Tyne and Wear Joint Transport Working Group
Third Local Transport Plan (LTP3)

Environmental Report

April 2011

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Document History

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## Glossary of Terms

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<th>Term</th>
<th>Meaning / Definition</th>
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<tr>
<td>Baseline</td>
<td>A description of the present and future state of an area, in the absence of any plan, taking into account changes resulting from natural events and from other human activities.</td>
</tr>
<tr>
<td>Consultation Body</td>
<td>An authority which because of its environmental responsibilities is likely to be concerned by the effects of implementing plans and programmes and must be consulted under the SEA Directive. The Consultation Bodies, designated in the SEA Regulations are English Heritage, Natural England and the Environment Agency.</td>
</tr>
<tr>
<td>Environmental appraisal</td>
<td>A form of environmental assessment used in the UK (primarily for development plans) since the early 1990s, supported by ‘Environmental Appraisal of Development Plans: A Good Practice Guide’ (DoE, 1993); more recently superseded by sustainability appraisal. Some aspects of environmental appraisal foreshadow the requirements of the SEA Directive.</td>
</tr>
<tr>
<td>Environmental assessment</td>
<td>Generically, a method or procedure for predicting the effects on the environment of a proposal, either for an individual project or a higher-level “strategy” (a policy, plan or programme), with the aim of taking account of these effects in decision-making. The term “Environmental Impact Assessment” (EIA) is used, as in European Directive 337/85/EEC, for assessments of projects. In the SEA Directive, an environmental assessment means “the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision”, in accordance with the Directive’s requirements.</td>
</tr>
<tr>
<td>Environmental Report</td>
<td>Document required by the SEA Directive as part of an environmental assessment, which identifies, describes and appraises the likely significant effects on the environment of implementing a plan or programme.</td>
</tr>
<tr>
<td>Equalities Impact Assessment</td>
<td>An equality impact assessment is a process designed to ensure that a policy, project or scheme does not discriminate against any disadvantaged or vulnerable people. There are eight protected characteristics identified in the Equality Act 2010 that are relevant to the transport agenda: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. The ITA/Nexus and local authority partners are also covered by the public sector equality duty.</td>
</tr>
<tr>
<td>European Sites</td>
<td>Include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). Habitats Regulations Assessment (HRA) is also required, as a matter of UK Government policy for potential SPAs (pSPA), candidate SACs (cSAC) and listed Wetlands of International Importance (Ramsar sites) for the purposes of considering plans and projects, which may affect them¹.</td>
</tr>
<tr>
<td>Habitats Regulations Assessment</td>
<td>An assessment of proposed plans or projects which are likely to have a significant effect on one or more European sites, either individually or in</td>
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combination with other plans and projects. The effects of a plan are assessed against the conservation objectives of a European site to determine whether it would adversely affect the site's integrity\(^2\). The requirement arises from the Conservation of Habitats and Species Regulations 2010\(^3\) implementing the Habitats Directive (92/43/EEC).

**Health Impact Assessment**

‘A combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population\(^4\).

**Home Zone**

Home Zones aim to improve the quality of life in residential roads by making them places for people, instead of just being thoroughfares for vehicles. The key elements to a Home Zone are: community involvement to encourage a change in user behaviour; and for the road to be designed in such a way as to allow it to be used for a range of activities and to encourage very slow vehicle speeds (usually involving sensitively designed traffic calming).

**Indicator**

A measure of variables over time, often used to measure achievement of objectives.

**Mitigation**

Measures to avoid, reduce or offset significant adverse effects.

**Ramsar Site**

Sites designated under the Convention on Wetlands of International Importance, called the Ramsar Convention.

**Responsible Authority**

In the SEA Regulations, means an organisation which prepares a plan or programme subject to the SEA Directive and is responsible for the SEA.

**Scoping**

The process of deciding the scope and level of detail of an SEA, including the environmental effects and options which need to be considered, the assessment methods to be used, and the structure and contents of the Environmental Report.

**Significant effect**

Effects which are significant in the context of the plan. (Appendix II of the SEA Directive gives criteria for determining the likely environmental significance of effects).

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\(^2\) Integrity is describe as the sites’ coherence, ecological structure and function across the whole area that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified

\(^3\) From the 6\(^{th}\) April 2010 the Conservation (Natural Habitats &c) Regulations 1994 and its many amendments have been consolidated into (and replaced by) the Conservation of Habitats and Species Regulations 2010.

## Acronyms

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<tr>
<th>Acronym</th>
<th>Meaning / Definition</th>
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<tr>
<td>AMR</td>
<td>Annual Monitoring Report</td>
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<td>AQMA</td>
<td>Air Quality Management Area</td>
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<td>BAP</td>
<td>Biodiversity Action Plan</td>
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<td>CLG</td>
<td>Communities and Local Government</td>
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<tr>
<td>CO</td>
<td>Carbon Monoxide</td>
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<td>CO₂</td>
<td>Carbon Dioxide</td>
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<tr>
<td>CQC</td>
<td>Countryside Quality Counts</td>
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<tr>
<td>DaSTS</td>
<td>Delivering a Sustainable Transport Strategy</td>
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<tr>
<td>dB(A) Leq</td>
<td>Leq is a symbol that represents “Equivalent Continuous Noise Level”. The result is expressed in dB(A), which gives a reasonable approximation of the human perception of loudness.</td>
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<tr>
<td>DCMS</td>
<td>Department for Culture, Media and Sport</td>
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<td>Defra</td>
<td>Department for Environment, Food and Rural Affairs</td>
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<tr>
<td>DfT</td>
<td>Department for Transport</td>
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<td>DH</td>
<td>Department of Health</td>
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<td>DPD</td>
<td>Development Plan Document</td>
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<tr>
<td>EEC</td>
<td>European Economic Community</td>
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<td>EHO</td>
<td>Environmental Health Officer</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EqIA</td>
<td>Equality Impact Assessment</td>
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<td>ER</td>
<td>Environmental Report</td>
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<td>ETP</td>
<td>Education, Training and Publicity</td>
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<td>EU</td>
<td>European Union</td>
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<td>GHG</td>
<td>Greenhouse Gases</td>
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<td>GIS</td>
<td>Geographic Information System</td>
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<td>HA</td>
<td>Highways Agency</td>
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<td>HIA</td>
<td>Health Impact Assessment</td>
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<td>HRA</td>
<td>Habitats Regulation Assessment</td>
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<tr>
<td>IMD</td>
<td>Indices of Multiple Deprivation</td>
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<td>IRS</td>
<td>Integrated Regional Strategy</td>
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<tr>
<td>ITA</td>
<td>Integrated Transport Authority</td>
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<tr>
<td>JTWG</td>
<td>Joint Transport Working Group</td>
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<tr>
<td>KSI</td>
<td>Killed or Seriously Injured (road safety)</td>
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<tr>
<td>LBAP</td>
<td>Local Biodiversity Action Plan</td>
</tr>
<tr>
<td>LDF</td>
<td>Local Development Framework</td>
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<tr>
<td>LNR</td>
<td>Local Nature Reserve</td>
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<tr>
<td>LSOA</td>
<td>Lower Layer Super Output Area</td>
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<td>LTP</td>
<td>Local Transport Plan</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>NATA</td>
<td>New Approach to Appraisal</td>
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<td>NCA</td>
<td>National Character Area</td>
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<td>NI</td>
<td>National Indicator</td>
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<tr>
<td>NIA</td>
<td>Newcastle International Airport</td>
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<tr>
<td>NO₂</td>
<td>Nitrogen Dioxide</td>
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<tr>
<td>NOₓ</td>
<td>Nitrogen Oxides. Nitric oxide (NO) and nitrogen dioxide (NO₂) are together commonly referred to as NOₓ.</td>
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<tr>
<td>NNR</td>
<td>National Nature Reserve</td>
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<tr>
<td>ODPM</td>
<td>Office of the Deputy Prime Minister (now CLG)</td>
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<td>ONS</td>
<td>Office for National Statistics</td>
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<tr>
<td>PCT</td>
<td>Primary Care Trust</td>
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<tr>
<td>PDL</td>
<td>Previously Developed Land</td>
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<tr>
<td>PM</td>
<td>Particulate Matter</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Particulate Matter &lt; 10µm</td>
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<tr>
<td>PPPs</td>
<td>Policies, Plans and Programmes</td>
</tr>
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<td>PPG</td>
<td>Planning Policy Guidance</td>
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<tr>
<td>PPS</td>
<td>Planning Policy Statement</td>
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<td>PSA</td>
<td>Public Service Agreement</td>
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<td>RIGGS</td>
<td>Regionally Important Geological and Geomorphological Sites</td>
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<td>RoW</td>
<td>Rights of Way</td>
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<td>RTPI</td>
<td>Real-Time Passenger Information</td>
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<tr>
<td>SA</td>
<td>Sustainability Appraisal</td>
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<td>SAC</td>
<td>Special Area of Conservation</td>
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<td>SEA</td>
<td>Strategic Environmental Assessment</td>
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<tr>
<td>SPA</td>
<td>Special Protection Area</td>
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<td>SPZ</td>
<td>Source Protection Zones</td>
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<td>SSSI</td>
<td>Site of Special Scientific Interest</td>
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<td>SUDS</td>
<td>Sustainable Drainage Systems</td>
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<tr>
<td>TAG</td>
<td>Transport Analysis Guidance</td>
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<td>TAMP</td>
<td>Transport Assessment Management Plan</td>
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<td>TaSTS</td>
<td>Towards a Sustainable Transport System</td>
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<td>TVSRP</td>
<td>Thames Valley Safer Roads Partnership</td>
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<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UTC</td>
<td>Urban Traffic Control</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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Non-Technical Summary

Background

This document is the Final Environmental Report for the Strategic Environmental Assessment (SEA) of the Tyne and Wear Third Local Transport Plan (LTP3), incorporating Health Impact Assessment (HIA), Equality Impact Assessment (EqIA) and Habitats Regulation Assessment (HRA). It has been produced by Atkins Ltd for Tyne and Wear Joint Transport Working Group (JTWG) on behalf of the Tyne and Wear Integrated Transport Authority (TWITA).

Tyne and Wear LTP3

The Transport Act 2000 introduced a statutory requirement for local transport authorities to produce a Local Transport Plan (LTP) every five years and to keep it under review. It sets out the statutory framework for Local Transport Plans and policies. This statutory requirement was retained in the Local Transport Act 2008, although other aspects of the statutory framework have changed. The Act now requires that LTPs contain policies (collectively referred to as ‘the strategy’) and implementation plans (the proposals for delivery of the policies contained in the strategy) and there is no longer the requirement for LTPs to be reviewed every five years – review periods should instead be decided at the local level to best fit with other local policies and plans.

The JTWG has developed its draft LTP3 to set out a long term transport strategy for South Tyneside, North Tyneside, Gateshead, Newcastle and Sunderland. The LTP3 consists of a strategy that covers the period 2011-2021 and an accompanying Delivery Plan (Implementation Plan) that covers 2011 – 2014. This Environmental Report is related to the Consultation Draft of the LTP3 that was published in October 2010.

The draft LTP3 vision for the Tyne and Wear area is:

“Tyne and Wear will have a truly integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. Our strategic networks will support the efficient movement of people and goods within and beyond Tyne and Wear, and a comprehensive network of pedestrian, cycle and passenger transport links will ensure that everyone has access to employment, training, community services and facilities”

The LTP3 strategy sets out forty-five policies required to deliver this vision and the LTP objectives, which are as follows:

1. To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes.
2. To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events.
3. To contribute to a healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security.
4. To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services.
5. To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places.

The Assessment Process

As it has already been stated above, the SEA process has been integrated with three other assessment processes: HIA, EqIA and HRA.
The SEA started as the preparation of LTP3 began and it has progressed concurrently in an iterative fashion in order to integrate environmental sustainability considerations into the plan making process. The SEA has been used as a tool for improving LTP3’s environmental sustainability performance. Specifically, this has been achieved through allowing environmental (and wider sustainability) objectives to be considered throughout LTP3 formulation process: from inception through development to adoption of the LTP3 proposals, measures and schemes.

The SEA has four stages, as follows:

- **Stage A** – Setting the Context and Establishing the Baseline;
- **Stage B** – Developing Alternatives;
- **Stage C** – Preparing the Environmental Report;
- **Stage D** – Consulting on Draft Plan and Environmental Report.

The work undertaken thus far involved the completion of the SEA stages A, B, C and D and associated tasks.

A methodology has been developed to incorporate the processes of HIA and EqIA. Additionally, the results of EqIA are reported in a separate report. HRA is a parallel exercise that has been reported in a separate report.

**Sustainability Baseline and Key Issues**

Tyne and Wear is part of a city-region situated in the North East of England, encompassing an urban core, plus a more rural hinterland stretching into north eastern County Durham and south eastern Northumberland. The region's two main trunk roads, the A1 and the A19, are managed by the Highways Agency. Public transport comprises the Tyne and Wear Metro system, an extensive bus network, the North Shields to South Shields cross-Tyne ferry and local rail services to the MetroCentre and Sunderland. A National Trail, the Hadrian’s Wall Path, runs through the city of Newcastle. There are a number of National Cycle Network routes running through the area, including National Routes 1, 7 and 14.

The key sustainability issues identified for Tyne and Wear are briefly summarised below. The complete list of references and sources of the information provided below are presented in section 14 and Appendix B.

**Historically a Low Base of the Local Economy and Related Social Issues**

The region suffers from historic economic weakness which has led to a long-standing problem with population out-migration. This has led to relatively high levels of unemployment and inactivity compared to other regions of the UK and a number of social and health problems.

**Population**

Tyne and Wear contains a higher than average proportion of the population aged 18 and under, and also those aged over 65. Elsewhere in Tyne & Wear, Sunderland, Jarrow, Hetton-le-Hole and pockets of Newcastle upon Tyne contain a higher than average proportion of the population that are of working age, although overall in Tyne & Wear, the proportion of this age group is in line with regional and national figures.

**Deprivation**

Tyne & Wear contains a considerable amount of Lower Layer Super Output Areas (LSOAs) that are consistently in the 20% most deprived areas nationally in terms of overall deprivation, health, income, employment, education and crime.

**Child poverty**

The percentage of children aged under 18 in workless households has only increased by 1% between 2004 and 2008 (21% and 22% respectively), however it is higher in comparison with regional (19%) and national (17%) figures. Statistics on the percentage of children living in families that are income deprived also indicates that child poverty is an issue in the area.
**Ethnicity**

Tyne & Wear generally contains a higher than average proportion of the population that is classed as white, with a consequent lower than average proportion of ethnic minority groups. However, there are a great number of asylum seekers within the area, as well as a considerable number of immigrants.

**Low Income Groups**

Whilst the proportion of residents in Tyne and Wear on low incomes (elementary occupations) is in line with the regional proportion, this figure is higher than the national average.

**Car Ownership**

Tyne and Wear has a considerably higher proportion of residents without access to a car compared to regional and national figures; these are mainly in urban areas.

**Congestion**

Relatively low levels of car ownership in the North East have not mitigated against the appearance of major congestion hotspots within the Tyne and Wear city regions. Reducing congestion in Tyne and Wear is fundamental to the regional economy and the quality of life.

**Poor Air Quality**

Road transport is the main source of air pollution in Tyne and Wear, which is reflected in the designation of six Air Quality Management Areas (AQMAs).

**Low Tranquillity Levels and Noise Pollution**

The mean tranquillity score for Tyne and Wear is significantly lower (-43.4) than the North East (15.3) and the England average (-9.34) scores. Such a low negative score suggests that urban development, transport and other infrastructure detracts from feelings of tranquillity. To put this into perspective, amongst all English Unitary Authorities, Northumberland has the highest score of 28.6 and Slough Unitary Authority has the lowest of -79.5.

**Water Quality**

Regional hydrology is influenced primarily by the Tyne, the Derwent, the Ouse Burn and the Team rivers which feed through a network of tributaries. Water quality varies across the study area with ratings from fair to very good.

**Barriers to Accessibility**

Overall, the residents of Tyne and Wear experience very high levels of accessibility to all core services. Accessibility to education facilities, food shops and GPs is particularly high – at 99%-100%. The level of accessibility to hospitals is slightly lower – 91% and to employment – 83.2%, which indicates some room for further improvement.

**Road Safety and Crime Levels**

The LTP2 Monitoring Report shows that a good progress has been made towards achieving the Government’s 2010 road safety targets. The numbers of total killed or seriously injured (KSI) casualties, child KSI casualties and total slight casualties show a reduction over the 2006/08 period and indicate that the 2010 targets will be met.

**Problems of General Health and Health Inequalities**

The North East is recognised as the unhealthiest region in England. Proportion of people not in good health in Tyne and Wear (11.2%-13%) is similar to the regional figure and higher than the national average (9%).

**Disabled Residents**
The proportion of residents claiming Disability Living allowance in Tyne and Wear, and the North East is considerably more than the proportion nationally. There has been a steady increase in the proportion of claimants from 2002 to 2009.

**Need to Mitigate Climate Change**

The CO₂ emissions per capita from Tyne and Wear are lower (6.8 tonnes) than that for North East (12.6 tonnes) and the UK (8.4 tonnes) due to the relatively low levels of emissions from industrial and commercial sources. The proportion of road transport CO₂ emissions in Tyne and Wear is similar to the national average (27%) but higher than the regional average (16%). The increasing rates of car ownership and likely growth of road traffic is likely to result in an increase of transport-related emissions of CO₂.

**Need for Climate Change Adaptation**

The most significant changes in the climate in the North East to the 2050s are forecast to be increased seasonality of rainfall with increases in winter and in summer; Average seasonal temperatures to increase and heat waves are likely to increase in frequency of occurrence.

**Biodiversity Threats and Green Infrastructure**

Two sites within the study area designated at the European level for their nature conservation value along with a number of designated nature conservation sites at the national and local levels. The construction of new or improvement of existing transport infrastructure can affect biodiversity through disturbance, severance, habitat loss, fragmentation, increased noise, light and air pollution and an increase in the number of road kills. Gritting of roads may also have effects on species and habitats. Bridges, culverts and other structures are potential habitats and maintenance and other activities can adversely effect species. Growing tourism and recreational activity, in particular in coastal areas, and associated transport infrastructure may place increasing pressure on environmental assets.

**Heritage**

The five districts of Tyne and Wear contain a wealth of important heritage assets, encompassing designated and non-designated assets and including historic buildings, archaeological sites and treasured landscapes, townscapes and other sites and features. The designated and non-designated heritage assets and their settings may be affected by increased pressure from development and regeneration. The assets may be also affected by transport related air and noise pollution and vibration. Increasing tourist pressure could further increase the vulnerability of cultural and historic assets.

**Negative Trends in Landscape Character Change**

The Countryside Quality Counts (CQC) assessment shows negative trends for three of the four National Character Areas (NCAs) within the study area over the period of 1999 - 2003: NCA13 South East Northumberland Coastal Plain; NCA14 Tyne and Wear Lowlands and NCA16 Durham Coalfield Pennine Fringe. All three were given an overall classified as ‘Neglected’. New roads, with their associated lighting and urban detailing contribute to the negative trends.

**Strategic Environmental Assessment Framework**

The SEA Framework is a key tool in completing the SEA as it allows the assessment of the effects arising from LTP3 proposals in key areas to be undertaken in a systematic way. The SEA Framework for the Tyne and Wear LTP3 comprises a series of objectives that incorporate specific health, equalities and habitats issues, to ensure the full integration of the assessment processes of HIA, EqIA and HRA, whilst also meeting the requirements of the SEA Directive.

An SEA Framework containing sixteen objectives and associated indicators has been developed. An iterative process, based on the review of relevant plans and programmes, the evolving baseline, analysis of key sustainability issues and consideration of which of these issues can potentially be addressed by LTP3, has contributed to the development of the SEA Framework.
The proposed LTP3 SEA objectives that form the framework against which the predicted performance of the LTP3 measures have been assessed are shown below:

1. Ensure good local air quality for all;
2. Protect and where possible enhance biodiversity, geodiversity and the multi functional green infrastructure network;
3. Protect and where possible enhance the European sites (HRA specific objective);
4. Mitigate against climate change by decarbonising transport;
5. Ensure resilience to the effects of climate change and flood risk;
6. Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy;
7. Protect and enhance the quality of the area’s ground, river and sea waters;
8. Ensure efficient use of land and maintain the resource of productive soil;
9. Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage;
10. Protect and enhance the character and quality of landscape and townscape;
11. Improve accessibility to services, facilities and amenities for all and avoid community severance;
12. Reduce noise, vibration and light pollution;
13. Improve health and well-being and reduce inequalities in health (HIA specific objective);
14. Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective);
15. Improve road safety;
16. Reduce crime and fear of crime and promote community safety.

LTP3 Objectives

To fulfil Tyne and Wear’s vision a set of local transport objectives were derived. These are consistent with DfT’s Guidance on Local Transport Plans (July 2009) and DfT’s five goals for transport - Tackling climate change; Quality of life and a healthy natural environment; Better safety, security and health; Supporting economic growth, and Equality of opportunity.

The SEA guidance states that it is important that the objectives of LTP3 are in accordance with SEA/HIA/EqIA/HRA objectives and, as such, an assessment of the compatibility of the two sets of objectives was undertaken. This assessment demonstrated that, overall, LTP3 objectives are broadly compatible with the SEA objectives. These are shown below:

1. To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes.
2. To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events.
3. To contribute to a healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security.
4. To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services.
5. To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places.
LTP3 Strategic Options

Tyne and Wear JTWG developed three strategic alternatives as follows:

1. Do Minimum Scenario;
2. Realistic Scenario;
3. Optimistic Scenario (‘Aspirational Funding Scenario’).

The optimistic scenario includes all of the interventions that were included in the realistic scenario plus additional interventions that would be included if funding is available.

These strategic options were assessed against the SEA Objectives. In terms of effects against the objectives, the ‘Do minimum’ scenario had least adverse effect on the SEA objectives. This is what would be expected as there are very few schemes included in the scenario hence the least number of adverse effects. Conversely, there are no positive effects against any of the objectives.

The optimistic funding scenario had the greatest number (six) of significant adverse effects against the objectives, particularly environmental, including three large adverse effects. However, it also had the greatest number of positive effects, overall.

The realistic scenario had two significant positive effects and five significant adverse effects against the objectives. It was recommended that the realistic scenario therefore provides the most balanced approach.

Assessment of the Predicted Effects of LTP3

There have been two iterations of the assessment of LTP3. Firstly, the LTP3 preferred strategy was subject to an SEA/HIA/EqIA to predict and evaluate the nature (beneficial, adverse or neutral) and scale (significant or non-significant) of effects (this includes the effects’ magnitude, geographical scale, time period over which they occur, whether they are permanent or temporary, probable or improbable, reversible or irreversible, frequent or rare, and whether or not there are secondary, cumulative and/or synergistic effects). The results of the first assessment iteration were reported in the draft Environmental Report. Following the public consultation, the changes made to the Final LTP3 have been assessed and the findings of this exercise presented in this final Environmental Report.

