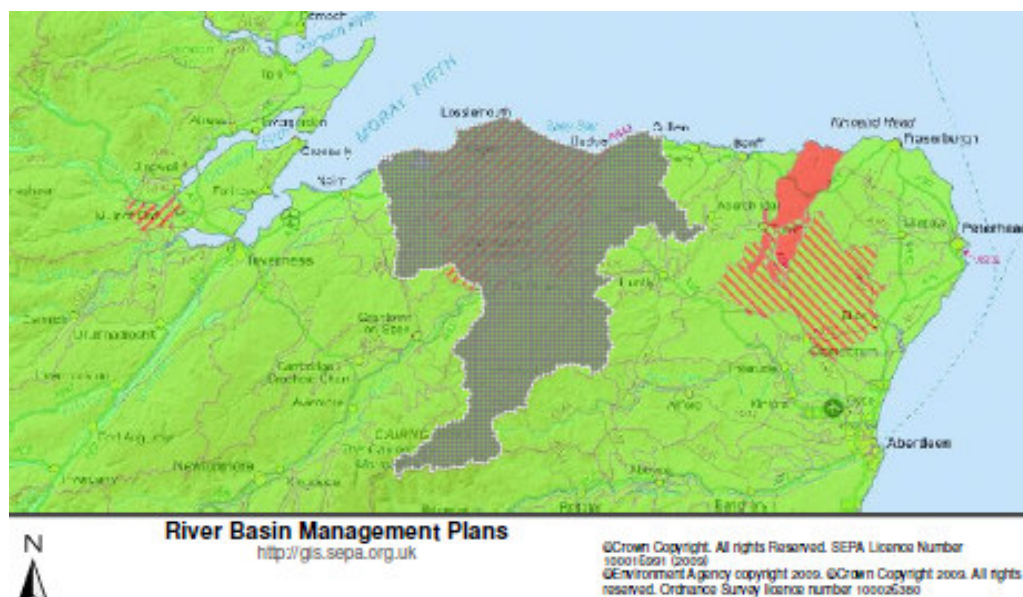
SEPA River Basin Management Plan Map for Moray – Water Quality<sup>3</sup>

Groundwater quality and quantity are assessed by consideration of the ingress of salty or polluted water, effect on the condition of associated surface waters and wetlands, protection of quality of water abstracted for human consumption, other environmental risks and abstraction/ replenishment balance. Groundwater can have either Good or Poor condition.

Moray's groundwater is classified as Good with some areas of Poor, Good.

- █ Good, Good
- █ Good, Poor
- █ Poor, Good
- █ Poor, Poor

<sup>3</sup> [http://www.sepa.org.uk/water/river\\_basin\\_planning.aspx#Interactivemap](http://www.sepa.org.uk/water/river_basin_planning.aspx#Interactivemap)



SEPA River Basin Management Plan Map for Moray - Groundwater<sup>4</sup>

### *Flooding*

Moray has been severely affected by flooding. The Moray Flood Alleviation group was set up in 2001 by the Moray Council and Haskoning UK Ltd to alleviate the flooding of communities (Lhanbryde, Elgin and Forres) in Moray.

The mission of Moray Flood Alleviation is to alleviate flooding for the communities of Moray.

### *Statement of Objectives*

- To have no major accidents or incidents
- To have a satisfied client and community
- To deliver effective flood alleviation as soon as possible
- To make the most effective use of the teams resources
- To develop demonstrably sustainable solutions and ;
- To ensure that the project is commercially viable for all partners.

## **5.2 Potential Impacts**

Most of the potential issues associated with implementation of the Strategy are those that require physical works on the transport network or operational impacts where maintenance or management are carried out. These potential issues can be mitigated through application of guidance and best practice.