For assessment purposes, LTP3 policies and interventions have been grouped into “components” where it is expected the type of effects will be similar and therefore they can be assessed together. Components assessed are as follows:

- Improving Safety
- Maintaining and Managing Infrastructure
- Promoting Sustainable Transport Modes
- Parking
- Freight
- Major Schemes

The assessment results show that the implementation of LTP3 should potentially successfully address a number of the key issues in the Tyne and Wear region, namely:

- Ensuring good local air quality for all;
- Prudent use of natural resources and waste minimisation;
- Maintaining and enhancing the quality and distinctiveness of the area’s historical and cultural heritage;
- Protecting and enhancing the character and quality of landscape and townscape;
- Improving accessibility to services, facilities and amenities for all and avoiding community severance;
- Improving health and well-being and reducing inequalities in health;
- Promoting a greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- improving road safety;
- Reducing crime and fear of crime and promoting community safety.

Moderate adverse effects may be expected against the SEA objectives concerned with:
- Ensuring resilience to the effects of climate change and flood risk; and
- Ensuring efficient use of land and maintain the resource of productive soil.

Recommendations to improve the overall sustainability performance of LTP3 have been provided as a result of both assessment iterations. Most of the recommendations set out in the draft Environmental Report have been addressed in the preparation of the Final LTP3.

Mitigation Measures

Although LTP3 will have beneficial effects overall, certain schemes and measures may have the potential for short to long term adverse effects. Significant adverse effects have been predicted against:

- SEA Objective 5: To ensure resilience to the effects of climate change and flood risk; and
- SEA Objective 8: To ensure efficient use of land and maintain the resource of productive soil.

The Environmental Report recommends a number of specific and more generic mitigation measures aimed at preventing, reducing or offsetting the adverse effects that have been identified.

Monitoring

Monitoring the significant sustainability effects of implementing LTP3 will be an important ongoing element of the SEA process. SEA monitoring involves measuring indicators that will enable a better understanding of the causal links between the implementation of the plan and the likely significant sustainability effects (either beneficial or adverse) being monitored. This will allow the identification of any unforeseen adverse effects and enable appropriate remedial action to be taken.

The following significant beneficial effects (direct as well as cumulative effects) have been identified by the assessment and form the basis of the monitoring programme:

- SEA Objective 1: Ensure good local air quality for all;
- SEA Objective 6: Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy;
- SEA Objective 9: Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage;
- SEA Objective 10: Protect and enhance the character and quality of landscape and townscape;
- SEA Objective 11: To improve accessibility to services, facilities and amenities for all and avoid community severance;
- SEA Objective 13: Improve health and well-being and reduce inequalities in health (HIA specific objective);
SEA Objective 14: To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective);

SEA Objective 15: Improve road safety;

SEA Objective 16: Reduce crime and fear of crime and promote community safety.

The following significant adverse effects (direct as well as cumulative effects) have been identified by the assessment and form the basis of the monitoring programme:

SEA Objective 5: To ensure resilience to the effects of climate change and flood risk;

SEA Objective 8: To ensure efficient use of land and maintain the resource of productive soil.

The SEA Framework contains indicators that have been used as the basis for preparing the monitoring programme. Monitoring must occur on a regular basis and must be constantly being updated, for the life of LTP3, to determine whether LTP3 targets and objectives are being met.

Conclusions

This Environmental Report sets out the SEA process and its key findings in relation to Tyne and Wear’s LTP3.

As a result of the first iteration of the assessment, the Draft Environmental Report made a series of SEA/HIA recommendations that aimed to improve the overall sustainability performance of the LTP3. JTWG has given careful consideration to these recommendations and addressed most of them (please refer to the SEA Statement for details). In relation to other, more specific, recommendations it has been confirmed that Partners will consider them during the preparation of lower tier specific transport policy documents and schemes as they come forward. JTWG also took on board the comments arising from public consultation in the preparation of the Final LTP3.

The changes made to the Final LTP3 improved its performance in such areas as ensuring resilience to climate change, resource efficiency, avoiding loss of valuable agricultural land and minimising noise and light pollution.

Overall, it is considered that the Final LTP3 meets the range of SEA/HIA/EqIA objectives identified in the SEA Framework to a large extent. It delivers potentially significant beneficial effects on a number of environmental and social (including health and inequality) SEA objectives. These include:

- Ensuring good local air quality for all;
- Prudent use of natural resources and waste minimisation;
- Maintaining and enhancing the quality and distinctiveness of the area’s historical and cultural heritage;
- Protecting and enhancing the character and quality of landscape and townscape;
- Improving accessibility to services, facilities and amenities for all and avoiding community severance;
- Improving health and well-being and reducing inequalities in health;
- Promoting a greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- Improving road safety;
- Reducing crime and fear of crime and promoting community safety.

Potentially significant adverse effects that have been predicted relate to:

- Ensuring resilience to the effects of climate change and flood risk; and
• Ensuring efficient use of land and maintain the resource of productive soil.

It is considered that the predicted adverse effects can be minimised to a satisfactory degree through the effective implementation of the SEA mitigation measures set out in this report and through adhering to the Councils’ development control policies.

The HRA Stage 1 Screening exercise concluded that, taking the effective and deliverable mitigation measures incorporated into the Tyne and Wear LTP3 into account, there are no likely significant effects from the schemes set out in the Plan on any of the seven international sites (alone or in combination with other plans and projects). Further details can be found in the separate HRA Screening Report.
1. Introduction

Purpose of this document

1.1 This is the Environmental Report for the Strategic Environmental Assessment (SEA) of the Tyne and Wear third Local Transport Plan (LTP3), incorporating Health Impact Assessment (HIA), Equality Impact Assessment (EqIA) and Habitats Regulation Assessment (HRA). It has been produced by Atkins Ltd for the Tyne and Wear Joint Transport Working Group (JTWG) on behalf of the Tyne and Wear Integrated Transport Authority (TWITA).

1.2 SEA of LTP3 is required under the European Directive 2001/42/EC ‘on the assessment of certain plans and programmes on the environment’ (the ‘SEA Directive’). HIA is required by a number of UK White Papers on public health strategy. Further emphasis has been given by the introduction of the Local Government and Public Involvement in Health Act 2007 and a specific requirement for HIA and EqIA in the Department for Transport (DfT) LTP3 guidance published in 2009\(^5\). HRA is required by the Conservation of Habitats and Species Regulations 2010\(^6\), implementing the European Council Directive 92/43/EEC on the Conservation of natural habitats and wild fauna and flora (the Habitats Directive).

Tyne and Wear LTP3

1.3 The JTWG has developed LTP3 to set out a long term transport strategy for South Tyneside, North Tyneside, Gateshead, Newcastle and Sunderland, covering all forms of transport. LTP3 consists of a strategy that covers the period 2011-2021 and the first in a series of three-year delivery plans (2011-2014) setting out how the strategy will be implemented. This Environmental Report is related to the Final LTP3 published in April 2011.

1.4 The Transport Act 2000 introduced a statutory requirement for local transport authorities to produce an LTP every five years and to keep it under review. It sets out the statutory framework for Local Transport Plans and policies. This statutory requirement was retained in the Local Transport Act 2008 although other aspects of the statutory framework have changed. The Act now requires that LTPs contain policies (referred to as the strategy) and implementation plans (the proposals for delivery of the policies contained in the strategy). There is no longer the requirement for LTPs to be reviewed every five years. The new legislation gives local authorities powers to decide when to renew the Plan to ensure best fit with other local policies and plans.

The Objectives of LTP3

1.5 DfT expects authorities to consider their contribution to national transport goals as over-arching priorities for the LTPs. The four shared priorities of LTP2 guidance (i.e. safer roads, tackle congestion, deliver accessibility and better air quality) have been replaced by the five goals set out in the DfT ‘Delivering a Sustainable Transport System’ (DaSTS) Strategy agenda. These goals are:

1. To support national economic competitiveness and growth, by delivering reliable and efficient transport networks;

2. To reduce transport’s emissions of carbon dioxide (\(\text{CO}_2\)) and other GHGs, with the desired outcome of tackling climate change;


\(^6\) From the 6th April 2010 the Conservation (Natural Habitats &c) Regulations 1994 and its many amendments have been consolidated into (and replaced by) the Conservation of Habitats and Species Regulations 2010.
3. To contribute to better safety and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;

4. To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and

5. To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.

1.6 The LTP3 vision for the Tyne and Wear area is:

“Tyne and Wear will have a truly integrated and sustainable transport network, allowing everyone the opportunity to achieve their full potential and have a high quality of life. Our strategic networks will support the efficient movement of people and goods within and beyond Tyne and Wear, and a comprehensive network of pedestrian, cycle and passenger transport links will ensure that everyone has access to employment, training, community services and facilities”

1.7 The LTP3 objectives that are based on the set of the DaSTS goals but tailored to the local circumstances and priorities are:

1. To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes.

2. To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events.

3. To contribute to a healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security.

4. To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services.

5. To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places.

1.8 The LTP3 has been developed by the Tyne and Wear Integrated Transport Authority (TWITA) in partnership with the five districts making up Tyne and Wear (Newcastle, Gateshead, North Tyneside, South Tyneside and Sunderland) and Nexus, the Passenger Transport Executive. A simplified timescale of the LTP3 production is set out below:

- May – October 2010 Consultation and liaison with district partners to develop LTP Strategy and Delivery Plan;
- October – December 2010 Public Consultation & associated events;
- December 2010 - January 2011 Revisions to draft;
- January 2011 – March 2011 LTP3 taken through District and ITA democratic processes.

Current Transport Situation

1.9 Tyne and Wear is part of a city-region situated in the North East of England, encompassing an urban core, plus a more rural hinterland stretching into north eastern County Durham and south eastern Northumberland.

1.10 Figure 1.1 shows the location of the study area and its transport connections: main roads, railway lines, ports and Newcastle International Airport.
1.11 The region’s two main trunk roads, the A1 and the A19, are managed by the Highways Agency. Public transport comprises the Tyne and Wear Metro system, an extensive bus network, the North Shields to South Shields cross-Tyne ferry and local rail services to the MetroCentre and Sunderland. A National Trail, the Hadrian’s Wall Path, runs through the city of Newcastle. There are a number of National Cycle Network routes running through the area, including National Routes 1, 7 and 14.

1.12 At most times of the day, the road and the strategic cycle and footpath networks are relatively uncongested, although there are localised congestion problems on the Tyne bridges, around the MetroCentre and the Western Bypass, the Silverlink junction in North Tyneside and the present Tyne Tunnel.

1.13 Since 2006, a number of important schemes have been implemented to reduce congestion and assist economic regeneration, including the Southern Radial Route in Sunderland, the new Eldon Square bus station in Newcastle and the widening of the Felling Bypass in Gateshead to facilitate
a new bus lane. There has also been substantial private sector investment in the local bus fleet, with bus companies having spent £26m on new vehicles since 2006.

Future plans include the beginning of the reinvigoration of the Metro system, a major bus corridor improvement programme, including Tyne and Wear’s first bus-based park and ride sites, a new bridge across the river Wear and the opening of the New Tyne Crossing in 2012.

As well as new projects, all districts in Tyne and Wear have been developing Network Management Plans to ensure that traffic flows on the existing network are handled in the most expeditious way possible. The potential for a region-wide Urban Traffic Management and Control (UTMC) system is also being examined.

For long-distance travel to and from the region, the major gateways are Newcastle Central Station and Newcastle International Airport. LTP Partners are working closely with operators to improve access to these key destinations and to ensure that they provide a welcoming introduction to the region. Work is also ongoing to ensure that the region participates in major new developments that could assist the economy and communication links – such as a potential north-south high speed rail line.

Major investment programmes of the kind listed above are also being complemented by measures to encourage walking and cycling, to promote more liveable local communities through Home Zones and speed restraint plans, and to develop more efficient and sustainable freight distribution by means of Tyne and Wear’s award-winning Freight Partnership.

Strategic Environmental Assessment

The EU Directive 2001/42/EC7 (the “SEA Directive”) on assessment of effects of certain plans and programmes on the environment came into force in the UK through the Environmental Assessment of Plans and Programmes Regulations 20048 (the “SEA Regulations”). The SEA Regulations apply to a wide range of plans and programmes, including LTPs, and modifications to them.

The overarching objective of the SEA Directive is:

“To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans… with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans… which are likely to have significant effects on the environment.” (Article 1)

The main requirements introduced by the SEA Regulations are that:

- the findings of the SEA are published in an Environmental Report (ER), which sets out the significant effects of the draft plan, in this case LTP3;
- consultation is undertaken on the plan and the ER;
- the results of consultation are taken into account in decision-making relating to the adoption of the plan; and
- information on how the results of the SEA have been taken into account is made available to the public.

SEA extends the evaluation of environmental effects from individual projects to the broader perspective of regional, county and district level plans. It is a systematic process that identifies and predicts the potential significant environmental effects of plans/programmes, informing the

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7 European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment
8 Statutory Instrument 2004 No. 1663, The Environmental Assessment of Plans and Programmes Regulations 2004
decision making process by testing different alternatives or options against environmental sustainability objectives.

1.22 The main work component stages for the preparation of the Tyne and Wear LTP3, both from a transport planning and SEA perspective, are shown in Figure 1.2 below.

**Figure 1.2 - LTP and SEA Process Stages and Links**

<table>
<thead>
<tr>
<th>LTP</th>
<th>SEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining the scope of the LTP (Strategy and Implementation Plan); clarifying goals; specifying the problems or challenges the authority wants to solve</td>
<td>Setting the SEA context; establishing the baseline situation; determining the scope of the SEA; and identifying LTP options Consulting on scope (6 weeks)</td>
</tr>
<tr>
<td>Generating options for the strategy and implementation plan to resolve these challenges; appraising the options and predicting their effects</td>
<td>Developing, refining and appraising strategic alternatives (LTP Strategy and Implementation Plan Options)</td>
</tr>
<tr>
<td>Selecting preferred options for the strategy and implementation plan and deciding priorities</td>
<td>Assessing the effects of LTP Preferred Options (Strategy and Implementation Plan) Proposing mitigation/enhancement measures and monitoring</td>
</tr>
<tr>
<td>Production of draft LTP (Strategy and Implementation Plan)</td>
<td>Production of the Environmental Report</td>
</tr>
<tr>
<td>Consultation on draft LTP (Strategy and Implementation Plan)</td>
<td>Consultation on the Environmental Report (Typically 12 weeks)</td>
</tr>
<tr>
<td>Production of final LTP (Strategy and Implementation Plan)</td>
<td>Production of a supplementary or revised Environmental Report if necessary*</td>
</tr>
<tr>
<td>Adoption of LTP</td>
<td>SEA Statement</td>
</tr>
<tr>
<td>Reviewing implementation of LTP (Strategy and Implementation Plan)</td>
<td>Monitoring the significant effects of LTP implementation</td>
</tr>
</tbody>
</table>

* An updated Environmental Report may only be required if significant changes are made to the LTP between draft and final versions.

SEA and New Approach to Appraisal

1.23 The New Approach to Appraisal (NATA) is an appraisal framework which aims to improve the consistency and transparency with which transport decisions are made. NATA sets out the Government’s five over-arching transport objectives, namely; environment, safety, accessibility, economy and integration. The DfT requires that all forms of transport proposals, including LTPs, are appraised against these objectives. DfT guidance on NATA, as set out in TAG, notes that NATA appraisal methodologies should be used in undertaking SEA of LTPs.

1.24 TAG Unit 2.11 (2009) provides guidance on integrating the requirements of the SEA Regulations with NATA reproduced below in Table 1.1. Further information on the technical scope of the SEA, based on this guidance, is provided in Section 3 of the TAG Unit 2.11.

Table 1.1 - Topics to be addressed as part of SEA

<table>
<thead>
<tr>
<th>NATA Objective</th>
<th>NATA sub-objective</th>
<th>SEA Topic (SEA Directive, Annex If)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Noise</td>
<td>Human health, Population(^9), Inter-relationships</td>
</tr>
<tr>
<td></td>
<td>Local air quality(^{10})</td>
<td>Air, Human health, Population</td>
</tr>
<tr>
<td></td>
<td>Greenhouse gases</td>
<td>Climatic factors</td>
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<tr>
<td></td>
<td>Landscape</td>
<td>Landscape</td>
</tr>
<tr>
<td></td>
<td>Townscape</td>
<td></td>
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<tr>
<td></td>
<td>Heritage</td>
<td>Cultural heritage including architectural and archaeological heritage</td>
</tr>
<tr>
<td></td>
<td>Biodiversity(^{11})</td>
<td>Biodiversity, Fauna, Flora, Soil(^{12})</td>
</tr>
<tr>
<td></td>
<td>Water environment</td>
<td>Water</td>
</tr>
<tr>
<td></td>
<td>Physical fitness</td>
<td>Human health, Population</td>
</tr>
<tr>
<td>Safety</td>
<td>Accidents</td>
<td>Human health, Population</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
<td>Community severance</td>
<td>Population</td>
</tr>
<tr>
<td></td>
<td>Access to the transport system</td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>Public accounts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business users and providers</td>
<td>Material assets(^{13})</td>
</tr>
<tr>
<td></td>
<td>Consumer users</td>
<td></td>
</tr>
</tbody>
</table>


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\(^9\) Population is interpreted broadly, referring to effects on people and quality of life. Many NATA indicators incorporate population.

\(^{10}\) The NATA local air quality indicator does not cover regional air quality, though guidance is given on its assessment. Where regional air quality is likely to be an issue, a local objective may be formulated.

\(^{11}\) Biodiversity also covers geological interests.

\(^{12}\) Soil is not explicitly covered by NATA sub-objectives, but is an underlying factor affecting landscape, heritage, biodiversity and the water environment. Where effects on soil are likely to be important a local objective should be formulated.

\(^{13}\) Material assets are not explicitly covered by NATA sub-objectives, but are reflected in the money costs incurred when they are consumed. Where effects on material assets such as infrastructure and property are expected to be of particular importance, a local objective should be formulated.
Health Impact Assessment

1.25 The DfT LTP3 guidance indicates that consideration of ‘Human Health’ is a legal requirement in an SEA and that an HIA is an integral part of an SEA to identify and inform health issues in Plans.

1.26 Undertaking an HIA as part of the SEA should provide an evidence base to help the decision making process in developing an effective LTP, and to mitigate the negative effects on health and well-being (whether physical and/or mental health). In addition, it should help:

- secure consistency between the LTP3 and work associated with Sustainable Community Strategies and Local Area Agreements;
- coordinate the public health concerns in respect of air quality, noise and climate change; and
- contribute to the wider agenda relating to quality of life and reducing health inequalities.

1.27 Draft guidance by the Department of Health (DH) 2007 aims to help authorities assess the health effects of their plans and programmes more effectively and is based on current good practice.

Habitats Regulation Assessment

1.28 HRA is required where a plan contains proposals that are likely to have a significant effect on a Special Protection Area (SPA) or Special Area of Conservation (SAC) collectively known as European sites. The requirement arises from the Conservation of Habitats and Species Regulations 2010 implementing the Habitats Directive (02/43/EEC). HRA is also required, as a matter of UK Government policy for potential SPAs (pSPA), candidate SACs (cSAC) and listed Wetlands of International Importance (Ramsar sites) for the purposes of considering plans and projects, which may affect them.

1.29 DfT guidance (2009) states that:

‘Local transport authorities need to consider if their LTP is likely to have a significant effect on a European site. If a significant effect is likely, the Plan must be subject to an appropriate assessment. Statutory environmental bodies should be consulted.”

1.30 The HRA of the Tyne and Wear LTP3 has been undertaken as a parallel exercise to the SEA process and reported separately. However, its findings informed the preparation of the Environmental Report.

Equalities Impact Assessment

1.31 LTP3 Guidance outlines the legislative requirements for local authorities to assess and determine the impacts of policies, strategies and plans on different social groups. A number of individual duties currently exist covering gender, equality, race and disability; however the Equality Act 2010 (received Royal Assent on 8th April 2010) consolidates, strengthens and expands on the previous legislation into a single duty.

1.32 The purpose of an EqIA is to ensure the proposed or existing scheme, strategy or policy does not discriminate against any individual or community and where possible promotes equality. An EqIA considers impacts on a variety of groups, mainly focussing upon the protected characteristics established under the new Act: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. However a number of other groups may also

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14 Draft Guidance on Health in Strategic Environmental Assessment, Consultation Document, Department of Health 2007

15 From the 6th April 2010 the Conservation (Natural Habitats &c) Regulations 1994 and its many amendments have been consolidated into (and replaced by) the Conservation of Habitats and Species Regulations 2010.
be examined, which would be dependent upon the specific demographic and socio-economic make up of the area.

1.33 LTP3 guidance requires an evidence-led EqIA to be completed to help inform the development of the LTP, ensuring it addresses any equality issues identified and takes account any impacts the LTP3 may have on the local communities.

1.34 Similarly to the HRA, the EqIA of the Tyne and Wear LTP3 has been undertaken as a parallel exercise to the SEA process and is reported separately. However, the EqIA process has been fully aligned with the SEA process and its findings have been integrated with the Environmental Report.

SEA/ LTP3 Programme Key Milestones

The SEA process has been programmed as follows:

- Commencement: April 2010;
- SEA Scoping Consultation: 7th June to 12th July 2010;
- Consultation on the draft LTP3 and Environmental Report: 18th October – 10th December 2010;
- Revisions to draft LTP3 and Environmental Report: January – March 2011;
- Publication of final LTP3 and SEA Statement: April 2011.

Consultation

1.35 The SEA Regulations identify three organisations to act as statutory consultation authorities in the SEA process: the Environment Agency, Natural England (formerly English Nature and the Countryside Agency) and English Heritage.

1.36 Natural England is also a statutory consultee for HRA process has been closely consulted throughout the HRA work. Specifically, they have been consulted on the assessment methodology and the screening matrices used for the HRA Screening report prior to the start of the assessment work. They have also been consulted on the results of the assessments as the work progressed.

1.37 The Equality and Diversity representatives in the Tyne and Wear LTP partner organisations have been consulted throughout the EqIA process and engaged at various key stages, including the utilisation of appropriate data, the proposed assessment framework for the process and the various reporting requirements. The EqIA report has been issued by the JTWG to a number of interested parties.

1.38 The draft 2007 DH guidance recommends that the relevant health organisations are also involved in the HIA consultation process. This includes the following bodies:

- The relevant primary care trust (PCT) with the PCT Director of Public Health being the first point of contact;
- Environmental Health Officers (EHOs);
- Health Protection Units;
- Public Health Observatories; and
- Environment Agency area office.

1.39 Two consultation periods involving the statutory consultation authorities and, in the latter period, the public are set in the SEA Regulations. The consultation periods relate to:
• **Scoping.** The responsible authority is required to send details of the plan or programme to each consultation authority so that they may form a view on the scope, level of detail and appropriate consultation period of the Environmental Report. The consultation authorities are required to give their views within five weeks.

• **The Environmental Report.** The responsible authority is required to invite the consultation authorities and the public to express their opinions on the Environmental Report and the plan or programme to which it relates.

### Scoping Report Consultation

1.40 A scoping workshop, attended by LTP3 and SEA team members, Officers from the Tyne and Wear Local Authorities, NEXUS representatives as well as stakeholders from other external organisations, took place on the 15th of June 2010 during the Scoping Report consultation period. The workshop aimed to gather additional information and discuss the key issues and proposed SEA Framework. Appendix D summarises the consultees’ comments received on the Scoping Report and indicates how these comments have been addressed in the preparation of this Environmental Report.

### Environmental Report Consultation

1.41 The SEA Directive states that:

> ‘An Environmental Report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.’

1.42 The Environmental Report is the key written document produced for the SEA. It is an important consultation document and is therefore likely to be of interest to a wide variety of readers including decision makers, other plan/programme practitioners, statutory consultees, NGOs and members of the public.

1.43 The Draft Environmental Report was published in support of the public consultation for the draft LTP3 disclosed for consultation from 18th October 2010 till 10th December 2010. Appendix H summarises the main consultees’ comments received and indicates how these comments have been addressed in the preparation of this Environmental Report. Comments were received from Natural England, English Heritage, NHS South of Tyne and Wear and Gateshead Access Panel.
2. Scope of the SEA

Introduction

2.1 The following section describes the spatial, temporal and technical scope of the environmental studies undertaken as part of the SEA.

Spatial scope

2.2 The study area for the SEA of LTP3 covers five districts making up Tyne and Wear: Newcastle, Gateshead, North Tyneside, South Tyneside and Sunderland (see Figure 1.1).

Temporal scope

2.3 The temporal scope of the SEA has been aligned with that for LTP3. Guidance for local authorities on the preparation of LTP3 allows increased flexibility over timescales of the delivery plan, which details expected funding distribution.

2.4 The LTP3’s strategy will apply to the period 2011-2021 with an initial Delivery Plan that covers the period 2011-14. The delivery plan will be subject to an annual review to ensure it is up to date and relevant to the political and economic situation.

Technical scope

SEA

2.5 The SEA Directive and the SEA regulations require that the likely significant effects on the environment are assessed, considering the following factors and interrelationship between them:

- Biodiversity;
- Population;
- Human health (covering noise issues among other effects on local communities and public health);
- Fauna and flora;
- Soil;
- Water;
- Air;
- Noise;
- Climatic factors;
- Material assets (covering infrastructure, waste and other assets);
- Cultural heritage including architectural and archaeological heritage; and
- Landscape.

2.6 This effectively forms the technical scope of the SEA.

HIA

2.7 The DH guidance recommends that the assessment of the impact of local transport plans should consider the following topics:
- Transport to work, shops, schools and healthcare;
- Walking and cycling;
- Community severance;
- Frequency and severity of crashes;
- Collisions causing injury and fatal accidents;
- Air pollution, noise; and
- Ageing population and increasing disability.

2.8 A more detailed analysis focused on the identification of links\(^{16}\) between transport and health, including both health outcomes and determinants has been undertaken as part of this project. These links are shown in Table 2.1 and Figure 2.1. This analysis has informed the coverage of the public health issues in relation to LTP3.

### Table 2.1 - Links between Transport and Health Outcomes and Determinants

<table>
<thead>
<tr>
<th>Health Outcomes and Determinants</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| General physical health          | • Accessible and affordable transport, enabling good access to education, employment, fresh food, friends and family, leisure and health services, enhances health.  
• Access to a car is linked in a way to improved physical health through such factors as improved access to essential services and health promoting amenities, reflection of socio-economic status and raised self-esteem. A proportion of those who are at most risk of social exclusion have no access to cars. |
| Physical activity                | • Walking and cycling are physically active forms of transport.  
• Physically active transport may lead to increases in overall levels of physical activity.  
• Dependence on car may be linked with a sedentary lifestyle and lack of physical activity which can contribute to or be a risk factor for many preventable health conditions, including cardiovascular disease, obesity, osteoporosis and depression. |
| Injuries and deaths              | • Road trauma is a leading cause of mortality across all age groups. Reducing the impact of road trauma has been a great public health success in the past 20 years, however vehicle crashes and collisions still produce a great deal of avoidable death and disability.  
• Travel by rail and aeroplane has the lowest rate of fatality or serious injury.  
• Road users at highest risk of being killed or seriously injured are cyclists and pedestrians.  
• The most commonly cited cause of a road crash is speed, which also increases the magnitude of the incident when it does occur. |
| Air pollution                    | • The pollutants most associated with traffic are small particles (PM), nitrogen dioxide (NO\(_2\)) carbon monoxide (CO) and toxicants such as benzene.  
• Increased outdoor air pollution is associated with increased cardiorespiratory mortality and morbidity. Some effects are more or less immediate and affect vulnerable groups (e.g. children, people whose health is already impaired) in particular, whereas the effects of long-term exposure are more widespread.  
• PM are the constituent most closely associated with adverse health outcomes. |

<table>
<thead>
<tr>
<th>Health Outcomes and Determinants</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some evidence shows that PM from traffic is more toxic (per unit mass) than PM from other sources.</td>
<td></td>
</tr>
</tbody>
</table>
| Noise pollution | • Motorised forms of transport are a common source of noise pollution, with road traffic being the most common.  
• Noise pollution at the levels generated by traffic can lead to serious annoyance, interference with speech and sleep disturbance.  
• Stress has been suggested as a possible mechanism through which noise may affect mental and physical health.  
• Evidence suggests noise pollution may limit children’s learning. |
| Land blight | • Land blight caused by roads and other transport infrastructure reduces enjoyment and discourages active recreation. |
| Stress/mental health and quality of life | • Noise pollution generated by transport can lead to stress.  
• Where public transport passengers feel ‘overcrowded’ this may lead to stress but the perceptions of overcrowding and related stress may be mediated by feelings of safety and control.  
• Traffic jams can be a source of stress for transport users  
• For low income families, dependency on walking as a primary form of transport can impact on their time for other recreational activity and may add to psycho-social stress within the family.  
• Access to a car has been linked to improved mental health.  
• Increased levels of physical activity may have a protective effect on mental health. |
| Personal safety and perceptions of safety | • Streets dominated by motorised vehicles with reduced numbers of people on the streets may create a social environment that is conducive to increased crime, which then discourages more people from walking, in particular women and children.  
• Fear of crime is an important factor influencing travel choices. Women’s fear is greater than men’s, and women are more likely to avoid using public transport as a result.  
• Personal safety may also affect decisions to walk or cycle. |
| Social capital and inclusion and community severance | • There is an observed relationship between positive social capital and health. Good transport planning, promoting a less-car dominated environment, can enhance social capital by increasing the number of people walking or cycling on the streets and making the streets a place of social interaction.  
• Community severance results from the divisive effects of the provision and use of transport infrastructure: major roads and railways running through an existing community. |
| Climate change | • Greenhouse gases (GHG) from transport contribute to climate change. Climate change consequences are likely to affect the health of the population, particularly with an increase in flooding, summer temperature, levels of solar radiation and frequency of extreme weather events leading to increased levels of fatalities, injury, infectious diseases, heat related deaths, skin cancer cases and cataracts. |
From an HIA perspective there are vulnerable social groups that need special consideration in transport planning with regards to their health. These groups are likely to experience transport-related exclusion and/or be subject to negative externalities of transport and are as follows:

- **Children** - who, as non-drivers, are reliant on others for motorised transport and who suffer the greatest impacts of transport policy on their health, particularly children in low-income families;
- **Women** – who are more likely not to own a car and find it harder to travel to shops, employment, healthcare and other services;
- **Older people** - who may feel vulnerable using public transport, who often need to seek health services and who are particularly vulnerable to road crash related injuries. Their continuing independence at home is often dependent on reliable transport options;
- **Disabled and people with other health problems** - who may not be able to access many forms of transport or need special arrangements to access those. They are likely to find it difficult to walk and may also be disadvantaged by the cost of transport;
- **Those in low-income groups** – who are likely to walk further because they cannot afford public transport or to own a car, and whose lack of transport options may limit life opportunities. They suffer the most from injuries, noise pollution and air pollution.

**EqIA**

The EqIA process focuses on the consideration of the potential LTP3 effects on eight protected characteristics identified in the Equality Act 2010 that are relevant to the transport agenda:

- **Age**;
- **Disability**;
- **Gender reassignment**;
• Pregnancy and maternity;
• Race;
• Religion or belief;
• Sex; and
• Sexual orientation.

2.11 In addition, households with no access to private vehicles, low income and unemployed groups have also been examined as part of the EqIA process.

2.12 A degree of overlap between the HIA vulnerable social groups and the EqIA protected characteristics has been acknowledged by both HIA and EqIA processes. Consistency between the two assessments has been ensured, where appropriate, particularly, in terms of assumptions, analysing techniques and findings.

HRA

2.13 As a starting point all sites within Tyne and Wear City Region and up to 20 km from the boundary were identified. There are three international sites within the Tyne and Wear City Region:
• Northumbria Coast SPA;
• Northumbria Coast Ramsar site; and
• Durham Coast SAC;

2.14 There are six other international sites within 20 km of the City Region boundary. These are:
• Castle Eden Dene SAC 7.7 km south-east;
• North Pennine Moor SAC 10 km south-west;
• North Pennine Moor SPA 10 km south-west;
• Thrislington SAC 12 km south;
• Teesmouth and Cleveland Coast SPA 13 km south-east; and
• Teesmouth and Cleveland Coast Ramsar site 13 km south-east.

2.15 Subsequently, North Pennine Moor SAC and SPA sites have been eliminated from the HRA Review process because the transport schemes included within LTP3 will not lead to increases in numbers of visitors to these sites because they will not result in changes in accessibility to these areas. Furthermore, none of the transport schemes included within the Plan are close to North Pennine Moor SAC and SPA sites: the nearest are the A1 improvements, which are approximately 24 km to the north-east.

2.16 Therefore the HRA Screening focused on possible likely significant effects of LTP3 on the following international sites: Northumbria Coast SPA, Northumbria Coast Ramsar site, Durham Coast SAC, Castle Eden Dene SAC, Thrislington SAC and Teesmouth and Cleveland Coast SPA and Ramsar site. This list of international sites has been agreed with Natural England.
3. Methodology

SEA

Introduction

3.1 The SEA started as the preparation of LTP3 began and it has progressed concurrently in an iterative fashion in order to integrate environmental sustainability considerations into the planning process. The SEA has been used as a tool for improving LTP3’s environmental sustainability performance. Specifically, this has been achieved through allowing environmental (and wider sustainability) objectives to be considered throughout LTP3 formulation process: from inception through development to adoption of the LTP3 proposals, measures and schemes.

3.2 An SEA Scoping Report, incorporating HIA, HRA and EqIA, (hereafter the ‘Scoping Report’) was published for consultation in June/July 2010 setting out the results of the SEA Stage A and the related tasks of the other parallel assessment processes.

3.3 A Draft Environmental Report was published alongside the draft LTP3 between 18th October 2010 and 10th December 2010 setting out the results of SEA Stages A, B and C. The Draft Environmental Report reported on the scoping work undertaken during the initial stages of the SEA process and took the process further by reporting on the significant environmental effects of the preferred proposals and schemes, proposed mitigation measures and proposals for monitoring significant environmental effects.

3.4 This Environmental Report takes on board the results of the public consultation and reports on the significant environmental effects of the Final LTP3, confirming mitigation measures and monitoring of significant environmental effects.

3.5 As it has already been stated, the SEA process has been integrated with three other assessment processes: HIA, EqIA and HRA. Table 3.1 demonstrates how the integration has been planned and achieved throughout all the stages of the SEA and LTP3 preparation.
### Table 3.1 - Integration of the Assessment Processes

<table>
<thead>
<tr>
<th>Transport Planning Stage</th>
<th>Strategic Environmental Assessment</th>
<th>Habitats Regulation Assessment</th>
<th>Health Impact Assessment</th>
<th>Equalities Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage</td>
<td>Tasks</td>
<td>Tasks</td>
<td>Tasks</td>
</tr>
<tr>
<td><strong>Determining the scope of the LTP (Strategy and Delivery plan); clarifying goals; specifying the problems or challenges the authority wants to solve</strong></td>
<td><strong>A. Setting the context and objectives, establishing the baseline and deciding on the scope</strong></td>
<td>Identify related plans/programmes</td>
<td>Identify Health related plans/programmes (as part of SEA)</td>
<td>Review of relevant policies and strategies</td>
</tr>
<tr>
<td></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
</tr>
<tr>
<td></td>
<td>Identify environmental protection objectives</td>
<td>Derivation of health-related themes</td>
<td>Derivation of equality-related themes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Baseline data and likely future trends</td>
<td>Identify all international sites within and up to 20km around the Tyne and Wear area</td>
<td>Gather data relating to health (as part of SEA)</td>
<td>Baseline evidence</td>
</tr>
<tr>
<td></td>
<td>Identify sustainability issues</td>
<td>Contact Natural England for details of all international sites and consultation purposes</td>
<td>Identify health specific issues (as part of SEA)</td>
<td>Identify equalities specific issues</td>
</tr>
<tr>
<td></td>
<td>Develop objectives, indicators and targets (Assessment Framework)</td>
<td>Liaise with SEA team to ensure SEA Assessment Framework cover international sites appropriately</td>
<td>Ensure inclusion of Health specific objectives in SEA Assessment Framework</td>
<td>Ensure inclusion of Equalities specific objectives in SEA Assessment Framework</td>
</tr>
<tr>
<td></td>
<td>Prepare SEA Scoping Report, incorporating HRA and HIA</td>
<td>HRA information incorporated in SEA Scoping Report</td>
<td>HIA information incorporated in SEA Scoping Report</td>
<td>EqIA information incorporated in SEA Scoping Report</td>
</tr>
<tr>
<td></td>
<td>Consult on the scope of the SEA including HIA, and HRA</td>
<td>Consultation as part of SEA Scoping Report consultation</td>
<td>Consultation as part of SEA Scoping Report consultation. Consultees include Primary Care Trust and other health stakeholders.</td>
<td>Consultation as part of SEA Scoping Report consultation. Consultees include Tyne and Wear’s Equalities and Diversity team.</td>
</tr>
<tr>
<td><strong>Generating options for the strategy and delivery plan to resolve these challenges; appraising the options and predicting their effects</strong></td>
<td><strong>B. Developing, refining and appraising strategic alternatives (LTP Strategy and Delivery plan options)</strong></td>
<td>Assess LTP3 objectives against the Assessment Framework</td>
<td>HIA assessment of LTP3 objectives, strategic options and preferred options to be undertaken within the SEA</td>
<td>Screening exercise of proposed strategic options (including transport schemes)</td>
</tr>
<tr>
<td></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
</tr>
<tr>
<td></td>
<td>Develop, refine and appraise strategic options (including transport schemes)</td>
<td>Initial advice provided to client in relation to the sensitivities of the international sites and how to avoid significant effects on these sites.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Planning Stage</td>
<td>Strategic Environmental Assessment</td>
<td>Habitats Regulation Assessment</td>
<td>Health Impact Assessment</td>
<td>Equalities Impact Assessment</td>
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<tr>
<td></td>
<td><strong>Stage</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
<td><strong>Tasks</strong></td>
</tr>
<tr>
<td>Selecting preferred options for the strategy and delivery plan and deciding priorities</td>
<td>B. Assessing the effects of the LTP Preferred Options (Strategy and Delivery plan)</td>
<td>Predict and assess effects of options taken forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Propose mitigation measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production of the draft LTP (Strategy and Delivery plan)</td>
<td></td>
<td></td>
<td>HIA fully documented in Environmental Report (no separate output but HIA component properly identified)</td>
<td>Prepare EqIA Report (EqIA also documented in Environmental Report)</td>
</tr>
<tr>
<td>Consultation on draft LTP (Strategy and Delivery plan)</td>
<td>D. Consultation on the Environmental Report</td>
<td>HRA Screening of consultation draft LTP HRA Screening report sent to Natural England for agreement of findings.</td>
<td>HIA Consultation included in Environmental Report consultation</td>
<td>Consultation on EqIA Report</td>
</tr>
<tr>
<td>Production of final LTP (Strategy and Delivery plan)</td>
<td>D. Prepare a supplementary or revised Environmental Report if necessary</td>
<td>Assess significant changes Prepare supplementary or revised Environmental Report</td>
<td>HIA assessment of significant changes undertaken as part of SEA</td>
<td>EqIA of final LTP</td>
</tr>
<tr>
<td>Adoption of LTP</td>
<td>D. SEA Statement</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Assessment Methodology

3.6 The SEA methodology adopted was broadly based on two published guidance documents:

- Transport Analysis Guidance (TAG) 2.11 Strategic Environmental Assessment for Transport Plans and Programmes, Department for Transport, ‘In Draft’ Guidance, April 2009; and

3.7 The work undertaken involved the completion of the SEA stages A, B, C and D and associated tasks as follows:

Stage A - Setting the Context and Establishing the Baseline

Other Relevant Plans and Programmes

3.8 The Tyne and Wear LTP3 will both influence and be influenced by other plans, policies and programmes (PPPs) produced by district councils, by statutory agencies and other bodies with plan making responsibilities. Legislation is a further driver that sets the framework for LTP3, both directly and indirectly. Such relevant plans and programmes have thus been identified.

3.9 The constraints or challenges that relevant plans and programmes pose for LTP3 were considered and broad environmental sustainability themes were identified. This is presented in section 4 of this report.

Baseline Information

3.10 To predict accurately how potential plan proposals will affect the environment, it is first important to understand the current state of the environment and then examine the likely evolution of the environment without the implementation of the plan.

3.11 Baseline information provides the basis for understanding existing local environmental as well as social issues, in particular in respect of health and equality, and alternative ways of dealing with them; formulating objectives to address these issues and predicting and monitoring environmental effects.

3.12 Baseline data tables (Appendix B) have been prepared where data have been listed under SEA topic areas. These tables record:

- General indicators;
- Quantified data within the plan area;
- Comparators and targets (if applicable);
- Trends (if identified); and
- Source of the information.

3.13 Baseline data maps have also been produced to illustrate spatial distribution of baseline information and are presented in Appendix C. These maps also included the schemes included in the LTP3 strategy.

3.14 Data were collated from a wide range of existing District Councils’ and external sources. For each indicator readily available, quantified baseline data were collected in a format applicable to the issues to be assessed by the SEA and at a relevant geographical level. The main sources used were official websites on the internet, LTP2 Progress Report 2006-11, Tyne and Wear Local Transport Plan Annual Monitoring Report, District Councils’ reports and data, the Census 2001 and Area Profiles (Audit Commission).
3.15 The initial baseline data have been reviewed and updated, incorporating consultees’ comments from the Scoping Report consultation. This is presented in section 5 this report.

3.16 Where significant gaps exist, these are identified and recommendations for filling the gaps have been included in the proposals for monitoring of the implementation of LTP3.

**Key Issues**

3.17 Key environmental and wider sustainability issues, in particular, those pertaining to health and equality, within Tyne and Wear have been identified as a result of the analysis of the baseline data and the review of other plans and programmes. The identification of these issues helped focus the SEA and other assessment processes on the aspects that really matter. Opportunities for how LTP3 could assist in addressing these issues were also identified. This is presented in section 6 of this report.

**Developing SEA Framework**

3.18 A set of SEA objectives against which the policies and proposals in LTP3 can be assessed, was drawn up. They were identified by reviewing relevant policy documents at the international, national, regional and district level (see Other Relevant Plans and Programmes above), reviewing the baseline data and identifying key sustainability issues. The SEA objectives were refined through the consultation on the original Scoping Report and are presented in this report.

3.19 For each objective, assessment prompt questions and potential indicators have been set out to form an SA framework. Table 7.1 shows the SA framework, identifying how relevant SEA Directive topic(s) as well as HIA, EqIA and HRA work streams have been covered.

3.20 The assessment prompt questions provide a clarification of the intended interpretation of each objective to support direction of change sought through the implementation of LTP3. The questions have guided the LTP3 assessment process.

3.21 Existing indicators have been used as often as possible. In some cases, specific new indicators have been proposed. The SEA framework indicators aim to capture the change likely to arise from the LTP3 implementation and have played a role in the assessment.

3.22 An analysis of the likely evolution of the state of the environment without the implementation of LTP3 was also undertaken at this stage. Likely future trends have been examined for the continuation of LTP2 programmes only (i.e. the ‘without plan’ or ‘business as usual’ scenario). This is presented Table 7.2.

**Consulting on the Scope of SEA**

3.23 The Tyne and Wear JTWG sought the views from the Consultation bodies and others on the scope and level of detail of the ensuing Environmental Report. A Scoping Report was prepared to that effect. The scoping consultation results have influenced and helped shape the Environmental Report (see Appendix E).

**Stage B - Developing alternatives**

**Testing the Plan Objectives against the SEA Objectives**

3.24 A compatibility assessment of LTP3 objectives in its initial stages of preparation against the SEA objectives was undertaken as part of the iterative process to assess the sustainability of LTP3 objectives. This was undertaken to ensure that the overall objectives of LTP3 were in accordance with the SEA objectives and to provide a suitable framework for developing alternatives. The results are presented in section 8 of this report.
Developing, Refining and Appraising Strategic Alternatives

3.25 Consideration of alternative strategies and options for LTP3 are an integral part of the plan development. Strategic alternatives were identified by the Tyne and Wear JTWG in close liaison with the team conducting the SEA.

3.26 This task comprised the prediction of changes to the predicted future trends without the implementation of LTP3, arising from LTP3 strategic alternatives. These were compared both with each other and with “Do Minimum” scenario. The effects of the evolving LTP3 were predicted and assessed during the plan-making process to ensure that the Final LTP3 is as sustainable as possible.

3.27 While carrying out this evaluation, each alternative was considered in the context on whether it would have a likely significant effect in relation to each of the SEA objectives. The results are presented in section 9 of this report.

Assessing the Effects of LTP3 Preferred Option (Strategy and Delivery plan)

3.28 Assessing the significance of predicted effects is essentially a matter of judgement. There are a number of factors that will determine the significance of an effect, e.g. its scale and permanence and the nature and sensitivity of the receptor. It is very important that judgements of significance are systematically documented, in terms of the particular characteristics of the effect which are deemed to make it significant and whether and what uncertainty and assumptions are associated with the judgement. The assessment of significance also includes information on how the effect may be avoided or its severity reduced.

3.29 DfT requires that all forms of transport proposals, including LTPs, are appraised against the Government’s five over-arching transport objectives, namely: environment, safety, accessibility, economy and integration. DfT guidance on NATA, as set out in TAG Unit 2.11 notes that NATA appraisal methodologies should be used in undertaking SEA of LTPs. Table 1.1 shows how NATA objectives have been integrated with SEA topics. The methodology that has been adopted for this assessment is generally broad-brush and qualitative.

3.30 In the current practice of SEA and NATA, the broad-brush qualitative prediction and evaluation of effects can be often based on a qualitative seven point scale in easily understood terms. In general, this assessment has adopted the scale shown in Table 3.2 to assess the significance of effects of the schemes and proposals in LTP3.