### **Construction**

- Earthworks and construction (track, machinery, borrow pits) may pollute nearby watercourses with sedimentary material or construction materials
- Increased loadings of suspended solids can smother the natural substrate of rivers and burns and adversely affect spawning ground and invertebrate communities

<sup>4</sup> [http://www.sepa.org.uk/water/river\\_basin\\_planning.aspx#Interactivemap](http://www.sepa.org.uk/water/river_basin_planning.aspx#Interactivemap)

- Earthworks may mobilise pollutants in soil and allow them to contaminate nearby water resources through surface water run-off and percolation to groundwater
- Earthworks/ creation of new ponds/ drainage systems/ culverts/ crossings/ temporary bunding or material stockpiles may alter runoff, hydrology or morphology of nearby water features resulting in changes to flood risk or habitats
- Accidental physical damage to banks/ stream beds/ culverts may affect flow characteristics
- Pollution from accidental spillage of fuels, hydraulic fluids and lubricants
- Pollution due to vandalism of stores or plant
- Foul drainage from washroom facilities, wheel washing, etc. impacts on receiving waters
- Water abstraction or change in groundwater level may alter hydrological regime
- Disturbance/ damage to existing foul drainage systems
- Maintenance of harbours/use of dredger may mobilise pollutants in coastal waters and noise/pollutants can affect marine life.

### ***Operation***

- Increased volume and rate of surface runoff from impermeable surfaces such as new road surface roads affecting flow characteristics or causing soil erosion
- Pollution of groundwater (and eventually receiving watercourses) from accumulated contaminants in runoff from these surfaces e.g. debris from plant litter, fuel, dust, surfactants, pesticides and herbicides, salt
- Changes to the permeability of surface cover may impact on the underlying hydraulic regime and groundwater recharge
- Surface drainage schemes may alter the flow characteristics of nearby watercourses and flooding characteristics
- Physical disturbance to surface water features from increased use of the area
- Use of dredger may mobilise pollutants in coastal waters and noise/pollutants can affect marine life.

### **5.3 Mitigation**

- All actions implemented by the LTS will ensure that surface water quality will not be adversely affected to satisfy the requirements of the Water Framework Directive and the River Basin Management Plans which are part of the implementation for the Water Framework Directive in Scotland under the Water Environment and Water Services Act (Scotland) 2003.
- SEPA Pollution Control Guidance and Best Practice measures implemented for all LTS Actions.
- Actions implemented through the LTS which require SUDS schemes should ensure water attenuation and discharge does not impact on attenuation of floodplains.
- Water crossings should be minimised and culverting avoided where possible as per SEPA Guidance.
- All actions should be compliant with SPP section on Flooding.

## **6.0 AIR QUALITY**

### **6.1 Baseline**

Air quality in Moray is of a high standard and there are consequently no Local Air Quality Management Areas in the region. There are known hotspots for air pollution within Elgin in particular as a result of congestion.

### **6.2 Potential Impacts**

- Air quality is not an issue in Moray present. The Strategy can encourage modal shift and may contribute to small scale attitude change and therefore local air quality improvements. Schemes will contribute to emissions reductions and Scottish Government targets.

### **6.3 Mitigation**

- Project level EIA for actions where air quality is identified as being of significant adverse impact.
- Appropriate controls for dust during construction and maintenance

## **7.0 NOISE AND VIBRATION**

### **7.1 Baseline**

Exposure to environmental noise can affect human health and quality of life. A range of non-auditory health effects that may be associated with exposure to environmental noise include<sup>5</sup>:

- hearing impairment
- interfere with communication
- disturb sleep
- cause cardiovascular and psycho-physiological effects
- reduce performance
- provoke annoyance responses and changes in social behaviour.

The main source of ambient noise pollution in the UK is from road traffic. Noise is not a major issue in Moray due to its predominantly rural nature, however the noise levels experienced from transport in areas with higher levels of traffic and congestion e.g. Elgin<sup>6</sup> can impact upon human health and therefore any potential impacts arising from implementation of the plan need to be identified and mitigated.

### **7.2 Potential Impacts**

- Actions could negatively impact upon noise if the projects taken forward could increase the number of cars/congestion particularly in Elgin town centre and on strategic routes close to existing receptors.
- Actions which promote modal shift and therefore aim to reduce congestion will benefit those living in built up areas.

### **7.3 Mitigation**

Without the actions within the Local Transport Strategy, road traffic volumes in the on Moray's roads, particularly in areas with existing issues e.g. Elgin would increase at a greater rate and therefore would also likely increase noise exposure levels for sensitive receptors e.g. residents living on key routes.