Table 3.2 - Criteria for Assessing Significance of Effects

<table>
<thead>
<tr>
<th>Assessment Scale</th>
<th>Significance of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>++</td>
<td>Strong beneficial</td>
</tr>
<tr>
<td>+</td>
<td>Moderate beneficial</td>
</tr>
<tr>
<td>0</td>
<td>Slight beneficial</td>
</tr>
<tr>
<td>-</td>
<td>Slight adverse</td>
</tr>
<tr>
<td>--</td>
<td>Moderate adverse</td>
</tr>
<tr>
<td>---</td>
<td>Strong adverse</td>
</tr>
</tbody>
</table>

3.31 Moderate and strong beneficial and adverse effects have been considered of significance whereas no effect and slight beneficial and adverse effects have been considered non-significant.

3.32 There have been two iterations of the assessment of LTP3: the assessment of the Draft LTP3 Consultation document and the assessment of the Final LTP3 document. The results of the first iteration of the prediction and evaluation task are presented in tables in Appendix G and the results of the assessment of the Final LTP3 are discussed in section 10 of this Environmental Report.

3.33 The assessment also considered cumulative, indirect (secondary) and synergistic effects of LTP3.
Secondary and Cumulative Effects Assessments

3.34 Annex I of the SEA Directive requires that the assessment of effects include secondary, cumulative and synergistic effects.

3.35 **Secondary or indirect effects** are effects that are not a direct result of the plan, but occur away from the original effect or as a result of the complex pathway e.g. a development that changes a water table and thus affects the ecology of a nearby wetland. These effects are not cumulative and have been identified and assessed primarily through the examination of the relationship between various objectives during the Assessment of Environmental Effects.

3.36 **Cumulative effects** arise where several proposals individually may or may not have a significant effect, but in-combination have a significant effect due to spatial crowding or temporal overlap between plans, proposals and actions and repeated removal or addition of resources due to proposals and actions. Cumulative effects can be:

- **Additive** - the simple sum of all the effects;
- **Neutralising** - where effects counteract each other to reduce the overall effect;
- **Synergistic** - is the effect of two or more effects acting together which is greater than the simple sum of the effects when acting alone. For instance, a wildlife habitat can become progressively fragmented with limited effects on a particular species until the last fragmentation makes the areas too small to support the species at all.

3.37 Many environmental problems result from cumulative effects. These effects are very hard to deal with on a project by project basis through Environmental Impact Assessment. It is at the SEA level that they are most effectively identified and addressed.

3.38 Cumulative effects assessment is a systematic procedure for identifying and evaluating the significance of effects from multiple activities. The analysis of the causes, pathways and consequences of these effects is an essential part of the process.

3.39 Cumulative (including additive, neutralising and synergistic) effects have been considered throughout the entire SEA process, as described below:

- Identification of key environmental, health and equality issues as part of the review of relevant strategies, plans and programmes and baseline data analysis (Table 6.1).

- Establishing the nature of likely cumulative effects, causes and receptors (Table 6.2).

- Identifying key receptors (e.g. specific wildlife habitats) in the process of collecting baseline information and information on how these have changed with time, and how they are likely to change without the implementation of the LTP3. Targets have been identified (where possible), that indicate how close to capacity the key receptor is, which is a key determining factor in assessing the likelihood of cumulative and synergistic effects occurring, and their degree of significance (Appendix B and Table 7.2).

- Particularly sensitive, in decline or near to their threshold (where such information is available) or with slow recovery receptors have been identified through the analysis of environmental issues and problems (Table 6.1 and Appendix B).

- The development of SEA objectives and indicators has been influenced by cumulative effects identified through the process above and SEA objectives that consider cumulative effects have been identified (Table 7.1).

- Cumulative effects of LTP3 proposals have been assessed (Table 10.3).

3.40 The results are presented in section 10 of this report.
Mitigating Adverse Effects and Maximising Beneficial Effects

3.41 Mitigation measures have been identified to reduce the scale/importance of significant negative effects.

3.42 The results are presented in section 11 of this report.

Monitoring the Environmental Effects of Plan Implementation

3.43 SEA monitoring involves measuring indicators which will enable the establishment of a causal link between the implementation of the plan and the likely significant effect (positive or negative) being monitored. It thus helps to ensure that any adverse effects which arise during implementation, whether or not they were foreseen, can be identified and that action can be taken by the Tyne and Wear JTWG to deal with them.

3.44 A monitoring programme was prepared showing, for each significant effect, what data should be monitored, the source of the data, the frequency of monitoring, as well as when and what actions should be considered if problems are identified from the monitoring.

3.45 The results are presented in section 12 of this report.

Stage C – Preparing the Environmental Report

3.46 The Draft Environmental Report was prepared to accompany the Draft LTP3 on consultation.

Stage D – Consulting on Draft Plan and Draft Environmental Report

Assessing significant changes

3.47 The SEA Directive requires that information on the changes to the Draft Environmental Report resulting from the formal consultation is recorded in the statement of how the SEA findings have been taken into account in the final LTP3, which should be made available to stakeholders.

3.48 JTWG sought the views of the Consultation bodies and others on the Draft LTP3 and Environmental Report. Comments were received from Natural England, English Heritage, NHS South of Tyne and Wear and Gateshead Access Panel. These comments have been taken on board in the preparation of both final LTP3 and Environmental Report documents. This is documented in Appendix H.

Final Environmental Report

3.49 This is the Environmental Report of the Tyne and Wear LTP3.

SEA statement

3.50 Following completion of the public consultation and preparation of the Environmental Report and the Final LTP3 document, an SEA Statement (separate document) has been prepared setting out the following:

- How environmental considerations have been integrated into the plan, for example any changes to or deletions from the plan in response to the information in the final Environmental Report.
- How the Environmental Report has been taken into account.
- How the opinions and consultation responses have been taken into account. The summary should be sufficiently detailed to show how the plan was changed to take account of issues raised, or why no changes were made.
- The reasons for choosing the plan as adopted in the light of other reasonable alternatives dealt with.
- The measures that are to be taken to monitor the significant environmental effects of implementation of the plan or programme.

**HIA**

**Introduction**

3.51 In order to ensure that potential impacts of LTP3 on health and health inequalities have been considered, and to fulfil the requirements of health legislation, an HIA has been undertaken in an integrated fashion with the SEA process. The need for the HIA arises from the recognition that LTP3 policies and proposals may impact on the factors influencing the health of communities and individuals, including such factors as accessibility and affordability of transport, levels of physical activity, air and noise pollution, personal safety and perception of safety and community severance. The HIA was integrated with the SEA process to maximise synergies between the two processes, as the SEA provides an important opportunity to address the wider determinants of health (e.g. air quality and climate change) and to promote health, prevent ill health and tackle health inequalities by ensuring that they are effectively covered in the plan assessment process.

The key elements of the HIA as part of the SEA include:

- PPP review and legislative context;
- Setting the context, baseline and scope of the assessment;
- Identification of health and health inequalities issues;
- Development of HIA specific objective;
- Assessment of impact; and
- Reporting.

3.52 The adopted approach to the HIA ensures that health considerations are considered throughout the assessment process from reviewing the relevant plans and programmes, establishing the baseline and building up the area’s population profile in terms of health, identifying the key issues, developing the SEA Framework and assessing LTP3 options.

**Methodology**

**PPP Review and Legislative Context**

3.53 Health related plans and programmes as well as legislation documents have been identified and reviewed alongside the other plans and programmes. In addition to the DH Draft guidance, the following guidance documents, setting out how the evidence should be applied to the local context, have been reviewed:

- ‘Health Impact Assessment of Transport Initiatives – A Guide’\(^{17}\); and
- ‘Transport Access and Health in the East of England’\(^{18}\).

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\(^{17}\) Health Impact Assessment of Transport Initiatives A Guide, Health Scotland, MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine, 2007

\(^{18}\) Source: HIA Guidance – Healthcare North East

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41
3.54 As a result of this review the links between transport and health and vulnerable social groups that need special consideration in respect of transport planning with regard to their health have been be identified. This information is presented in Section 2. It has informed the technical scope of this study.

3.55 The key health related themes presented in Section 4 of this report were identified as a result of the review of the relevant plans and programmes.

Setting the Context, Baseline and Scope of the Assessment

3.56 This stage enabled the HIA to be set in context, against which the likely impacts of LTP3 have been assessed.

3.57 The identification of the vulnerable groups and linkages between health and transport informed the baseline data collection (Section 5 and Appendix B) in terms of specifying requirements for data on the demographic make-up of the local population (including vulnerable groups), health status of the local population (including vulnerable groups) and features of the local area, such as levels of noise and air pollution.

Identification of Health and Health Inequalities Issues

3.58 Health related issues have been identified, as a result of the analysis of the baseline data and the review of other plans and programmes. Opportunities for how LTP3 could assist in addressing these issues were also identified. This is presented in section 6 of this report.

Development of HIA Specific Objective

3.59 A health-specific objective was included in the set of SEA objectives with a view of distilling the main effects of LTP3 on health and health inequalities (Section 7). It was also ensured that all the DH guidance topics and the identified linkages between transport and health in Section 2 receive an appropriate coverage in the SEA objectives, assessment prompt questions and indicators.

Assessment of Impact

3.60 The identification of the vulnerable groups and linkages between health and transport informed the assessment process against the HIA specific objective. The multi-faceted nature and complex linkages of health determinants have also been recognised in the assessment against the other relevant SEA objectives, e.g. objectives on air quality, equality and accessibility.

3.61 The assessment of LTP3 has been undertaken indicating any potential negative and/or positive health impacts occurring as a result of its future implementation. Impacts on public health have been characterised in terms of their nature, direction (i.e. increasing or decreasing) and magnitude. Specifically, the magnitude of impacts has been judged based on the following where the data were available:

- ‘Nastiness/niceness’ of impacts (e.g. lethal impacts are deemed as more serious than temporal noise disturbance);
- Number/ percentage of people affected;
- Timing of impact (immediate or delayed);
- Who is affected (focus on vulnerable groups identified). This aspect has been aligned with EqIA as appropriate;
- Certainty of impacts.

3.62 The HIA identified actions that can enhance positive impacts and reduce or eliminate negative impacts of LTP3 with respect to health and health inequalities.

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18 Transport, access and health in the East of England, Eastern Region Public Health Observatory, 2006
Reporting
3.63 The results of the HIA are reported in this Environmental Report in Section 10.

EqIA

Introduction

3.64 In order to ensure that potential impacts of LTP3 on equality have been considered and to fulfil the requirements of the Equality Act, an EqIA has been undertaken as a parallel exercise to the SEA process. However, the EqIA process has also been integrated with the SEA through the following steps:

- PPP review and legislative context;
- Setting the context, baseline and scope of the assessment;
- Identification of equalities issues;
- Development of EqIA specific objective;
- Assessment of impact; and
- Reporting.

Methodology

PPP Review and Legislative Context

3.65 The relevant legislative and policy context for addressing equality has been established in the EqIA report and also as part of the review of the relevant plans and programmes in Section 4.

3.66 Specifically, in developing the EqIA approach as part of the LTP3 process, the following guidance and documents have been reviewed and considered:

- ‘Guidance on Local Transport Plans, Department for Transport, July 2009;
- http://www.idea.gov.uk/idk/core - the Equality and Diversity web link which includes the ‘Equality Framework for Local Government’;
- Gateshead Equality Strategy;
- Newcastle City Equality Policy;
- North Tyneside Corporate Equality Plan;
- South Tyneside Corporate Equality Plan;
- Sunderland City Council Corporate Equality Scheme; and
- Comprehensive Equalities Policy – Tyne and Wear Passenger Transport Authority and Nexus.

3.67 The key equality related themes presented in Section 4 of this report were identified as a result of the review of the relevant plans and programmes.

Setting the Context, Baseline and Scope of the Assessment

3.68 This stage enabled the EqIA to be set in context, against which the likely impacts of LTP3 have been assessed.
3.69 The protected characteristics specified in the Equality Act informed the baseline data collection (Section 5 and Appendix B) in terms of specifying requirements for data on the demographic make-up of the local population and socio-economic characteristics of the area to describe communities’ profile.

Identification of Equalities Issues

3.70 Equality related issues were identified, as a result of the analysis of the baseline data and the review of other plans and programmes. Opportunities for how LTP3 could assist in addressing these issues were also identified. This is presented in section 6 of this report.

Development of EqIA Specific Objective

3.71 An equality-specific objective was included in the set of SEA objectives with a view of distilling the main effects of LTP3 on equality. It was also ensured that all the protected characteristics and other vulnerable social groups are properly covered in the assessment prompt questions and indicators under this objective.

Assessment of Impact

3.72 The impacts of the draft LTP3 proposals have been assessed against the EqIA specific objective in terms of likelihood, type and magnitude of impact. The EqIA examined the likelihood for LTP3 to affect any of the identified equality groups disproportionately.

3.73 Opportunities for the improvement of LTP3’s performance in relation to its effects on the equality groups were identified.

Reporting

3.74 The EqIA findings were reported in the separate EqIA report as well as integrated and presented in this Environmental Report in Section 10.

HRA

Introduction

3.75 The HRA work is being undertaken as a parallel process to the SEA following current available guidance including:

- The Appropriate Assessment of Spatial Plans in England - A guide to why, when and how to do it (RSPB, 2007).
- Planning for the Protection of European Sites: Appropriate Assessment, Guidance for Regional Spatial Strategies and Local Development Plan Documents (Department for Communities and Local Government, August 2006).
- Planning Policy Statement 9: Biodiversity and Geological Conservation – Statutory obligations and their impact within the planning system (PPS9).
- English Nature (Habitats Regulations Guidance Notes 1 to 6).
HRA Screening Methodology

3.76 The screening of LTP3 was carried out in three steps:

1) Determining whether the plan is directly connected with or necessary to the management of the designated sites

2) Describing the plan and other plans or projects that in combination have the potential for having significant effects on the designated sites

3.77 Relevant local planning authorities whose areas also adjoin the designated sites were contacted for information on progress of their LDF, SA/SEA and potential impacts were identified on the international sites. Information from Natural England and any other relevant competent authorities was also requested at this stage. This information was used when describing the plan and other plans where in-combination impacts may arise. Other bodies such as local water companies and the Environment Agency were contacted for information on any projects and plans that have had HRAs undertaken on them.

3) Identifying the potential effects on the designated sites and assessing the significance of any effects on the designated sites

3.78 Potential impacts were identified based on the information collected at step two. An HRA Review of the draft LTP3 was undertaken during November and December 2010. As part of this, suggestions for amendments to the LTP3 were made to prevent the impacts and/or strengthen the document in relation to the designated sites.

3.79 The HRA screening report was produced for the final LTP3, using a simple matrix which set out the potential impacts with an assessment of their potential significance on the qualifying interest features of the European sites and the conservation objectives (i.e. whether the policies are likely to affect the European site). The guidance documents was used to assess whether any of the objectives or options of the plan could have a potentially significant effect upon the designated sites.

3.80 As part of the HRA screening, where relevant, general mitigation principles were identified for inclusion in the plan that could help reduce impacts from the transport schemes and objectives and options proposed in the LTP3 to insignificant levels.

3.81 The results of the HRA screening exercise were integrated with the SEA work through the HRA specific objective. They were also reported in detail in the separate HRA screening report.
4. Review of Other Plans and Programmes

Introduction

4.1 The first task of the SEA is the identification of other relevant PPPs. This helps to identify relevant environmental and wider sustainability themes, baseline information and key issues. LTP3 must be prepared to take these PPPs into account as it may influence and be influenced by them.

4.2 The SEA Directive specifically states that information should be provided on:

“The relationship [of the plan or programme] with other relevant plans and programmes”

“The environmental protection objectives, established at international, [European] Community or [national] level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation”

4.3 In addition to this, the PPPs related to HIA and EqIA have also been considered and are reported alongside environmental considerations in this section.

Methodology

4.4 Both LTP3 and the Environmental Report should be set in the context of international, national, regional and local objectives along with environmental, strategic planning, transport, health, social, economic and equality policies.

4.5 Relevant plans and programmes include those at different levels (international, national, regional and local) which influence LTP3, or those in other sectors which contribute, together with LTP3, to changes in the environmental, health and equality conditions of the area to which they apply. Relevant plans and programmes may include land use or spatial plans, plans dealing with aspects of the physical environment, and plans and programmes for specific sectors or types of activity. Environmental, health and equality protection objectives may be set by policies or legislation. Such policies and legislation may include European Directives, international undertakings, UK initiatives and national planning guidance.

4.6 Tables A.1 - A.3 in Appendix A lists the documents reviewed to identify environmental, health and equality themes. A series of key themes which were used alongside baseline information and key issues to help develop an SEA framework is presented below.

4.7 This exercise was repeated for health and equality in order that the requirements and processes for HIA and EqIA are clearly documented and reported as part of this Environmental Report.

Environmental Themes

4.8 The review of PPPs revealed a large amount of common themes in terms of their objectives relating to the environment within the context of transport planning.

Climate Change and Energy

- Reduce energy consumption and energy wastage;
- Reduce GHG emissions, particularly carbon dioxide;
- Maximise the use of renewable energy;
- Increase energy efficiency and make use of new and clean technologies;
- Minimise the use of fossil fuels;
- Need for measures to adapt to climate change.
Transport

- Promote mixed-use development policies to reduce the need to travel;
- Improve local air quality through minimising traffic related emissions;
- Encourage walking, cycling and the use of public transport;
- Reduce traffic congestion and improve safety for all road users;
- Promote sustainable alternatives to car travel;
- Promote viable alternatives to road haulage, such as shipping and rail;
- Promote clean vehicle technology;
- Connect key regeneration sites;
- Promote integration, maintain and improve the public right of way and wider access network;
- Connect the area to the wider regional, national and international networks.

Natural Resources and Waste

- Ensure efficient resource use and minimise resource footprint;
- Raise awareness of resource use/depletion;
- Use secondary and recycled materials;
- Consider opportunities to maximise on-site re-use of materials;
- Reclaim derelict land and buildings, optimising the use of “brownfield sites”;
- Employ waste reduction methods to minimise construction and maintenance waste;
- Reduce the amount of waste disposed off at landfill.

Land

- Adhere to the Brownfield/Greenfield hierarchy of land use;
- Minimise and seek to reclaim derelict and contaminated land whilst taking into account any biodiversity interests;
- Protect farmland and soils.

Water

- Improve the quality of ground and surface water;
- Improve the biological and chemical quality of rivers;
- Make use of vegetated drainage systems and 'Sustainable Urban Drainage Systems';
- Minimise the risk and impact of flooding by controlling surface water management and floodplain management;
- Prevent inappropriate development in floodplains;
- Prepare for impacts of climate change, including sea level rise, coastal squeeze and coastal erosion.

Biodiversity

- Contribute to the delivery of local and national Biodiversity Action Plans;
- Protect and enhance endangered species, habitats and geodiversity, including sites of geological importance;
• Protect and enhance existing wildlife and provide opportunities for new habitat creation
• Increase tree cover and ensure the sustainable management of existing woodland;
• Protect, maintain and where possible enhance natural habitat networks and green infrastructure, to avoid fragmentation and isolation of networks;
• Protect and enhance designated nature conservation sites of international importance (SPA/SAC) and national importance (SSSI);
• Promote access and understanding of nature and biodiversity.

Landscape
• Protect and enhance landscape and townscape character and local distinctiveness;

Heritage
• Help to conserve historic buildings through sympathetic design;
• Conserve, protect and enhance designated and non-designated historic assets;
• Improve access to buildings and landscapes of historic/cultural value;
• Use architectural design to enhance the local character and “sense of place” of development;
• Protect local distinctiveness.

Safety
• Promote design that discourages crime and fear of crime e.g. by reducing hiding places or escape routes;
• Address anti social behaviour.

Jobs and Education, Community Services and Amenities
• Improve physical accessibility of jobs through the location of sites and transport links close to areas of high unemployment.
• Provide or improve access to local health and social care services;
• Provide or improve physical accessibility of education facilities and training opportunities;
• Provide information and advice to the community on the transport services and initiative available;
• Reduce light pollution;
• Reduce noise pollution and protect tranquillity;
• Minimise dust, odours, litter;
• Provide access to leisure and tourism facilities;
• Ensure the protection, maintenance, enhancement (including creation) of, and access to green spaces, and the wider multi-functional green infrastructure network including the wider countryside; and
• Improved public spaces.

Health Themes

4.9 The derived key health-related themes are:
• Improve health in the UK and globally, taking account of the diverse factors influencing health, such as climate change, pollution, conflict, environmental degradation and poverty;

• Tackle poor health by improving the health of everyone, and of the worst off in particular;

• Reduce health inequalities among different groups in the community (e.g. young children, pregnant women, black and minority ethnic people; older people, people with disabilities; low income households);

• Support the public to make healthier and more informed choices with regard to their health and adopt physically active lifestyles;

• Address pockets of deprivation;

• Provide physical access for people with disabilities;

• Provide or improve access to local health and social care services;

• Provide opportunities for increased exercise, thus reducing obesity, particularly in children, and illnesses such as coronary heart disease;

• Provide for an ageing population;

• Promote healthy lifestyles through exercise, physically active travel and access to good quality and affordable food, which can assist in reducing both physical and mental illnesses.

Equality Themes

4.10 The derived key equality-related themes are:

• Protect human rights (e.g. the right to liberty and security of person) and fundamental freedoms (e.g. a right to freedom of thought, conscience and religion, freedom of expression, etc);

• Prohibit discrimination, harassment and victimisation on such grounds as sex, race, language and religion;

• Promote equality of opportunity in the way services are planned, promoted and delivered;

• Treat everyone with dignity and respect;

• Recognise people’s different needs, situations and goals and removes the barriers that limit what people can do and can be;

• Create sustainable communities which are active, inclusive, safe, fair, tolerant and cohesive;

• Create sustainable communities which are fair for everyone – including those in other communities, now and in the future;

• Improve economic, social and environmental conditions particularly in the most deprived areas;

• Ensure fair access to and distribution of resources across the community;

• Assess and address the impacts upon diverse communities including cultural, racial, economic, generational, social (including disabilities) and religious mixes;

• Create a sense of belonging and wellbeing for all members of the community;

• Provide physical access for people with disabilities;

• Minimise isolation for vulnerable people.
5. Baseline Information

Introduction

5.1 The next task in the SEA addresses the collection of an evidence base for the SEA.

5.2 The SEA Directive states that the Environmental Report should provide information on:
"relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan" and the "environmental characteristics of the areas likely to be significantly affected" (Annex I (b) (c))

and

"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Birds Directive) and 92/43/EEC (Habitats Directive)" (Annex I (c)).

5.3 To accurately predict how potential LTP3 strategies and measures will affect the environment, it is important to understand the current state of the environment and then examine the likely evolution of the environment without the implementation of the plan.

Methodology

5.4 Baseline information provides the basis for the prediction and monitoring of the effects of the implementation of the LTP3 and helps identify environmental problems and alternative ways of dealing with them.

5.5 Due to the fact that SEA is an iterative process, subsequent stages in its preparation and assessment might identify other issues and priorities that require the sourcing of additional data and/or information and identification of monitoring strategies. This makes the SEA process flexible, adaptable and responsive to changes in the baseline conditions and enables trends to be analysed over time.

5.6 The most efficient way to collate relevant baseline data is through the use of indicators (see below). This ensures that the data collation is both focused and effective. The identification of relevant indicators has taken place alongside the assessment of other relevant plans, policies and programmes (Task A1), the identification of sustainability issues (Task A3) and developing the SEA framework (Task A4).

5.7 It should be noted that the SEA process does not require the collection of primary data, but relies of the analysis of existing information. As such, where data gaps exist, this is highlighted in the report.

5.8 Indicators have been selected for their ability to provide objective data that will, over time, offer an insight into general trends taking place. Throughout the assessment process, the following issues were addressed:

- What is the current situation, including trends over time?
- How far is the current situation from known thresholds, objectives or targets?
- Are particularly sensitive or important elements of the environment, economy or society affected?
- Are the problems of a large or small scale, reversible or irreversible, permanent or temporary, direct or indirect?
- How difficult would it be to prevent, reduce or compensate for any negative effect?
- Have there been, or will there be, any significant cumulative or synergistic effects over time?

**General and Transport Related Characteristics of Tyne and Wear**

5.9 Tyne and Wear is part of a city-region situated in the North East of England, encompassing the urban areas of Newcastle, Gateshead, North and South Tyneside and Sunderland, plus a hinterland stretching into County Durham and Northumberland.

5.10 It is a vibrant and varied area combining the revitalised city centres of Newcastle and Sunderland with the legacy of heavy industry along the banks of the Tyne and the Wear. To the east lie the rolling seascapes of the North Sea coast whilst in the rural west of Gateshead the land rises steadily up to the fells of North-West Durham. Whilst geographically this is a small area, it has a variety of landscapes with wide river valleys, hilly suburbs, rural villages and densely-crowded urban terraces.

5.11 Figures C1 – C5 in Appendix C show the main settlements, built up areas, the main natural and built environment designations, transport routes, including the public Rights of Way (RoW) network and cycling lanes and open space in the study area.

**The Five Districts of Tyne and Wear**

5.12 **Gateshead Borough** covers an area of some 88 square kilometres to the south of the river Tyne. In 2003, the population was estimated to be 191,000. The borough consists of densely built up urban areas in the centre and east, surrounding Gateshead town centre, with a more dispersed settlement pattern of scattered villages towards the west. There has been major redevelopment of the Quayside area in recent years, with iconic attractions such as the Sage Gateshead and BALTIC Centre for Contemporary Arts, and there are now equally ambitious plans to regenerate the town centre with associated changes to the road layout. This is the most rural of the districts in Tyne and Wear, which poses challenges in maintaining good public transport links to the rural hinterland.

5.13 **The City of Newcastle upon Tyne** is widely recognised as the regional capital for the North East of England. The City covers an area of 103 square kilometres and is host to 143,000 jobs, attracting 80,000 people from neighbouring authorities to work. The population is 266,000. Newcastle is a key regional gateway for the city-region, providing access to the national railway and trunk road networks, and international air travel at Newcastle International Airport (NIA). The bridges across the Tyne, with heavy flows of commuter traffic into/out of the city centre, are a major source of congestion and the city centre has been designated as an Air Quality Management Area (AQMA). All the designated AQMAs in the study area are shown on Figure C.7 in Appendix C.

5.14 **North Tyneside** is a largely urban borough with no identifiable strategic centre; rather it is made up of a number of settlements, which include the larger town centres of North Shields, Wallsend and Whitley Bay. Much of the northern fringe of the borough is designated green belt whilst the fine coastline attracts tourists and is a site of international nature conservation interest. Recent years have seen considerable housing growth and business park development in the district, putting pressure on the local road network. The district covers an area of 82 square kilometres in size with a population of 192,000.

5.15 **The Borough of South Tyneside** covers an area of 64 square kilometres, most of which is densely urbanised, but it is also situated on a coastline of spectacular beauty and scientific interest. This is the smallest of the five districts and the one with the highest levels of
unemployment. Good transport links to surrounding districts are thus of key importance, especially for access to the many jobs in the business parks of North Tyneside. South Shields and Jarrow are the main towns and the population is 153,000

5.16 **The City of Sunderland** covers an area of 137 square kilometres with a population of 281,000, making it the largest and most heavily-populated of the five districts. As well as Sunderland itself, other key centres are Washington, Houghton-le-Spring and Hetton le Hole, in the heart of the former Durham coalfield. Although traditionally an industrial area, it has a rich heritage and an environment which includes attractive features such as the river Wear valley and the North Sea coastline. There are bold plans to regenerate many of the former industrial sites along the banks of the Wear and in July 2008 the Transport Minister approved the council’s £98m scheme to build a new four lane bridge over the river Wear between Claxheugh and Castletown.

### Data Analysis

5.17 The baseline data provides an overview of the environmental and social characteristics of the LTP3 area and how these compare to the region and the UK. This overview is presented in Appendix B. The analysis of the baseline data has highlighted a number of key issues in Tyne and Wear. These, together with implications and opportunities arising for the LTP3, have been summarised in Table 6.1.

5.18 Where available, data have been collated and analysed for the following indicators (as detailed in Appendix B):

**Environmental data**

- Number of AQMAs
- Average annual mean \( \text{NO}_2 \) concentration in AQMAs
- \( \text{CO}_2 \) Emissions
- Extent of Floodplain
- Planning to adapt to climate change
- Groundwater source protection zones (SPZ)
- Water Quality (Biological and Chemical)
- Registered Parks and Gardens
- Scheduled Monuments, including those at risk
- Listed Buildings, including those at risk
- Registered Battlefield
- Conservation Areas
- Tranquillity
- Extent of Green Belts
- Landscape National Character Areas
- Local Landscape Character Areas (where assessed)
- Number of Geological SSSI and Regionally Important Geological and Geomorphological Sites (RIGGS)
- Ancient Woodland
- Ecological Footprint
- Population of species and areas of priority habitat
- Number of sites designated for nature conservation
- Areas of Green Space
- Green Infrastructure Strategies/studies (where undertaken)

**Social data, including health, inequality, connectivity and accessibility**

- Access to key services facilities by public transport, walking and cycling
- Access to key employment sites by public transport
- Working age population with access to employment by public transport
- Number of people killed and seriously injured (KSI) on the roads (all)
- Number of people killed and seriously injured (KSI) on the roads (children)
- Slight casualty rate - number of people slightly injured per 100 million vehicle kilometres
- Total number of road accident casualties (pedestrian)
- Total number of road accident casualties (cyclists)
- Children travelling to school by age and mode
- Children travelling to school by car
- Percentage of pedestrian crossing which have facilities for disabled people
- Percentage of the footway network which may require repair
- Percentage length of footpaths and rights of way which are easy to use
- Modes of transport used to travel to work
- Distance travelled to work by the resident population
- Peak period traffic flows
- Congestion – average journey time per mile during the morning peak
- Area-wide road traffic kilometrage (million vehicle kilometres)
- Public transport patronage
- Bus punctuality
- Total annual cycle trips
- Percentage of households with car(s)
- Percentage of residents who think that for their local area, over the past three years, the level of traffic congestion has got better or stayed the same
- % of residents who think that for their local area, over the past three years, that public transport has got better or stayed the same
- Life expectancy at birth
- Life expectancy at age 65
- Proportion of population in good/ fairly good/not good health
- General health compared to accessibility levels
- Mortality rate from circulatory diseases at age 75
- Percentage of people with a limiting long term illness
- % claiming disability living allowance
- % claiming disability living allowance
- Obesity
- Reception year obesity levels
- Year 6 obesity levels
- Total Population
- % of females
- % of the population aged 18 and under
- % of the population aged between 18 and 25
- % of the population aged between 16 and 65
- % of the population aged over 65
- Number of people per Hectare
- % of SOAs in the most / least deprived areas nationally in terms of overall deprivation
- % of SOAs in the most / least deprived areas nationally in terms of health
- % of SOAs in the most / least deprived areas nationally in terms of income
- % of SOAs in the most / least deprived areas nationally in terms of employment
- % of SOAs in the most / least deprived areas nationally in terms of living environment
- % of SOAs in the most / least deprived areas nationally in terms of education
- % of SOAs in the most / least deprived areas nationally in terms of crime
- % of children aged under 16 in workless households
- % of children that live in families that are income deprived
- % population classed as White
- % population classed as Mixed
- % population classed as Asian
- % population classed as Black
- % population classed as Chinese
- % population classed as Christian
- % population classed as Buddhist
- % population classed as Hindu
- % population classed as Jewish
- % population classed as Muslim
- % population classed as Sikh
- % population classed as having no religion
- Unemployment
- % of working age population who are claiming job seekers allowance
- Low Income Groups
- % population in elementary occupations
- % population that are economically active but unemployed
- Asylum Seekers
- Number of dispersed asylum seekers
- National Insurance Registrations
- Number of National Insurance (NiNo) registrations (in thousands)
- % of residents who feel fairly safe outside during the day
- % of residents who feel fairly safe outside after dark
- Number of recorded crimes per 1,000 people

**Data Limitations**

5.19 The purpose and use of indicators is to provide quantified, objective information in order to show how things change over time. However, they do not explain why particular trends are occurring and the secondary, or knock-on, effects of any changes.

5.20 There are several gaps in the data collected as a result of not all the relevant information being available at the local level for recent time periods. However, it is believed that the data sets available provide a comprehensive overview of the sustainability situation in Tyne and Wear. Data gaps include:

- Data on public transport adaptability for the use by disabled people;
- Detailed information on access to health facilities;
- Detailed information on pregnancy and maternity statistics;
- % of Lesbian, Gay, Bisexual and Transgender People; and
- Crime statistics associated with public transport.
6. **Key Environmental Issues**

6.1 The SEA Directive states that the Environmental Report should provide information on:

6.2 *"Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC"* (Annex I(d))

6.3 The analysis of environmental issues influences the development of the SEA framework (see Section 7), in particular in formulating assessment prompt questions and identifying and selecting indicators.

**Methodology**

6.4 The key environmental issues that are relevant to the LTP3 were identified through discussions with the Tyne and Wear JTWG, together with reviews of published documents, analysis of existing data and review of the key issues identified in the Environmental Report prepared previously for the LTP2. The analysis of environmental issues is iterative and ongoing. Accordingly, as the SEA develops with further stakeholder consultation and involvement, the analysis of these key issues is likely to evolve further.

6.5 The review of key environmental issues and problems indicated that there are a number of significant environmental issues in the Tyne and Wear area directly related to transport. These include traffic congestion, a likely increase in transport related CO₂ emissions, air quality and noise issues, room for further improvements in the level of the use of public transport and other carbon friendly modes and the need to further improve road safety. Other identified environmental issues where transport planning may have direct or indirect effects and which should inform the Plan include flooding, water quality, need for climate change adaptation, pressure on landscape, historical assets, biodiversity, geology and tranquility level. This analysis also highlighted the need to consider pertinent socio-economic issues such as deprivation levels, accessibility, physical activity, health issues and unemployment.

6.6 These key issues were summarised in Table 6.1. This table also includes an outline of the potential opportunities for the LTP3 to address these issues, in some instances contributing to the wider regeneration initiatives in the area. The relevance to the SEA topics outlined in the Directive as well as to the HIA, EqIA and HRA processes is indicated in the third column of the table.
Table 6.1 - Key Issues

<table>
<thead>
<tr>
<th>No</th>
<th>Issue</th>
<th>Implications/Opportunities</th>
<th>SEA Topic and Relevance to HIA, EqIA and HRA processes</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Historically a Low Base of the Local Economy and Related Social Issues</strong></td>
<td>Tyne and Wear has enjoyed some success over recent years in regenerating the local economy and promoting tourism growth. The region does, however, suffer from historic economic weakness which has led to a long-standing problem with population out-migration. This economic weakness results in relatively high levels of unemployment and inactivity compared to other regions of the UK and a number of social and health problems; Tyne and Wear lags behind national indicators for higher educational achievement, ill-health and obesity.</td>
<td>Population, Material Assets, Human Health, Population, Health HIA, EqIA</td>
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<tr>
<td></td>
<td></td>
<td>LTP3 should aim to contribute to making the area more attractive to investors and existing and potential residents by improving connectivity and accessibility by various transport modes. See also issues on Deprivation and Health below.</td>
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<tr>
<td>2.</td>
<td><strong>Population</strong></td>
<td>In comparison with national figures, Tyne and Wear contains a higher than average proportion of the population aged 18 and under, and also those aged over 65. Parts of Newcastle upon Tyne contain a high proportion of both these age groups. Elsewhere in Tyne &amp; Wear, Sunderland, Jarrow, Hetton-le-Hole and pockets of Newcastle upon Tyne contain a higher than average proportion of the population that are of working age, although overall in Tyne &amp; Wear, the proportion of this age group is in line with regional and national figures. The proportion of females within the area is in line with regional and national statistics, standing at around 52% of the overall population in Tyne and Wear. It is known that there are some security issues for this group when travelling, and these will only be heightened when pregnant.</td>
<td>The LTP should seek to implement measures that will consider the differing needs of the varying age and different sex groups of residents within the area. For example, taking into consideration the need for security when travelling for the older population to improve community cohesion and reduce social exclusion for this group, as well as providing suitable measures that do not intimidate younger travellers, and enhancing security and providing suitable facilities for women (including those during pregnancy and on maternity leave, as their travel habits and needs will be adapting to their circumstances).</td>
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3. **Deprivation**  
Tyne & Wear contains a considerable amount of Lower Layer Super Output Areas (LSOAs) that are consistently in the 20% most deprived areas nationally in terms of overall deprivation, health, income, employment, education and crime. Areas that are particularly affected include parts of Gateshead, Newcastle upon Tyne and Sunderland. The exception to this is deprivation in terms of living environment, where just 23 LSOAs are in the 10% most deprived nationally.

The LTP should:
- seek to address measures within its reach to reduce deprivation, including measures that will improve air quality, safety, reduce inequalities in other types of pollution such as noise,
- increase accessibility to services and facilities, including employment and education.
- consider the use of targeted fare concessions to reduce inequalities in income and opportunities;
- recognise and address the needs of vulnerable groups that need special consideration in transport planning;
- take account of EqIA findings and recommendations.

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<tbody>
<tr>
<td>3.</td>
<td>Deprivation</td>
<td>The LTP should:</td>
<td>Population, Human Health, Material Assets</td>
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<td></td>
<td></td>
<td>• seek to address measures within its reach to reduce deprivation, including measures that will improve air quality, safety, reduce inequalities in other types of pollution such as noise,</td>
<td>EqIA, HIA</td>
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<td>• increase accessibility to services and facilities, including employment and education.</td>
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<td>• consider the use of targeted fare concessions to reduce inequalities in income and opportunities;</td>
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<td>• recognise and address the needs of vulnerable groups that need special consideration in transport planning;</td>
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<td>• take account of EqIA findings and recommendations.</td>
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4. **Child poverty**  
The percentage of children aged under 18 in workless households has only increased by 1% between 2004 and 2008 (21% and 22% respectively), however it is higher in comparison with regional (19%) and national (17%) figures. Statistics on the percentage of children living in families that are income deprived also indicates that child poverty is an issue in the area. Even the lowest level found in North Tyneside (24.2%) is higher than the national average (approximately 18%). The highest level of children in income deprived families is found in Newcastle upon Tyne (35%), which almost doubles the national average.

See implications for Deprivation Issue (see key issue 3).
5. **Ethnicity**  
Tyne & Wear generally contains a higher than average proportion of the population that is classed as white, with a consequent lower than average proportion of ethnic minority groups.  
Whilst there are not significant proportions of non-white residents within Tyne and Wear, there are a great number of asylum seekers within the area, as well as a considerable number of immigrants, as described below, and therefore a vast mix of nationalities.  
A considerable proportion (69%) of the asylum seekers in the North East region were within Tyne and Wear. Newcastle Upon Tyne contains the greatest number of asylum seekers in the North East in 2007.  
Tyne and Wear has a considerable number of immigrants from a range of destinations. The largest number of immigrants to the area is from India, but a considerable number also come from Poland and China, showing the diversity within the local population.

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</table>
| 5. | **Ethnicity** | Te LTP should:  
- seek to be inclusive of all residents in the area, to ensure equality and effective community cohesion between different ethnic groups.  
- focus on increasing accessibility to key services as well as social facilities and places of worship. Access to employment and education to gain new skills may be particularly important for this group.  
- ensure that public transport and other travel information is available in a variety of languages to assist travel for all residents. | Population, Material Assets  
EqIA |
| 6. | **Low Income Groups** | The LTP should  
- seek to promote equality between income groups, by providing low income residents with suitable travel options which offer the same level of opportunity as those on a higher income. This includes providing access to key services such as employment, healthcare, training and for social purposes;  
- ensure that these services are affordable for this | Population, Human Health, Material Assets  
EqIA, HIA |
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<tr>
<td>7.</td>
<td>Lesbian, Gay, Bisexual and Transgender People</td>
<td>The LTP should ensure people are not victimised or harassed because of their sexual orientation by staff or other customers when using transport services.</td>
<td>Population, EqIA</td>
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<tr>
<td>8.</td>
<td>Car Ownership</td>
<td>The LTP3 will need to consider the needs of those who do not have access to a car, particularly in any policies relating to public transport and promoting walking and cycling as this group of residents are likely to be dependent on this mode of transport for their journeys. Measures should also seek to provide those in more rural areas, who rely on cars for their journeys, with more sustainable transport alternatives.</td>
<td>Material Assets, Population, Air Quality, Human Health, EqIA, HIA</td>
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<td>9.</td>
<td>Congestion</td>
<td>LTP3 should:</td>
<td>Air Quality, Material Assets, Human Health, EqIA, HIA</td>
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|    | Relatively low levels of car ownership in the North East have not mitigated against the appearance of major congestion hotspots within the Tyne and Wear city regions. Reducing congestion in Tyne and Wear is fundamental to the regional economy and the quality of life. On the positive side, there has been good progress in reducing congestion and increasing the number of people using sustainable travel options, as demonstrated by the following figures (2009) in the LTP Annual Monitoring Report: | • build upon the success of LTP2;  
• progress with the examination and introduction of Urban Traffic Management and Control (UTMC) system to further manage traffic across the conurbation;  
• consider and if feasible utilise the potential of the disused Leamside line to carry local passenger trains between Durham, Washington and Newcastle, as well as railfreight;  
• aim to improve infrastructure efficiency for all transport modes and improve the quality of infrastructure to encourage cycling and walking; |                                                       |
### Issue 8% reduction in congestion on key corridors.
Reduction in congestion has been achieved through improvements in public transport (metro, bus), interchange facilities, development of Network Management Plans (NMP), introduction of new trains, upgrading walking and cycling routes and improving links into town and city centres and to cultural and leisure attractions, and preparation of cycling maps, covering all districts of Tyne and Wear, plus cross-boundary routes.

However, driving to work is currently the most popular mode of transport and the percentage of people cycling and using trains is relatively low.

**Implications/Opportunities**
- promote modal shift to encourage the public to switch to more sustainable forms of transport such as buses, trains, walking or cycling;
- promote ‘smarter choices’ such as workplace, residential and school travel plans;
- support publicity or awareness-raising campaigns and/or education and practical offers to promote active modes of transport or physical activity;
- promote sufficiency through integration with the other land use plans such as Core Strategies and Site Allocations DPDs to reduce the need to travel.

### Issue Poor Air Quality
Road transport is the main source of air pollution in Tyne and Wear, which is reflected in the designation of six Air Quality Management Areas (AQMAs). They are shown on Figure C.7 in Appendix C.

Monitoring results show a worsening of air quality in the Newcastle city centre AQMA in 2007 and 2008 and exceedences of the local targets. As levels of car ownership are rising faster in the region than in other parts the country, air quality issues may exacerbate in the future.

**LTP3 should:**
- aim to improve air quality across Tyne and Wear as a whole with a particular focus on locations with identified air quality problems;
- ensure integration with the Tyne and Wear Air Quality Delivery Plan (2008);
- promote the operation of most modern engine buses, especially in current and potential AQMAs.

### Issue Low Tranquillity Levels and Noise Pollution
Tranquillity arises from a combination of physical features and human experience. It is important for mental and physical wellbeing and improves the quality of life.

Threats to tranquillity include new buildings and infrastructure, new roads, increasing infrastructure at airports and air traffic, increased light pollution and inadequate funding for land management.

**LTP3 should:**
- promote the use of public and non-motorised transport;
- avoid a significant increase in road infrastructure;
- aim to minimise noise and light pollution and vibration, in particular, in the Important Areas and First Priority Locations.
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<td>Make the most efficient use of the existing transport infrastructure.</td>
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<td>The mean tranquillity score for Tyne and Wear is significantly lower (-43.4) than the North East (15.3) and the England average (-9.34) scores. Such a low negative score suggests that urban development, transport and other infrastructure in the area detracts from feelings of tranquillity. To put this into perspective, amongst all English Unitary Authorities, Northumberland has the highest score of 28.6 and Slough Unitary Authority has the lowest of -79.5. The Tyneside Agglomeration Noise Action Plan indicates that noise from major roads is an issue in the area. It identifies Important Areas and First Priority Locations, where noise issues need to be managed as a priority. The First Priority Locations are the areas with the highest noise level within the Important Areas (see Figure C.8 in Appendix C). The total number of dwellings in the Important Areas is 6,950 with associated population of 13,600. The approximate number of dwellings and associated population in the First Priority Locations is 400 and 900 respectively. The second source of noise is the major railways. The numbers of dwellings and associated population within the Important Areas identified due to railway noise are 150 and 400, respectively.</td>
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<td>The LTP should seek to prevent pollution of watercourses, groundwater and coastal waters (e.g. by incorporating vegetated drainage systems in road drainage design to convey, store and treat runoff and by promoting porous surfacing for transport infrastructure).</td>
<td>Water HIA</td>
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<td>Water Quality</td>
<td>Regional hydrology is influenced primarily by the Tyne, the Derwent, the Ouse Burn and the Team rivers which feed through a network of tributaries. Water quality varies across the study area with ratings from fair to very good.</td>
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<td>Barriers to Accessibility</td>
<td>Overall, the residents of Tyne and Wear experience very high levels of accessibility to all core services. Accessibility to education facilities, food shops and GPs is</td>
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<td>LTP3 should:</td>
<td>Population, Material Assets, Human Health HIA, EqIA</td>
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<td>• specifically target improvements to the public transport routes to access key services and facilities;</td>
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<td>Implications/Opportunities</td>
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<td>particularly high – at 99%-100%. The level of accessibility to hospitals is slightly lower – 91% and to employment – 83.2%, which indicates some room for further improvement. The LTP2 Progress Report identifies a number of barriers to accessibility, including:  - A high-floor bus service that is difficult to board for elderly or infirm users, or someone with a pushchair. The walking route to the bus stop might be inadequate as well.  - The bus fare might be expensive.  - The public transport journey may be slow or there may be concerns about security at bus stops or interchanges.  - The user might not be aware of the best way to reach the hospital or other key services by public transport. There may also be a lack of awareness about the available reduced fares. It is also the case that most public transport routes still run from the periphery into town and city centres, whereas in recent years many destination points (hospitals, business parks, shopping centres, large retail stores) have been located on edge-of-town locations, creating a demand for radial journeys which the bus and rail network often struggles to provide for.</td>
<td>• explore opportunities for radial journeys to key destinations by public transport;  • include improvement measures to the public rights of way and the green infrastructure networks;  • include improvement measures and extend infrastructure for cycling and walking. This covers improvements to the public RoW network. See also recommendations for Congestion, and Health Issues.</td>
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<td>14. Road Safety and Crime Levels</td>
<td>LTP3 should:  • ensure continuation of such LTP2 initiatives as</td>
<td></td>
<td>Human Health, Population, Material Assets</td>
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<td>The LTP2 Monitoring Report shows that a good progress</td>
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|    | has been made towards achieving the Government’s 2010 road safety targets\(^\text{19}\). The numbers of total killed or seriously injured (KSI) casualties, child KSI casualties and total slight casualties show a reduction over the 2006/08 period and indicate that the 2010 targets will be met. The LTP2 Progress Monitoring Report summarises casualty trends for each road user as follows:  
  - **Pedestrians** - the rate of reduction of casualty trends was levelling out in the lifetime of LTP1. However the underlying trend is down. Significant reductions have been made, compared against the baseline levels (1994-98 average). However, there are still issues of concern: 31% of pedestrian accidents occur at junctions on A class roads and estate roads in neighbourhoods. Children are over represented in the pedestrian road user group, with under 16s making up 40% of overall pedestrian KSIs.  
  - **Cyclist** KSI for 2000-04 is 22% lower than the 1994-98 average. Overall, casualty trends for cyclists show an underlying downward trend. This trend reflects LTP Partners’ investment in improved safety for cyclists in recent years, as reported in the LTP2 Cycle Strategy.  
  - In absolute numbers, **motorcyclists** are a cause for concern, with the underlying trend showing a significant upward turn in numbers involved in accidents.  
  - 59% of all casualties on the roads in Tyne and Wear involve **car drivers or car occupants**, with the general  | Home Zones, Safer Routes to School schemes and safety talks/training and speed management campaigns, such as Newcastle’s “Twenty’s Plenty” programme in residential areas;  
  - be developed in close coordination with the other documents forming the local LDFs, in particular with elements of the Core Strategies and Site Allocations DPDs pertaining to the vitality and safety of the city centre;  
  - be informed by ‘Secured by Design’ principles;  
  - ensure safe paths for walking and cycling;  
  - promote the Secure Stations Scheme, which is a national accreditation that recognises rail stations that have reached a required standard of passenger and staff security;  
  - promote such measures as street lighting and extending the CCTV network on public transport and at interchanges; provision of Help Points and clear signage;  
  - seek to reduce the levels of crime and perceived crime within Tyne and Wear and improve the quality of life.  | HIA, EqIA                                                      |

trend upward. Whilst 30-39 year olds are the most represented age group in all accidents, 16-24 year olds are more likely to be involved in KSI accidents.