- Project level EIA for actions where noise is identified as being of significant adverse impact.
- Appropriate siting of transport infrastructure and use of acoustic barriers where noise is likely to be an issue.
- Use of low-noise road surfaces could be considered for both new infrastructure and replacement surfacing as part of ongoing maintenance.
- Promotion of lower speed limits in built up areas can reduce noise of passing traffic whilst improving safety.

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<sup>5</sup> <http://www.who.int/mediacentre/factsheets/fs258/en/>

<sup>6</sup> <http://www.scottishnoisemapping.org/default.aspx>



## **8.0 CLIMATE**

### **8.1 Baseline**

Moray has a temperate maritime climate having mainly cool summers but with relatively mild winters. There is variation between the coastal areas and the Cairngorms to the South.

Based on the climate scenarios of the UKCP09<sup>7</sup>, it is evident that there is the potential for changes to temperatures, precipitation and sea levels. The changes are predicted to include:

- Higher summer temperatures and higher winter temperatures
- The UK will get wetter as it gets warmer - increased rainfall and therefore potential for flooding.
- Sea levels are anticipated to rise, although Scotland will see less impact due to isostatic uplift (0.9mm/year). Extreme sea levels and increased storminess will cause problems for transport, in particular travel via ferry.

### **8.2 Potential Impacts**

Infrastructure strategies could both impact and be affected by climatic changes. Transport is the largest contributor of greenhouse gases and therefore climate change.

The Climate Change (Scotland) Act 2009 received Royal Assent on August 4, 2009, following a comprehensive Parliamentary Bill Process. The Act is a key commitment of the Scottish Government and seeks to reduce greenhouse gas emissions by 80% by 2050.

Dependence on the private car could be reduced by an integrated transport system. Any new transport infrastructure should accommodate changing climatic conditions e.g. increased frequency of flooding, higher summer temperatures.

### **8.3 Mitigation**

Strategic mitigation could include the following:

- LTS will aim to satisfy the requirements of the National and Regional Transport Strategies through a reduction in emissions.
- Promotion of modal shift and integration of public transport to improve accessibility and reduce car use for local journeys.
- Planning for the potential changes to climate and incorporation of climate change awareness within the LTS will ensure that disruption to transport is minimal.
- Areas prone to landslides and landslip prone routes should be addressed at detailed stage.

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<sup>7</sup> <http://ukclimateprojections.defra.gov.uk/>

## 9.0 MATERIAL ASSETS

### 9.1 Baseline

#### *Tourism*

Tourism is an important sector within the Moray economy. Moray and the North East of Scotland attracts a significant number of visitors each year to attractions such as the whisky distilleries, castles, and local visitor attractions.

	UK Tourist Trips (%)		Overseas Tourist Trips (%)	
	A&G	Scotland	A&G	Scotland
January-March	17	18	10	15
April -June	26	27	29	28
July-September	33	21	48	41
October-December	24	24	13	16
Total (%)	100	100	100	100

Source: Visit Scotland Tourism Statistics for the North East of Scotland, 2006

Moray is also a popular destination for outdoor pursuits including walking, cycling, watersports etc. The Strategy has the potential to increase visitor numbers to the region further as a result of improved access.

Tourism is a significant part of the overall economy in Moray, as in the rest of Scotland. Tourism is recognised as a major employer in the region behind the public sector, RAF and retail sectors.

	2005	2006	As % of All Employment 2006
Aberdeen and Grampian	22,000	22,000	8.0
All Scotland	210,000	218,000	9.2

Source: Visit Scotland Tourism Statistics for the North East of Scotland, 2006 (from Annual Business Inquiry (Office for National Statistics))

#### **Land Ownership/Rural Businesses**

##### *Private Land Ownership*

Scotland mainly (97%) consists of rural land equating to approximately 18.5 million acres. The general pattern of land ownership across Scotland is that a high percentage (87%) of rural land is privately owned, nominally held by estates. Moray Council fits this general pattern with large estates including Seafield Estate and Tulchan Estate owning significant tracts of the study area.

##### *Agricultural Holdings*

Moray is a predominately rural area and therefore there are a large number of agricultural holdings and businesses in the region.