- **Public Service Vehicle (PSV) user casualty trends** have revealed a marked increase, compared to the baseline average. There has been a steady increase in the number of accidents involving PSV drivers.

Achieving further reductions in road casualties is needed. There has been an increase in the number of reported crimes in Tyne and Wear – from 336 per 1,000 people in 2003/04 to 433 in 2007/08. Anti social behaviour on public transport or at its facilities may discourage people from using it.

15. **Problems of General Health and Health Inequalities**

The North East recognised as the unhealthiest region in England. The proportion of people not in good health in Tyne and Wear (11.2%-13%) is similar to the regional figure and higher than the national average (9%). Conversely, proportion of people in good health is lower in the study area (62.6%-65.1%) than nation-wide (68.8%). The percentage of people with a limiting long term illness in all local authorities within Tyne and Wear (21.6% - 24%) is higher than the national level (17.9%).

The life expectancy at birth for both males (75.4 years) and females (79.8 years) in the region is lower than the national average (76.9 and 81.1 years respectively). This is reflected in higher regional rates for smoking, unhealthy eating, obesity and binge drinking.

Life expectancy of females in Tyne and Wear is similar to the regional figure but slightly below the national average (e.g. about a year lower). Males' life expectancy is also similar to the regional average but has a 1-2 year gap.

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<tbody>
<tr>
<td>15</td>
<td>Problems of General Health and Health Inequalities</td>
<td>LTP3 should:</td>
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<td>• encourage healthier lifestyles: sport, exercise and active recreation and forms of travel should be promoted; access to safe, green and open spaces for activity should be ensured;</td>
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<td>• aim to improve local air quality and tranquillity levels;</td>
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<td>• improve the public RoW network and integrate with green infrastructure plans and ensure accessibility for young, disabled and older people;</td>
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<td>• help identify what forms of intervention best improve health literacy, personalising messages for population subgroups, including those with low health literacy where the prevalence of chronic diseases is often high;</td>
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<td>• improve accessibility to health and recreation facilities and community facilities and amenities</td>
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<td>Population, Human Health EqIA, HIA</td>
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<td>No</td>
<td>Issue</td>
<td>Implications/Opportunities</td>
<td>SEA Topic and Relevance to HIA, EqIA and HRA processes</td>
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|    | varying across the local authorities, with the national average. The health of individuals is linked to age, gender, some inherited factors, as well as deprivation and life style choices. Mortality rates for cancer, coronary heart disease and child health issues all show variations by deprivation category, where generally people in more deprived areas have poorer health. There are 379 (52.7%) out of 719 LSOAs which are within the 20% most deprived nationally in terms of health (see Figure C.9 in Appendix C. Research relating to the links between transport and health inequalities shows that:  
- People without access to a car are more likely to experience health problems as a result of lack of access to essential services and amenities and increased level of social exclusion;  
- Disadvantaged groups are more likely to be involved in a road crash;  
- The pedestrian death rate for children from families in social class V is higher than for children of social class I;  
- Speeding is more common in less affluent areas, leading to more accidents in these areas;  
- There is a disproportionately high level of pedestrian and cyclist casualties in deprived areas;  
- Pedestrians over the age of 70 account for a disproportionate share of deaths. The LTP2 Progress Report shows that the areas where ill-health is most common (generally inner-city wards on Tyneside and Wearside) score quite well for accessibility. | for all by affordable and efficient transport systems;  
- recognise and address the needs of vulnerable groups that need special consideration in transport planning, including low-income families, children (particularly in low-income families), disabled people and older people. See also implications for Accessibility Issue. |
This demonstrates that good access to services is only one of the numerous determinants of health (see Baseline Tables in Appendix B).

### Disabled Residents

The proportion of residents claiming Disability Living allowance in Tyne and Wear, and the North East is considerably more than the proportion nationally. There has been a steady increase in the proportion of claimants from 2002 to 2009.

Local authorities, Nexus and bus operators aim to ensure inclusive accessibility with 80% of bus services are formed of easy access vehicles. The aim is to increase this to 100%.

The LTP should seek to address measures which promote equality for disabled residents within Tyne and Wear. This includes measures to promote inclusive accessibility across Tyne and Wear, and to offer equal opportunities for access to key destinations such as employment, healthcare, education and for social purposes, as those residents who are not disabled.

The use of audible devices at pedestrian crosswalks to assist the visually impaired should be promoted.

### Need to Mitigate Climate Change

Climate change is a global issue that require responses at all levels, including the local one, where the actual reductions in GHG emissions can be achieved. The Tyne and Wear local authorities recognise the need to tackle this challenging issue. All Tyne and Wear local authorities have signed up to the EU Covenant of Mayors initiative aiming to mitigate climate change through the implementation of intelligent local sustainable energy policies that create stable local jobs and increase citizens’ quality of life. Newcastle City Council has also set an ambition to become the world’s first carbon neutral city.

The CO₂ emissions per capita from Tyne and Wear are lower (6.8 tonnes) than that for North East (12.6 tonnes) and the UK (8.4 tonnes) due to the relatively low levels of emissions from industrial and commercial sources. The proportion of road transport CO₂ emissions in Tyne and Wear is similar to the national average (27%) but higher.

LTP3 should:
- set out a clear strategy and programme to decarbonise transport, implementing the government strategy;
- encouragement of efficient and sustainable low carbon travel, including walking and cycling;
- improvements in public transport and better coordination and integration of different modes;
- improving energy efficiency of passenger transport, including rail and bus. Promoting the use of sustainable bio-fuels;
- encourage sustainable procurement for wider transport infrastructure. The use of local materials should be encouraged where practicable to help reduce transport costs and emissions;
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<th>No</th>
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<th>Implications/Opportunities</th>
<th>SEA Topic and Relevance to HIA, EqIA and HRA processes</th>
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</table>
|    | than the regional average (16%). The increasing rates of car ownership and likely growth of road traffic is likely to result in an increase of transport-related emissions of CO₂. | • supporting infrastructure for low emission vehicles, for example, the trialling and adoption of electric vehicle charging infrastructure  
• the use of new Intelligent Transport Systems technologies (e.g. bus priority controls and traffic signals) to reduce congestion and therefore CO₂ emissions;  
• improving drivers’ skills in driving more efficiently through training;  
• the use of financial incentives, such as road pricing and a congestion charge.  
See also recommendations for Biodiversity Threats and Green Infrastructure Issue. | |
| 18 | **Need for Climate Change Adaptation**  
The most significant changes in the climate in the North East to the 2050s are forecast to be:  
• Increased seasonality of rainfall with increases of up to around 21% in winter and reductions of up to around 37% in summer and variability in extreme rainfall events;  
• Average seasonal temperatures to increase, with a region-wide annual average daily temperature change of just under 2°C. Heat waves are likely to increase in frequency of occurrence;  
• An increase in mean sea levels of around 0.3m and an increase in sea surge levels of around 0.30m to 0.35m. Increased frequency of flooding from rivers, streams and the sea.  
Such changes in climate may result in the following | LTP3 should:  
• take account of the predicted climate changes and investigate potential solutions for transport infrastructure assets adaptability and resilience to a changing climate;  
• require the use materials and techniques (e.g. specialist road surfaces) which have been tested for durability outside the normal range of the UK’s climatic/weather conditions. LTP3 can inform asset management plans in these terms to help authorities be prepared for such events;  
• have regard to the risk of flooding and take into consideration the effects of climate change which could accentuate this risk. Road infrastructure design should include improved drainage standards to allow for increases in rainfall intensity and vegetated drainage systems where | Climatic Factors, Human Health, Material Assets, Water HIA, HRA |
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<th>No</th>
<th>Issue</th>
<th>Implications/Opportunities</th>
<th>SEA Topic and Relevance to HIA, EqiA and HRA processes</th>
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<td></td>
<td>impacts:</td>
<td>appropriate. The use of impermeable hard surfacing, e.g. concrete, should be minimised; the 2008 North East Climate Change Adaptation Study and the Shoreline Management Plan 2 (the second generation) should inform the LTP3.</td>
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<td></td>
<td>• <em>Highway</em> (urban) - The major concern for road networks within Tyne and Wear is the increase in surface water flooding due to high intensity, low duration rainfall events. Tyne and Wear was particularly affected by such events in 2005. Higher temperatures could lead to more cracking and pot-holing of road surfaces which could lead to more water getting into the base of the road construction and weakening it.</td>
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<td></td>
<td>• <em>Bus and Rail Stations</em> – Stations across Tyne and Wear could be affected by climate change impacts including storms leading to blown debris and leaf fall onto tracks, and trees in close proximity to the stations could fall on to the tracks affecting services. Station buildings structures could be damaged by flood events or by strong winds or lightning strikes. They could also be affected by expansion and contraction in extremes of temperature.</td>
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<td></td>
<td>• <em>Bus</em> – Bus routes are an important regional resource especially in such a rural region where many do not have access to a car. Delays to services on the local road network due to extreme weather conditions may have an impact upon the reliability of scheduled bus services. If there is a regular disruption of services patronage figures may fall and the bus operators may review their operations.</td>
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<td></td>
<td>• <em>Tyne and Wear Metro</em> - Issues include increasing temperatures and, particularly the long duration of high temperatures through the summer months, imposing greater stress on the tracks and increasing</td>
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<td>Implications/Opportunities</td>
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<td>the likelihood of buckling.</td>
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<td>19.</td>
<td><strong>Biodiversity Threats and Green Infrastructure</strong></td>
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<td>Biodiversity, Flora, Fauna, Human Health HRA</td>
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<td></td>
<td>The area has a mosaic of habitats and diversity of landscape character including river, wetlands, estuary, coastline, green spaces and important conservation areas. Two sites within the study area designated at the European level for their nature conservation value are Northumbria Coast SPA/Ramsar and Durham Coast SAC. There is also a number of designated nature conservation sites at the national and local levels, including Sites of Special Scientific Interest (SSSI), designated for both biological and geological/geomorphological interests, Local Nature Reserves (LNR) and Sites of Nature Conservation Importance (SINC). The urban and rural areas of Tyne and Wear have important priority Biodiversity Action Plan habitats and species, along with parks, gardens, hedges, open spaces and transport verges which are all important elements of green infrastructure. The construction of new or improvement of existing transport infrastructure can affect biodiversity through disturbance, severance, habitat loss, fragmentation, increased noise, light and air pollution and an increase in the number of road kills. Gritting of roads may also have affects on species and habitats. Bridges, culverts and other structures are potential habitats and maintenance and other activities can have adverse</td>
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<td><strong>Bridges and Tunnels</strong> - Increases in winter rainfall may result in exacerbation of current bridge scour problems such as at King Edward VII Bridge in Tyne and Wear. The principal climate related concerns for the Tyne Tunnel are associated with increased temperatures within the tunnel.</td>
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LTP3 should:
- aim to protect designated areas and other areas of ecological and geological value;
- explore opportunities for new habitat creation and enhancement. The potential for biodiversity creation on brownfield sites should be taken into account;
- explore and maximise synergies between transport proposals and green infrastructure;
- adopt best practice wildlife friendly designs into road schemes (e.g. the use of specialist road materials);
- explore opportunities to seek net environmental gain from necessary transport development whilst avoiding, mitigating or compensating for negative impacts;
- take into account findings and recommendations set out in the HRA Screening report to ensure that the integrity of the European sites is not undermined.
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<th>No</th>
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<th>SEA Topic and Relevance to HIA, EqIA and HRA processes</th>
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<td>20</td>
<td><strong>Heritage</strong>&lt;br&gt;The five districts of Tyne and Wear contain a wealth of&lt;br&gt;important heritage assets, encompassing designated and&lt;br&gt;non-designated assets and including historic buildings,&lt;br&gt;archaeological sites and treasured landscapes,&lt;br&gt;townscapes and other sites and features:&lt;br&gt;• 67 Scheduled Monuments,&lt;br&gt;• 3150 listed buildings (approx)&lt;br&gt;• 66 Conservation Areas&lt;br&gt;• 5274 sites on the Archaeological Sites and&lt;br&gt;Monuments Record&lt;br&gt;• 1 Registered Historic battlefield site (Battle of&lt;br&gt;Newburn Ford)&lt;br&gt;• 10 Historic Parks and Gardens&lt;br&gt;• 2 Roman Forts and a Roman Temple&lt;br&gt;• 10 miles of World Heritage Site (Hadrian’s Wall)&lt;br&gt;A number of heritage assets, including listed buildings,&lt;br&gt;Scheduled Monuments and the battlefield are on the&lt;br&gt;Heritage at Risk Register, which indicates their&lt;br&gt;vulnerability.&lt;br&gt;The designated and non-designated heritage assets and&lt;br&gt;their settings may be affected by increased pressure from&lt;br&gt;development and regeneration. The assets may be also&lt;br&gt;affected by transport related air and noise pollution and&lt;br&gt;vibration. Increasing tourist pressure could further&lt;br&gt;increase the vulnerability of cultural and historic assets.&lt;br&gt;LTP3 should:&lt;br&gt;• ensure that transport infrastructure is carefully&lt;br&gt;developed in and around the areas of cultural and&lt;br&gt;designated and non-designated historic assets in&lt;br&gt;order to maintain their character and appearance,&lt;br&gt;while increasing access for its use and enjoyment,&lt;br&gt;and conforming to Disability Discrimination Act&lt;br&gt;(DDA) requirements.&lt;br&gt;• explore synergies between improvements to the&lt;br&gt;public transport systems and the preservation and&lt;br&gt;refurbishment of designated and non-designated&lt;br&gt;heritage assets.&lt;br&gt;• ensure that signing does not detract from the&lt;br&gt;appearance of an area.</td>
<td>Cultural Heritage, Material Assets, Population EqIA</td>
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</table>
21. **Negative Trends in Landscape Character Change**

The Countryside Quality Counts (CQC) assessment, which tracks change in the character of the English landscape, shows negative trends for three of the four National Character Areas (NCA) within the study area, over the period of 1999 – 2003. There was an “Enhancing” trend found for the fourth NCA: NCA15: Durham Magnesian Limestone Plateau.

Negative trends are as below:

- **NCA13 South East Northumberland Coastal Plain** - Overall Classification ‘Neglected’ (Trees and woodland, Boundary features, River and coastal). Settlement pressure continues to transform the area around major towns, although the character of the farmed area has been enhanced. Lighting and amenity planting works associated with new roads have extended urban influences further into the countryside. Coastal, boundary and woodland character are stable but weakened. Overall landscape character appears to be eroding slowly.

- **NCA14 Tyne and Wear Lowlands** - Overall Classification ‘Neglected’ (Boundary features, Agriculture, Semi-natural habitats, Historic features). The character of the rural parts of this heavily urbanised area remains weakened, largely as a result of development pressure. New roads, with their associated lighting and urban detailing, erode the rural character of the remaining areas of open countryside. While there have been some attempts to restore environmental quality, through such initiatives as the Community Forest, there remain significant opportunities for further restoration and enhancement.

LTP3 should:
- consider key characteristics of the landscape character of the area and ensure that negative effects are avoided and opportunities for enhancement are maximised;
- ensure sympathetic high quality design.

See also recommendation for Heritage and Biodiversity Issues.

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<th>No</th>
<th>Issue</th>
<th>Implications/Opportunities</th>
<th>SEA Topic and Relevance to HIA, EqIA and HRA processes</th>
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<tbody>
<tr>
<td>21</td>
<td><em>Negative Trends in Landscape Character Change</em></td>
<td>LTP3 should:</td>
<td>Cultural Heritage, Flora, Fauna, Material Assets HRA</td>
</tr>
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<th>No</th>
<th>Issue</th>
<th>Implications/Opportunities</th>
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<tbody>
<tr>
<td></td>
<td><strong>NCA16 Durham Coalfield Pennine Fringe</strong> Overall</td>
<td>Classification ‘Neglected’ (Semi-natural habitats Historic features). Although woodland character has been enhanced, development pressure and the weakened character of the agricultural landscape suggest this area remains degraded. There are significant opportunities for further restoration and enhancement.</td>
</tr>
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</table>


Likely Cumulative Effects

6.7 The SEA Directive requires the consideration of cumulative effects. Cumulative effects can occur from the following situations:

- Combined effects of a plan with effects of another plan, affecting the same receptor. For example, proposals from land use and transport plans could affect a nature reserve; and
- Interaction of effects from proposals within a plan affecting the same receptor. For example, proposals to build new roads or upgrade existing ones, implement more lighting schemes, etc in a particular area within a short period of time could result in cumulative noise, dust and light effects on the residents or a sensitive biodiversity habitat nearby.

6.8 Likely cumulative effects of LTP3 have been identified from the analysis of plans and programmes, the baseline data and the key issues. This analysis has identified a set of likely cumulative effects, their receptors and likely causes, as shown in Table 6.2.

<table>
<thead>
<tr>
<th>Cumulative Effect</th>
<th>Affected Receptor</th>
<th>Causes</th>
</tr>
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<tbody>
<tr>
<td>Habitat degradation, loss and fragmentation and effect on local heritage</td>
<td>Areas of wildlife habitats (in particular, those in unfavourable condition), valuable landscapes (in particular, those showing negative trends) and local heritage assets (in particular, those on the Heritage at Risk Register)</td>
<td>Use of land for new infrastructure, including transport infrastructure, commercial uses and housing. Disturbance of habitats and species and negative effects on valuable landscapes and heritage assets as a result of human activities (recreation, noise from transport, etc), coastal squeeze and pollution of environmental media (water, soil and air).</td>
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<tr>
<td>Climate change</td>
<td>Population (human health)</td>
<td>Even though local actions to combat an increase in GHG emissions are important, including Newcastle City Council’s ambition to become the world's first carbon neutral city, climate change is a global phenomenon and GHG concentrations in the atmosphere are likely to increase during the LTP3 period as a result of human activities worldwide. These activities include transport, energy, industry, buildings sectors and others. Joint efforts of all nations may lead to a subsequent stabilisation and decline of GHG concentrations but such effects may occur in a distant future, beyond the LTP3 period.</td>
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<tr>
<td>Increase in ambient noise levels</td>
<td>Population (in particular within Important Areas and First Priority Locations)</td>
<td>Noise generated by different uses, including road traffic and railways. This effect is likely to be most greatly observed in Important Areas and First Priority Locations identified in the Tyneside Agglomeration Noise Action Plan.</td>
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<tr>
<td>Increase in air pollution</td>
<td>Population Wildlife habitats Species (in particular within the AQMAs and in proximity to major roads)</td>
<td>Air emissions from major roads and particularly congested areas within Newcastle city centre. Designation of the AQMAs indicates that capacity of the ecosystem services regulating air quality is under strain and close to being breached.</td>
</tr>
<tr>
<td>Increase in flood risk</td>
<td>Population Material assets, including transport infrastructure and heritage assets Wildlife habitats Species</td>
<td>Use of land for new transport infrastructure, commercial uses, housing and associated increase in impermeable surfaces. Risk of significant flooding events is also likely to increase in the future, particularly as a result of climate change consequences.</td>
</tr>
<tr>
<td>Depletion of virgin natural resources and materials</td>
<td>Non-renewable virgin natural resources and materials</td>
<td>Demand and use of virgin natural resources and materials for construction of transport infrastructure, housing, other type of buildings, production of goods, etc. Use of carbon-based material as fuel and to generate heat and electricity.</td>
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7. **SEA Framework**

**Introduction**

7.1 The assessment framework is a key component in completing the SEA by synthesising the baseline information and environmental issues into a systematic and easily understood tool that allows the prediction and assessment of effects arising from the implementation of the Plan. Although the SEA Directive does not specifically require the use of objectives or indicators in the SEA process, they are a recognised and useful way in which environmental effects can be described, analysed and compared at key stages of the Plan development. The use of objectives is fundamental to NATA.

7.2 Defining these objectives before the Plan is written gives an early indication of the environmental issues that will require particular attention in the Plan making process. They also ensure that a new or revised Plan is consistent with the strategic aims of the partner authorities, with all related plans, and is consistent with European, UK Government and regional policies.

**Methodology**

7.3 The development of the SEA Framework for the Tyne and Wear LTP3 SEA has specifically drawn on a number of relevant documents, including the following:

- The DfT DaSTS Strategy agenda;
- The 2008 Integrated Regional Framework (IRF) for the North East England. This is the regional sustainable development framework, which presents a shared regional vision, signed up to by key regional partners and aiming to ensure achieving a more sustainable future. It also provides a practical tool that can assist in the development of strategies, plans and programmes and allows assessing how those plans will contribute to achieving sustainable development
- The Sustainability Appraisal Reports for the study area’s Local Authorities Local Development Framework Core Strategies; and
- The Environmental Report prepared for the Tyne and Wear LTP2.

7.4 The relevance of the objectives and indicators within the listed documents (see Appendix D) has been gauged against the themes identified as a result of the review of relevant plans and programmes and the identification of key environmental and social issues in order to draw up a draft set of objectives, assessment prompt questions and potential indicators. The derivation of the draft SEA framework aimed to ensure appropriate coverage of the SEA topics and align the objectives’ wording with the wording of objectives in the relevant documents where appropriate.

7.5 The SEA objectives have been worded so that they reflect one single desired direction of change for the theme concerned and do not overlap with other objectives. They include both externally imposed socio-economic and environmental objectives and other objectives have been devised specifically in relation to the context of the LTP3 being prepared. The SEA objectives have also been worded to take account of local circumstances and concerns feeding from the analysis of environmental / sustainability problems and opportunities. The analysis of the likely cumulative effects in section 6 helped identify the SEA objectives that consider cumulative effects.

7.6 The assessment prompt questions provide a clarification of the intended interpretation of each objective to support direction of change sought through the implementation of LTP3. The questions guided the assessment process.

7.7 Existing indicators were used as often as possible. In some cases, specific new indicators were proposed which may require monitoring by relevant bodies where significant effects relating to the
SEA objectives concerned have been identified as part of the assessment of effects during SEA Stage C. The proposed indicators aimed to capture the change likely to arise from the LTP3 implementation and played a role in the assessment process. This set of indicators was revised for the purposes of establishing a monitoring programme.

Results

7.8 The SEA framework for the assessment of LTP3, consisting of the objectives, assessment prompt questions and indicators, is set out in Table 7.1.
<table>
<thead>
<tr>
<th>No</th>
<th>SEA Objective</th>
<th>Assessment prompt questions</th>
<th>Potential indicators</th>
<th>SEA topic and relevance to HIA, EqIA and HRA work streams</th>
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<tbody>
<tr>
<td></td>
<td><strong>Environmental</strong></td>
<td><strong>Will LTP proposals …</strong></td>
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| 1. | Ensure good local air quality for all*                                                                                                                  | • Reduce traffic levels and promote more sustainable transport patterns across the area, particularly focusing on areas with low air quality (e.g. AQMAs)?  
• Promote walking and cycling and improve infrastructure for these forms of travel?  
• Encourage Green Travel Plans and School Travel Plans?  
• Promote operation of the most modern vehicles, including buses and private cars?  
• Recognise the importance of awareness and marketing campaigns promoting the issue of improving air quality in the region?  
• Reduce congestion on the inter-urban trunk road network in large urban areas?  
• Instigate financial incentives and measures on the basis of the polluter pays principle? (e.g. congestion charge, road pricing)?  
• Promote the use of public transport?  

|    |                                                                                                                                                                                                                     | • Levels of main pollutants for national air quality targets  
• Number of residential properties within AQMAs  
• Number of Euro engine buses operating in AQMA/ future AQMAs in Tyne and Wear  
• Effective use of awareness and marketing campaigns – percentage of the population reached by awareness campaigns  
• No of business and school travel plans  
• NI 194: Level of air quality – reduction in NO\textsubscript{x} and primary PM\textsubscript{10} emissions through local authority’s estate and operations  

|    |                                                                                                                                                                                                                     | Air Quality, Human Health  
|    |                                                                                                                                                                                                                     | HIA, EqIA  

| 2. | To protect and where possible enhance biodiversity, geodiversity and the multi functional green infrastructure network*                                                                                       | **Will LTP proposals …**                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                               |
|    |                                                                                                                                                                                                                     | • Affect/enhance area and condition of designated and non-designated but locally important biological and geological sites?  

|    |                                                                                                                                                                                                                     | • NI 197 Improved local biodiversity – active management of local sites  
• Area and condition of SSSIs (focus on transport related)  

|    |                                                                                                                                                                                                                     | Biodiversity, Flora, Fauna, Human Health, Population HRA  


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<th>Potential indicators</th>
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</table>
| 3. | Protect and where possible enhance the European sites *(HRA specific objective)* | - Affect greenfield and/or brownfield land which have significant biodiversity or geological interest of recognised local importance?  
- Promote the delivery of Local Biodiversity and Geodiversity Action Plans?  
- Protect and enhance green infrastructure, a network of linked, multifunctional green spaces in and around the area’s towns and cities, avoiding severance of habitats’ links?  
- Explore opportunities for new habitat creation and enhancement?  
- Promote good design to secure biodiversity benefits?  
- Take on board the HRA findings and recommendations? | - reasons for unfavourable classification, if any)  
- Numbers of transport planning applications conditioned to ensure works manage/enhance conditions of European sites/SSSI  
- Numbers of transport planning applications conditioned to ensure works protect /enhance protected species  
- Numbers of transport planning applications resulting in need to protected species license  
- Number of new transport schemes integrated with green infrastructure (green corridors and spaces)  
- Amount of new BAP habitats created or enhanced as a result of new transport schemes  
- Ease of use of Public Rights of Way | Biodiversity, Flora, Fauna, Population HRA |
| 4. | To mitigate against climate change by decarbonising | *Will LTP proposals …*  
- Affect the European sites identified as part of the HRA Screening process (including both positive and negative effects)? | *Internationally designated sites negatively affected by transport development*  
- Carbon dioxide emissions from Climatic Factors, |
## SEA Objective

### Assessment prompt questions

- Reduce CO₂ emissions?
- Protect carbon sinks?
- Promote the use of sustainable forms of transport and reduce car use?
- Promote better coordination and integration of different modes?
- Support the use of clean vehicles and energy efficiency improvements of passenger transport?
- Promote the use of new Intelligent Transport Systems technologies?
- Support the use of financial incentives to reduce the reliance on a private car?

### Potential indicators

- **transport sector**
  - % of local bus services are operated by vehicles using sustainable bio-fuels
  - Modes of transport used to travel to work by the resident population
  - NI 198 Children travelling to school – mode of travel usually used
  - Levels of car ownership
  - Distance travelled by mode of transport per person per annum
  - Public transport patronage

### Human Health, Air EqIA, HIA

#### To ensure resilience to the effects of climate change and flood risk*

**Will LTP proposals…**

- Plan for the successful adaptation to the predicted changes in weather conditions and frequency of extreme events?
- Minimising the risk of flooding by, for example, promoting improved drainage standards in rainfall intensity and vegetated drainage systems?
- Explore synergies with green infrastructure proposals for flood alleviation purposes?
- Ensure that floodplains are used for their natural purpose and are protected from inappropriate development?
- Integrate with the provisions and recommendations

- **NI 189: Flood and coastal erosion risk management**
- **NI 188: Adapting to climate change**
- **Number of new transport schemes in flood risk areas**
- **Number of new transport schemes with improved drainage standards**
- **% of floodplain changing due to new/planned transport related schemes**
- **Number of new transport schemes integrated with green infrastructure**

### Climatic Factors, Human Health, Material Assets EqIA, HIA
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<td>6.</td>
<td>Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy*</td>
<td><em>Will LTP proposals …</em></td>
<td>• Re-use of road materials and use of recycled materials in road construction and maintenance</td>
<td>Material Assets</td>
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<td></td>
<td>• Help to enable new infrastructure /repair to be resource efficient (materials, energy, water, sustainable procurement etc) in construction and operation?</td>
<td>• Proportion of recycled materials used in transport related construction</td>
<td></td>
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<td></td>
<td></td>
<td>• Promote sustainable waste management practices?</td>
<td>• Number of locations for refuse and recyclables with improved accessibility</td>
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<td></td>
<td></td>
<td>• Promote the use of recycled materials in construction?</td>
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<td>• Improve access to recycling centres?</td>
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<td></td>
<td></td>
<td>• Promote the use of local suppliers and locally-produced materials in construction?</td>
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<tr>
<td>7.</td>
<td>Protect and enhance the quality of the area’s ground, river and sea waters</td>
<td><em>Will LTP proposals …</em></td>
<td>• Number of pollution incidents attributable to transport related activities</td>
<td>Water, Soil, Human Health HIA</td>
</tr>
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<td></td>
<td></td>
<td>• Protect the quality of surface and groundwater resources?</td>
<td>• Numbers and % of transport schemes incorporating vegetated drainage systems to protect surface water, where these have been requested by the Environment Agency</td>
<td></td>
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<td></td>
<td></td>
<td>• Protect the quality of sea water?</td>
<td>• Number and % of transport schemes incorporating conditions to protect groundwater, where these have been requested by the Environment Agency</td>
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<td>• Minimise the use of impermeable hard surfacing?</td>
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<td>No</td>
<td>SEA Objective</td>
<td>Assessment prompt questions</td>
<td>Potential indicators</td>
<td>SEA topic and relevance to HIA, EqIA and HRA work streams</td>
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<tr>
<td>8</td>
<td>To ensure efficient use of land and maintain the resource of productive soil</td>
<td><strong>Will LTP proposals …</strong></td>
<td>• Numbers and % of transport schemes on previously developed land</td>
<td>Soil, Biodiversity, Flora, Fauna, Material Assets HRA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Promote the reclamation and use of previously-developed land to make more productive use of land?</td>
<td>• Area of grade 1, 2 or 3a agricultural land permanently lost as a result of transport schemes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Avoid permanent (irreversible) loss of the most highly productive agricultural soils?</td>
<td>• Number of pollution incidents attributable to transport</td>
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<tr>
<td>9</td>
<td>Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage</td>
<td><strong>Will LTP proposals …</strong></td>
<td>• Heritage assets at risk (Listed Buildings, Conservation Areas, scheduled Monuments, Registered Parks and Gardens)</td>
<td>Heritage, Landscape, Material Assets</td>
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<td></td>
<td></td>
<td>• Attach value to the historic environment?</td>
<td>• % of transport planning applications with archaeological site appraisals completed as a result of Archaeological Alert Areas’ requirement</td>
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<td></td>
<td></td>
<td>• Conserve, protect and enhance the region’s cultural and designated and non-designated historic assets (e.g. locally important buildings, archaeological remains, World Heritage Sites, SMs, Listed Buildings and structures, Registered Parks and Gardens, Registered Battlefields and Conservation Areas) and their settings?</td>
<td>• Number of LTP proposals contributing to the improvement of the built environment</td>
<td></td>
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<td></td>
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<td>• Have potential effects on archaeological remains?</td>
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<td></td>
<td></td>
<td>• Improve access to historic sites by sustainable transport modes and reduce traffic congestion in historic town centres and villages?</td>
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<td>No</td>
<td>SEA Objective</td>
<td>Assessment prompt questions</td>
<td>Potential indicators</td>
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| 10 | Protect and enhance the character and quality of landscape and townscape* | **Will LTP proposals …**  
- Ensure the construction, repair and maintenance of transport infrastructure respects and enhances the local landscape character?  
- Conserve, protect and enhance the region's natural environmental assets (e.g. the green belt, parks and green spaces, common land, woodland and forests, Heritage Coasts, etc)?  
- Protect ‘tranquil’ areas (e.g. areas free from visual intrusion, noise, light pollution etc)?  
- Protect and enhance locally important buildings and townscapes, maintaining and strengthening local distinctiveness and sense of place?  
- Improve the streetscape by removing unnecessary clutter? | **CQC (focus on any changes in the landscape quality due to transport effects)**  
- NI 195: Improved street and environmental cleanliness - levels of a) litter, b) detritus, c) graffiti and d) fly posting  
- sq metres of area of pedestrianisation/ number of pedestrianisation projects  
- % of transport schemes applications refused for reasons due to poor design  
- % of transport schemes applications that incorporate improvements to public realm and sympathetic design | Cultural Heritage, Landscape, Material Assets HIA |

**Social Objectives, Including Health and Inequality Issues**

| 11 | To improve accessibility to services, facilities and amenities for all and avoid community severance | **Will LTP proposals …**  
- Promote accessibility (particularly on foot or by cycling or public transport) to key services and facilities, employment sites and open space?  
- Coordinate with the local LDF documents, in particular Core Strategies and Site Allocations DPD, to ensure good accessibility by sustainable forms of transport for new development? | **NI 175: Access to services and facilities by public transport, walking and cycling**  
- NI 176: Working age people with access to employment by public transport  
- Cycling journeys  
- Bus punctuality | Population, Material Assets, Human Health HIA, EqIA |
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<th>No</th>
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<th>Potential indicators</th>
<th>SEA topic and relevance to HIA, EqIA and HRA work streams</th>
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<td></td>
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<td>● Improve the quality of cycling and walking infrastructure? Explore synergies with green infrastructure proposals for enhancing green walking and cycling routes? ● Promote modal shift to more sustainable forms of transport and continue making this forms of travel more convenient, accessible and affordable? ● Promote integration, maintain and improve the public right of way and wider access network?</td>
<td>● Number of LTP3 initiatives to improve access to essential facilities ● Number of improvement schemes for pedestrian and cycle routes and green networks, including the RoW network ● % of proposed LTP3 spend on walking, cycling and public transport measures</td>
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<tr>
<td>12.</td>
<td>Reduce noise, vibration and light pollution*</td>
<td><strong>Will LTP proposals …</strong> ● Aim to minimise noise and light pollution and vibration? ● Promote the use of silent vehicles and aircrafts <em>if the latter is within the remit of LTP3</em>? ● Avoid a significant increase in road infrastructure and make the best use of the existing physical infrastructure?</td>
<td>● Number of noise complaints received relating to transport activities ● % of road network surfaced with low road noise materials ● Transport related noise levels ● Numbers and extent of Important Areas and First Priority Locations established due to transport noise ● Proportion of street lamps with downward beam</td>
<td>Population, Human Health, Landscape, Material Assets</td>
</tr>
<tr>
<td>13.</td>
<td>Improve health and well-being and reduce inequalities in health <em>(HIA specific objective)</em></td>
<td><strong>Will LTP proposals …</strong> ● Ensure that developments are accessible (particularly on foot or by cycling or public transport) to primary health care services, particularly for vulnerable groups? ● Promote and enable measures to help all residents to adopt healthy lifestyles?</td>
<td>● % of people in good and not good health ● % of people using non-motorised modes of transport ● Number of bus stops adapted for easy access buses ● Pedestrian crossings with facilities</td>
<td>Population, Human Health HIA, EqIA</td>
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<td>No.</td>
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<td>• Promote inclusive accessibility? &lt;br&gt;• Promote accessibility (particularly on foot or by cycling or public transport) to recreational activities (e.g. playing fields, sports facilities, footpaths etc), particularly for vulnerable groups? &lt;br&gt;• Support publicity or awareness-raising campaigns and/or education and practical offers to promote active modes of transport or physical activity?</td>
<td>for disabled &lt;br&gt;• Public transport accessibility for disabled</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)</td>
<td>• Promote social cohesion and inclusion? &lt;br&gt;• Consider the differing needs of: the varying age groups of residents (the older population and younger travellers), disabled people, different nationalities and ethnic groups, different religious groups, low income and unemployed people, different sex and sexual orientation groups?</td>
<td>• Use of targeted fare concessions &lt;br&gt;• Number of LTP3 initiatives to improve access to essential facilities, including employment, in the most deprived areas (20% most deprived nationally) &lt;br&gt;• % of transport schemes applications that incorporate improvements to public realm in the most deprived areas (20% most deprived nationally) &lt;br&gt;• Number of improvement schemes for pedestrian and cycle routes and green networks in the most deprived areas (20% most deprived nationally) &lt;br&gt;• % of proposed LTP3 spend on walking, cycling and public transport measures in the most deprived areas</td>
<td>Population, Human Health EqIA, HIA</td>
</tr>
<tr>
<td>No</td>
<td>SEA Objective</td>
<td>Assessment prompt questions</td>
<td>Potential indicators</td>
<td>SEA topic and relevance to HIA, EqIA and HRA work streams</td>
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</table>
| 15 | Improve road safety                                   | *Will LTP proposals …*  
  - Ensure safe paths for walking and cycling?  
  - Promote training for drivers to promote safe driving?  
  - Ensure the continuation and further development of LTP2 initiatives aiming to calm traffic in residential areas?  
  - Promote safety talks with children and young people to raise awareness of their safety as pedestrians and cyclists. | *Total killed and seriously injured in traffic accidents*  
  *Children killed and seriously injured in traffic accidents*  
  *Total slight casualties*  
  *Casualties by transport users*                                                                                                                                  | Population, Human Health, Material Assets  
 EqIA, HIA                                                                              |
| 16 | Reduce crime and fear of crime and promote community safety | *Will LTP proposals …*  
  - Promote the application of ‘Secured by Design’ in development schemes?  
  - Contribute to improvements of public realm and aim to the levels of natural surveillance?                                                                 | *Numbers and % of transport schemes or LTP3 spend aiming to improve personal security on public transport and at its facilities*  
  *Number of reported crimes on public transport and at its facilities*  
  *Percentage of residents who feel fairly safe or very safe outside during the day*  
  *Percentage of residents who feel fairly safe or very safe outside after dark*  
  *Number/extent of 20 mph zones*                                                                                                                                  | Population, Human Health  
 EqIA, HIA                                                                              |

* - Indicate SEA objectives that consider cumulative effects.
**Predicted Future Trends**

7.9 The starting points for the prediction of future trends are current conditions and trends. The existing environmental and social baseline and associated current trends for Tyne and Wear is presented in Appendix B.

7.10 The SEA Directive requires the consideration of the likely evolution of the state of the environment without the implementation of the Plan being assessed. There will be a number of external influences that will affect the state of Tyne and Wear’s social, natural, built and economic environment during the lifetime of the LTP3. Key local and regional planning documents that will influence the area’s future trends without the implementation of the LTP3 are:

- The DfT DaSTS Strategy agenda;
- Local Authorities Core Strategies.

7.11 The SEA framework (Table 7.1) is the key tool used in the assessment of effects. The prediction of effects, in terms of their magnitude, frequency, duration, and spatial extent, is conducted via detailed analysis of the baseline data. It is thus important to ensure that critical aspects of the baseline can be directly related to the objectives and indicators of the SEA framework. Determining the significance of predicted effects is perhaps the most critical task in the SEA. The picture that the baseline presents in terms of the SEA framework is the starting point for this.

7.12 Table 7.2 presents a preliminary analysis of the fundamental characteristics of the baseline (current conditions and predicted trends without the LTP3) against the draft SEA objectives using a simple three-point normative scale as follows:

- Current Conditions - good/moderate/poor;
- Future Trends (without plan implementation) - improving/stable/declining.

7.13 Table 7.2 indicates that without the implementation of the LTP3 the predicted future trends show a decline in performance against a number of SEA objectives. In particular, without the future transport policy and schemes in Tyne and Wear, the state of the environment and socio-economic conditions, in terms of air quality, transport related CO₂, levels of noise, vibration and light, resistance of transport infrastructure to climate change and crime levels are likely to experience a declining trend.
<table>
<thead>
<tr>
<th>No</th>
<th>SEA Objective</th>
<th>Baseline Condition</th>
<th>Future Trends without LTP3</th>
<th>Limitations of Data</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ensure good local air quality for all</td>
<td>Poor</td>
<td>Declining</td>
<td>No data limitations</td>
<td>Despite technological improvements, localised air quality problems are likely to persist and may become worse due to increasing levels of traffic and congestion.</td>
</tr>
<tr>
<td>2.</td>
<td>To protect and where possible enhance biodiversity, geodiversity and for the multi functional green infrastructure network</td>
<td>Good</td>
<td>Stable</td>
<td>No data limitations</td>
<td>The majority of the SSSI sites are in favourable condition, meeting the Government's Public Service Agreement (PSA) target. The trend is likely to remain stable due to the requirements in the local land use plans. The spatial distribution and quality of green infrastructure and its assessment is varied across the plan area but with increasing consideration within development plans of green spaces and landscaping of public rights of way and increasing numbers of studies relating to green infrastructure and green spaces, this situation is likely to remain stable.</td>
</tr>
<tr>
<td>3.</td>
<td>Protect and where possible enhance the European sites (<em>HRA specific objective</em>)</td>
<td>Moderate</td>
<td>Stable</td>
<td>No data limitations</td>
<td>The identified European sites are vulnerable to the effects of recreation and tourism activities, farming and agricultural practices. These issues are being addressed through a number of initiatives and mechanisms. The condition of the sites should remain stable or improve as they have a high level of protection. However, in the longer term some change might be unavoidable, as a result of the changing climate and the coastline.</td>
</tr>
<tr>
<td>4.</td>
<td>To mitigate against climate change by decarbonising transport</td>
<td>Poor</td>
<td>Declining</td>
<td>No data limitations</td>
<td>Current proportion of transport related CO₂ in the area is similar to the national average and higher than the regional figure. The current level of nation-wide CO₂ emissions from all sectors, including transport, is unacceptably high, which is recognised through government targets detailing requirements for significant CO₂ reductions. Car ownership is likely to increase and overall traffic levels on the local highway network are likely to grow without targeted interventions. This will increase the level of CO₂ emissions from transport, counteracting technological improvements in the energy efficiency of vehicles.</td>
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<tr>
<td>No</td>
<td>SEA Objective</td>
<td>Baseline Condition</td>
<td>Future Trends without LTP3</td>
<td>Limitations of Data</td>
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<tr>
<td>5.</td>
<td>To ensure resilience to the effects of climate change and flood risk</td>
<td>Moderate</td>
<td>Declining</td>
<td>There is lack of details on climate change adaptation at the local level, as the data show that Tyne and Wear districts have just begun the process of assessing the climate change adaptation.</td>
<td>The effects of climate change will become more apparent in the future, increasing the risk of flooding and intrusion of the sea. Transport infrastructure, in particular roads, is likely to be affected by flooding, sea level rise and summer cracking. The comfort of public transport may also be affected by high summer temperatures. The actual impacts will depend on the climate change adaptation measures that are introduced in the area.</td>
</tr>
<tr>
<td>6.</td>
<td>Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy</td>
<td>Moderate</td>
<td>Improving</td>
<td>Limited data available on the use of recycled aggregates in transport infrastructure</td>
<td>With more far-reaching national and European legislation related to waste, including taxes on landfill, and the impact of local and regional initiatives, waste minimisation, re-use and recycling rates are likely to increase in the area over the longer term. This is likely to be augmented by developments in packaging and recycling technology.</td>
</tr>
<tr>
<td>7.</td>
<td>Protect and enhance the quality of the area’s ground, river and sea waters</td>
<td>Moderate</td>
<td>Improving</td>
<td>No data limitations</td>
<td>EA water pollution monitoring shows that water quality in the areas varies from fair to very good classification. However, the implementation of the Water Framework Directive is likely to result in improvements to the water environment. It is likely that the water environment will be safeguarded in the future.</td>
</tr>
<tr>
<td>8.</td>
<td>To ensure efficient use of land and maintain the resource of productive soil</td>
<td>Moderate</td>
<td>Declining</td>
<td>No data limitations</td>
<td>Agricultural land is likely to continue to be under threat from development pressures. The requirement to deliver new housing and associate infrastructure by 2021 is likely to place pressures on the areas of productive land and greenfield land in the area.</td>
</tr>
<tr>
<td>9.</td>
<td>Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage</td>
<td>Moderate</td>
<td>Improving</td>
<td>No data limitations</td>
<td>Increasing traffic levels are likely to reduce the quality of the settings of cultural and designated and non-designated heritage assets. Regeneration efforts are likely to offset these negative effects to some degree, improving the quality of the built environment, especially in</td>
</tr>
<tr>
<td>No</td>
<td>SEA Objective</td>
<td>Baseline Condition</td>
<td>Future Trends without LTP3</td>
<td>Limitations of Data</td>
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<tr>
<td></td>
<td></td>
<td>Poor</td>
<td>Stable</td>
<td>No data limitations</td>
<td>The data show negative trends for three of the four NCAs within the study area. Development pressures are likely to further affect the landscape and countryside character. This may be offset to some extent by restoration and enhancement initiatives and regeneration projects within urban areas improving townscape quality.</td>
</tr>
<tr>
<td>10.</td>
<td>Protect and enhance the character and quality of landscape and townscape</td>
<td>Poor</td>
<td>Stable</td>
<td>No data limitations</td>
<td>Overall, the residents of Tyne and Wear experience very high levels of accessibility to all core services. This is likely to remain stable.</td>
</tr>
<tr>
<td>11.</td>
<td>To improve accessibility to services, facilities and amenities for all and avoid community severance</td>
<td>Good</td>
<td>Stable</td>
<td>No data limitations</td>
<td>There is lack of updated data on noise, vibration and light pollution. The local levels of tranquillity are low in the area, indicating noise and light pollution. Without intervention, increasing traffic levels on the local highway network is likely to increase noise and light pollution and vibration.</td>
</tr>
<tr>
<td>12.</td>
<td>Reduce noise, vibration and light pollution</td>
<td>Poor</td>
<td>Declining</td>
<td>No data limitations</td>
<td>The North East recognised as the unhealthiest region in England and the situation in Tyne and Wear is a reflection of the regional picture. Life expectancy in the area is lower than the national average. The proportion of the population of who consider their health to be good or fairly good is lower than that observed for in England. Improvements in medicine and health care and provision of new health facilities will have positive effects on the well being of people. However, the expected benefits may be counteredacted by the nationwide rise of obesity.</td>
</tr>
<tr>
<td>13.</td>
<td>Improve health and well-being and reduce inequalities in health (HIA specific objective)</td>
<td>Poor</td>
<td>Stable</td>
<td>No data limitations</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>SEA Objective</td>
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<tr>
<td>14</td>
<td>To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (<em>EqIA specific objective</em>)</td>
<td>Moderate</td>
<td>Stable</td>
<td>No data limitations</td>
<td>Accessibility to transport services is not equal for different social groups across the area. This includes difficulties with boarding a high-floor bus for elderly or infirm users, unaffordable bus fares for certain groups and low percentage of the pedestrian crossings with facilities for disabled people in Sunderland. This situation is likely to remain unless specifically targeted.</td>
</tr>
<tr>
<td>15</td>
<td>Improve road safety</td>
<td>Good</td>
<td>Improving</td>
<td>No data limitations</td>
<td>The area is on the way towards achieving the Government’s 2010 road safety targets. A number of the initiatives in progress are likely to reinforce the achieved improvements.</td>
</tr>
<tr>
<td>16</td>
<td>Reduce crime and fear of crime and promote community safety</td>
<td>Poor</td>
<td>Declining</td>
<td>It is noted that the identified increase may be due to better reporting/recording/monitoring systems being established</td>
<td>There has been an increase in the number of reported crimes in Tyne and Wear. The situation may continue deteriorating due to remaining inequalities and deprivation issues and a challenging economic climate.</td>
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**Key:**