#### **Agriculture: Employment in Moray (June 2006)**

	1996	2002	2005	2006	1996-2006
Full Time Occupiers	472	401	388	375	-87
Part Time Occupiers	276	411	427	437	157

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<b>Total</b>	<b>748</b>	<b>812</b>	<b>815</b>	<b>812</b>	<b>70</b>
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Source: Source: Scottish Executive, Environment and Rural Affairs Department, June 2006 Census (Moray Facts, the Moray Council<sup>8</sup>)

## 9.2 Potential Impacts

- The use of resources in construction and particularly in the construction of road infrastructure have major environmental impacts in terms of raw materials
- The LTS should have a positive impact on local businesses through the reduction of congestion, improvement of transport infrastructure and in support of strategic road and rail improvements. Care must be taken to ensure that any temporary disruptions etc are mitigated appropriately.

## 9.3 Mitigation

The use of resources in construction and particularly in the construction of road infrastructure have major environmental impacts in terms of raw materials. Mitigation should include the following:

- Project level EIA/assessment for any actions where there is potential for significant adverse impacts on sensitive receptors
- Adherence to best practice construction methods and working practices to ensure that any impacts on residents/businesses/visitors to Moray arising from actions implemented as part of the Strategy are minimised
- Commitment where possible to use recycled aggregates in maintenance programme and production of a Moray generic guidance
- Commitment to Sustainable Procurement and ensuring contractors undertaking transport works associated with the LTS are adhering to environmental best practice in line with regulatory and guidance framework.

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<sup>8</sup> <http://www.moray.gov.uk/downloads/file54640.pdf>

## **10.0 CULTURAL HERITAGE**

### **10.1 Baseline**

Moray benefits from a number of important sites for cultural heritage including<sup>9</sup>:

- 1668 Listed Buildings
- 80 Ancient Monuments
- 2211 archaeological sites
- Garden and Design Landscapes

### **10.2 Potential Impacts**

There could be an adverse impact on cultural heritage interests resulting from physical interventions i.e. maintenance of transport infrastructure and increased recreational pressure. Impacts will be dependent on proximity to sites of cultural heritage importance.

- Potential for impacts on cultural heritage designations.
- Landscape impacts on sites of cultural importance should be considered. Archaeological information in the region obtained from the Aberdeenshire Council Archaeologist (includes Moray) in addition to advice from Historic Scotland.

### **10.3 Mitigation**

- Design and location of transport infrastructure should be mindful of local and national designations for cultural heritage at the strategic level to minimise impacts at a project level. This includes avoiding impacts on Listed Buildings, protected sites, sites with local historical interest and historical landscapes.
- Care should be taken to ensure that signage and changes to road layouts do not adversely affect the setting of historical sites and or landscapes and are appropriate in location, size, scale and colour.

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<sup>9</sup> From Moray Development Plan, 2005

## **11.0 LANDSCAPE & VISUAL**

### **11.1 Baseline**

There is an overall high quality of landscape within Moray Region with areas designated as being of particular scenic quality - Moray contains a number of Areas of Great Landscape Value (AGLVs) and the Cairngorms National Scenic Area:

1 Coastal Protection Zone – protects coastal zone from inappropriate development  
Cairngorms National Park  
Cairngorms National Scenic Area  
7 Historic Gardens and Designed Landscapes<sup>10</sup>

Designated Areas are shown on Figure 1.6

#### *Landscape Character Assessment*

Figure 1.7 shows the Landscape Character Assessment for the Moray and Nairn region. The predominant landscapes are Coast, Coastal Lowlands, River Valleys and Uplands. The Moray Council area contained within the Cairngorms area of landscape assessment has been classified as Straths or Uplands & Glens.

### **11.2 Potential Impacts**

- Potential for impacts on areas designated for landscape quality
- Inappropriate signage and use of road materials could detract from the landscape setting

### **11.3 Mitigation**

- Design and location of transport infrastructure should be mindful of local and national designations for landscape at strategic level to minimise impacts at a project level. This includes avoiding impacts on Conservation Areas and Areas of Great Landscape Value.
- Landscape and Visual impacts of new transport infrastructure may need to be assessed at EIA level to mitigate for localised and regional impacts.

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<sup>10</sup> From Moray Development Plan 2005