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<tr>
<td>Good</td>
<td>Improving</td>
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<tr>
<td>Mod</td>
<td>Stable</td>
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<tr>
<td>Poor</td>
<td>Declining</td>
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8. Compatibility between LTP3 Objectives and the SEA Objectives

Preliminary LTP3 Objectives

8.1 A compatibility assessment of the preliminary LTP3 objectives was undertaken. Overall, the preliminary LTP3 objectives were found to be broadly compatible with the SEA objectives, as they provide very good coverage of all SEA objectives. There were no potential conflicts identified between preliminary LTP3 objectives and the SEA objectives (see Figure 8.1).

Objective 1: To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes

8.2 The LTP3 objective does not conflict with any of the SEA objectives; however, its compatibility will mainly be dependent on the nature of implementation. The LTP3 objective relates to improving the reliability and integration of transport networks across all modes. Improving public transport and encouraging walking and cycling will generally be more compatible with the SEA objectives than encouraging car use through improving the road network.

8.3 The nature of implementation of improving transport networks will determine how biodiversity, townscape and natural resources will be affected. Any improvements in green infrastructure as part of LTP3 could lead to an enhancement in biodiversity (SEA Objective 2) as well as mitigating flood risk (SEA Objective 5).

8.4 Providing an efficient use of the existing network and reducing unnecessary delays could lead to shorter journey times and lower levels of traffic and congestion. This could lead to improvements in local air quality (SEA objective 1) as well as reduced greenhouse gas emissions (SEA objective 4). Lower levels of traffic and congestion could also lead to lower levels of disturbance due to noise and light pollution (SEA objective 12). Reduced noise and light pollution could result in benefits for SEA objectives seeking to protect the settings of heritage assets (SEA objective 9), as well as benefits for health (SEA objective 13).

8.5 Focusing on an improvement in the efficiency of the network could help to reduce the necessity of additional road construction, however this effect is uncertain. If this were to be the case, there would be less greenfield land development leading to benefits against SEA objectives seeking to protect landscape character (SEA Objective 10), protect the water environment (SEA Objective 7) and minimising the effect of flooding (SEA Objective 5). If reduced construction were to arise as a result of this objective, this may also minimise the need for the increased use of natural resources, which could provide benefits against natural resources and waste minimisation (SEA Objective 6).

8.6 The objective is likely to be compatible with SA Objective 11 to provide accessibility to services, facilities and amenities and SEA Objective 14 to promote greater equality and opportunity to all citizens.

Recommendations

8.7 It is suggested that the wording of the objective is revised to ensure that improvements to network efficiency make the best use of existing infrastructure and therefore reduce road construction associated effects.

8.8 The objective could be worded to read “To support the economic development, regeneration and competitiveness of Tyne and Wear through improving the efficiency, reliability and integration of transport networks across all modes making better use of existing transport infrastructure”.
Objective 2: To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events

8.9 This Objective is broadly compatible with most of the SEA Objectives. It is directly compatible with SEA Objectives 4 and 5, which refer to decarbonisation of transport and adaptation to climate change respectively.

8.10 Through the reduction of carbon emissions, there will be a beneficial effect on biodiversity, the water environment and soil (SEA Objectives 2, 3, 7 and 8). There will also be a need for prudent use of natural resources and waste minimisation in order to reduce carbon emissions (in line with SEA Objective 6).

8.11 SEA Objective 11 is related to providing accessibility to services, facilities and amenities. Compatibility against this SEA objective is related to how the LTP3 Objective is to be implemented; if transport enhancements are not carried out on the basis of their high carbon emissions, then accessibility may be compromised.

Recommendations
8.12 None.

Objective 3: To contribute to healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security

8.13 A healthy community is related to access to open, green space; providing a healthy community is therefore compatible with improving air quality (SEA Objective 1), enhancing biodiversity (SEA Objectives 2 and 3), enhancing the water and soil environment (SEA Objectives 7 and 8 respectively).

8.14 Compatibility with SEA Objective 12 (Reducing noise, vibration and light pollution) is dependent on the nature of implementation. Providing a safe environment with high levels of personal security may lead to high levels of lighting thus leading to light pollution.

8.15 This LTP3 Objective is directly compatible with SEA Objective 16: Reduce crime and fear of crime and promote community safety.

Recommendations
8.16 None.

Objective 4: To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services

8.17 SEA Objective 11 is related to improving the accessibility to services, facilities and amenities for all and avoiding community severance; this is directly compatible with LTP3 Objective 4. Providing access to facilities and services such as health facilities is also in compatibility with SEA Objective 14.

8.18 It is unclear how this LTP3 objective will be implemented and therefore the compatibility with a number of the other SEA objectives is dependent on that implementation. If increasing accessibility is linked to further road building then it is likely to be in conflict with SEA Objectives 1-8. However, if it is linked to improving public transport networks and encouraging walking and cycling, then it will be compatible with SEA Objectives 1-8.

Recommendations
8.19 None.
Objective 5: To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places

8.20 SEA Objectives 9 and 10 aim to protect the historic/cultural heritage and improve landscape/townscape respectively and are directly compatible with LTP3 Objective 5. Most other SEA Objectives are broadly compatible with protecting, preserving and enhancing the natural and built environments.

8.21 With SEA Objective 11 (accessibility), the nature of implementation will determine compatibility. If protecting the natural environment leads to new transport infrastructure not being built this may limit accessibility.

Recommendations

8.22 None.
Figure 8.1 – Compatibility Assessment Summary

<table>
<thead>
<tr>
<th>LTP3 Objectives</th>
<th>SEA Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes</td>
<td><img src="" alt="Compatibility Assessment Summary" /></td>
</tr>
<tr>
<td>To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events</td>
<td><img src="" alt="Compatibility Assessment Summary" /></td>
</tr>
<tr>
<td>To contribute to healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security</td>
<td><img src="" alt="Compatibility Assessment Summary" /></td>
</tr>
<tr>
<td>To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services</td>
<td><img src="" alt="Compatibility Assessment Summary" /></td>
</tr>
<tr>
<td>To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places</td>
<td><img src="" alt="Compatibility Assessment Summary" /></td>
</tr>
</tbody>
</table>

**SEA Objectives**

1. Ensure good local air quality for all
2. To protect and where possible enhance biodiversity and geodiversity and explore opportunities for green infrastructure
3. Protect and where possible enhance the European sites (HRA specific objective)
4. To mitigate against climate change by decarbonising transport
5. To ensure resilience to the effects of climate change and flood risk
6. Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy
7. Protect and enhance the quality of the area’s ground, river and sea waters
8. To ensure efficient use of land and maintain the resource of productive soil
9. Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage
10. Protect and enhance the character and quality of landscape and townscape
11. To improve accessibility to services, facilities and amenities for all and avoid community severance
12. Reduce noise, vibration and light pollution
13. Improve health and well-being and reduce inequalities in health (HIA specific objective)
14. To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)
15. Improve road safety
16. Reduce crime and fear of crime and promote community safety

![Compatiblity Assessment Summary](attachment:image_url)

- **Broadly compatible**
- **Potential conflict**
- **Not relevant**
- **Dependent on nature of implementation**
Final LTP3 Objectives

8.23 Following consideration of the SEA recommendations there were no changes made. The JTWG felt that the recommendation to change the wording of Objective 1 was not required. The final objectives in the LTP3 are as follows:

1. To support the economic development, regeneration and competitiveness of Tyne and Wear, improving the efficiency, reliability and integration of transport networks across all modes.

2. To reduce carbon emissions produced by local transport movements, and to strengthen our networks against the effects of climate change and extreme weather events.

3. To contribute to a healthier and safer communities in Tyne and Wear, with higher levels of physical activity and personal security.

4. To create a fairer Tyne and Wear, providing everyone with the opportunity to achieve their full potential and access a wide range of employment, training, facilities and services.

5. To protect, preserve and enhance our natural and built environments, improving people’s quality of life and creating high quality public places.
9. Developing, Refining and Appraising Strategic Alternatives

Introduction

9.1 Stage B of the SEA process seeks to develop and refine alternatives following the initial compatibility assessment between the LTP3 objectives and the SEA objectives outlined in section 8 of this Environmental Report.

9.2 The SEA Directive requires that the Environmental Report should consider:

9.3 ‘reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme’ and give ‘an outline of the reasons for selecting the alternatives dealt with’ (Article 5.1 and Annex Ih).

Developing and Refining Strategic Alternatives

9.4 Tyne and Wear LTP working group developed its strategic alternatives in response to the local transport goals and challenges identified in section 6 of this report. Three alternatives were developed as follows:

1. Do Minimum Scenario
2. Realistic Scenario
3. Optimistic Scenario (‘Aspirational Funding Scenario’)

9.5 Each Strategic Alternative includes different interventions in the following categories:

- Additional Interventions
- Buses and other Public Transport
- Freight and Ports
- Highway Capacity
- Highway Management
- Park and Ride
- Parking Strategy
- Public Transport Ticketing and Information
- Rail and Metro
- Smarter Choices
- Walking and Cycling
- Road User Charging

9.6 A full description of each of the three strategic alternatives under consideration is provided in Appendix F, with a brief synopsis shown below:

Do Minimum Scenario

- No Public Transport, Highway Management interventions, Walking and Cycling or Freight and Ports interventions
• Highway Capacity Schemes that are already underway or have confirmed funding to go ahead
• Bus and metro fares to increase
• Rail and metro refurbishment
• Workplace and school travel planning to remain at current levels

Realistic Scenario
• Emphasis on highway capacity schemes (mainly junction improvements)
• Three park and ride schemes
• Bus priority lanes at eleven locations
• Integrated “smart” ticketing on public transport
• Electric vehicle charging points
• Emphasis on Walking and Cycling initiatives

Optimistic Scenario (‘Aspirational Funding Scenario’)  
To include all interventions included in the realistic scenario and additionally:
• Much greater emphasis on highway capacity schemes
• A further eleven park and ride schemes
• An additional nine bus priority lanes
• Greater emphasis on rail and metro including reopening a number of rail lines
• No additional emphasis on walking and cycling initiatives

Other Information
9.7 The Tyne and Wear JTWG provided a range of maps that showed environmental constraints with selected schemes overlaid. These can be seen in Appendix C.

Appraising strategic alternatives
9.8 The strategic alternatives presented in Appendix F were assessed using the assessment prompt questions in Table 7.1. The outcomes of this process are shown in full in Table F.4 in Appendix F and also summarised in Table 9.1 and the subsequent discussion.

9.9 Each strategic alternative was assessed against the various SEA objectives. This was done using a seven point scale of effect as follows:

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+++</td>
<td>Large beneficial</td>
</tr>
<tr>
<td>++</td>
<td>Moderate beneficial</td>
</tr>
<tr>
<td>+</td>
<td>Slight beneficial</td>
</tr>
<tr>
<td>0</td>
<td>Neutral or no effects</td>
</tr>
<tr>
<td>-</td>
<td>Slight adverse</td>
</tr>
<tr>
<td>--</td>
<td>Moderate adverse</td>
</tr>
<tr>
<td>---</td>
<td>Large adverse</td>
</tr>
</tbody>
</table>

9.10 Those effects which are either moderate or large were deemed to be significant. In addition, commentary on each assessment was provided. The subsequent discussion includes recommendations and mitigation to be considered in developing the preferred option for the long-term strategy.
### Table 9.1 – Assessment Summary of Strategic Options

<table>
<thead>
<tr>
<th>SEA Objective</th>
<th>Strategic Alternative 1: The 'Do Minimum' Scenario</th>
<th>Strategic Alternative 2: The Realistic Scenario</th>
<th>Strategic Alternative 3: The Optimistic Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Objectives</strong></td>
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<tr>
<td>1</td>
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<td>0</td>
<td>++</td>
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<td>10</td>
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<td>++</td>
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<tr>
<td><strong>Social Objectives, Including Health and Inequality Issues</strong></td>
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<tr>
<td>11</td>
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<tr>
<td>16</td>
<td>0</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Scale of Effect (SE):**

+++ Large beneficial  ++ Moderate beneficial  + Slight beneficial
0 Neutral or no effects
--- Large adverse  -- Moderate adverse  - Slight adverse

Those effects which are either moderate or major are deemed to be significant

<table>
<thead>
<tr>
<th>No.</th>
<th>SEA Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure good local air quality for all</td>
</tr>
<tr>
<td>2</td>
<td>To protect and where possible enhance biodiversity, geodiversity and the multi functional green infrastructure network</td>
</tr>
<tr>
<td>3</td>
<td>Protect and where possible enhance the European sites (<em>HRA specific objective</em>)</td>
</tr>
<tr>
<td>4</td>
<td>To mitigate against climate change by decarbonising transport</td>
</tr>
<tr>
<td>5</td>
<td>To ensure resilience to the effects of climate change and flood risk</td>
</tr>
<tr>
<td>6</td>
<td>Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy</td>
</tr>
<tr>
<td>7</td>
<td>Protect and enhance the quality of the area’s ground, river and sea waters</td>
</tr>
<tr>
<td>8</td>
<td>To ensure efficient use of land and maintain the resource of productive soil</td>
</tr>
<tr>
<td>9</td>
<td>Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage</td>
</tr>
<tr>
<td>10</td>
<td>Protect and enhance the character and quality of landscape and townscape</td>
</tr>
<tr>
<td>11</td>
<td>To improve accessibility to services, facilities and amenities for all and avoid community severance</td>
</tr>
<tr>
<td>12</td>
<td>Reduce noise, vibration and light pollution</td>
</tr>
<tr>
<td>13</td>
<td>Improve health and well-being and reduce inequalities in health (<em>HIA specific objective</em>)</td>
</tr>
<tr>
<td>14</td>
<td>To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (<em>EqIA specific objective</em>)</td>
</tr>
<tr>
<td>15</td>
<td>Improve road safety</td>
</tr>
<tr>
<td>16</td>
<td>Reduce crime and fear of crime and promote community safety</td>
</tr>
</tbody>
</table>
Strategic Alternative One – the ‘Do Minimum’ Scenario

9.11 The ‘Do minimum’ scenario largely has non-significant effects against the SEA objectives; either no/neutral effect or slight adverse effect. However there are three instances where there are significant negative effects. The scenario is likely to have a moderate adverse effect on protecting and enhancing the character and quality of townscape and landscape; this is because of the large emphasis on road based transport without substantial emphasis on public transport or walking and cycling initiatives. The scenario is likely to also have a moderate adverse effect on improving health and well-being and reducing inequalities in health; this is due to the likely undesirable modal shift to car from public transport. This is likely to have an unequal effect with four of the designated AQMAs being in areas classified as in the 20% most deprived for health. A further moderately adverse effect is likely against ensuring resilience to the effects of climate change and flood risk as there is no provision for climate change adaptation in the scenario.

Strategic Alternative Two – the Realistic Scenario

9.12 The realistic scenario has a range of effects against the SEA Objectives. There are significant effects against seven of the objectives: two beneficial and five adverse.

9.13 The scenario is likely to have a moderate beneficial effect on protecting and enhancing the character and quality of the landscape and townscape; this is due to the large emphasis on walking and cycling and smarter choices schemes that will encourage modal shift away from the car thus protecting the quality of the townscape in the cities and towns by limiting the need for roads. It also is likely to have a moderate beneficial effect on improving health and well-being and reducing inequalities in health. This is because the walking and cycling initiatives (including health promotions with the PCT) in the scenario are likely to have a positive effect on health; additionally some of the highway capacity schemes are likely to reduce congestion and thus air quality and related respiratory problems.

9.14 The scenario is likely to have a moderate adverse effect on five of the SEA objectives, all environmental ones. Firstly, with no provision for climate change adaptation, the scenario is likely to have a moderately adverse effect against ensuring resilience to the effects of climate change and flood risk. The scenario is also likely to have a moderate adverse effect on promoting prudent use of natural resources, waste minimisation and movement up the waste hierarchy. Waste generation is limited by a number of schemes in the scenario e.g. public transport ticketing initiatives. However, in comparison to some of the highway schemes that will require resource for construction and operation, this positive effect is likely to be counteracted by the negative effects and therefore the overall effect is likely to be moderately adverse. The scenario is also likely to have a moderate adverse effect on protecting and enhancing the quality of the area’s ground, river and sea waters. Park and Ride schemes that are included in this scenario are likely to increase surface run off (and thus pollution). There is also works included near to the coastline that could cause pollution, particularly in construction. A further moderate adverse effect is likely to arise against ensuring efficient use of land and maintaining the resource of productive soil. This is in part due to land take required for park and ride schemes, two of which are on Grade 3 agricultural land. There are also a number of other schemes that will require land take. The final moderate adverse effect is against maintaining and enhancing the quality and distinctiveness of the area’s historic and cultural heritage. Newcastle has the World Heritage Site of Hadrian’s Wall running through it; there are a number of schemes in this scenario that are in the vicinity of the wall and thus it is deemed to have a moderately adverse effect.

Strategic Alternative Three – the Optimistic Scenario

9.15 The optimistic funding scenario is likely to have significant effects against ten of the SEA objectives (four beneficial and six adverse). Of those that are not significant, there are four objectives with a slight positive effect and two objectives with slight negative effects.
9.16 This scenario has a moderately beneficial effect against four of the objectives. Firstly, against ensuring good local air quality for all, as there is a significant number of interventions that are likely to reduce dependence on the car and reduce emissions. There is likely to be a moderate beneficial effect against protecting and enhancing the character and quality of the landscape, this is due to the inclusion of walking and cycling and smarter choices initiatives. This scenario has a significant emphasis on park and ride schemes, which is likely to have a beneficial effect on townscape by limiting cars in the town centre. However, it may have an adverse effect on landscape out of town as car parking areas will need to be provided. On balance it is deemed to likely have a moderate beneficial effect. This scenario also has a moderate beneficial effect on improving accessibility to services, facilities and amenities for all and avoiding community severance. As the scenario has an emphasis on all modes of transport, it is likely to provide benefits for all members of society. Finally, the scenario is deemed to have a moderately beneficial effect on promoting greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; this is because of the emphasis on all transport modes with a large number of schemes included in the scenario.

9.17 This scenario is likely to have moderately adverse effects against four of the objectives, all environmental ones. The scenario is likely to have a moderately adverse effect on protecting and where possible enhancing biodiversity, geodiversity and the multi functional green infrastructure network. There is an emphasis on highway capacity schemes that can impact upon biodiversity, particularly through noise generation during construction, thus there will be a moderately adverse effect. There is also a likely moderate adverse effect on protecting and where possible enhancing the European Sites. There are a number of schemes close to SACs and SPAs, including the A183 Coast Road realignment scheme that is proximal to the Durham Coast SAC.

9.18 There are three objectives against which this scenario is likely to have a large adverse effect. Firstly, protecting and enhancing the quality of the area’s ground, river and sea waters. This scenario has specific emphasis on Park and Ride schemes, which can increase surface run off thus causing pollution to water courses. There are also a number of other interventions that are in close proximity to the watercourses of the River Tyne and the River Wear. This scenario is also likely to have moderately adverse effects against promoting prudent use of natural resources, waste minimisation and movement up the waste hierarchy and also ensuring efficient use of land and maintaining the resource of productive soil. This is due to the emphasis on Highway Capacity schemes and Park and Ride schemes that will use resource, land take and create waste. This scenario is also likely to have a large adverse effect against maintaining and enhancing the quality and distinctiveness of the area’s historic and cultural heritage. This is due to the fact that there are additional highway capacity schemes affecting enjoyment of historical features (e.g. through increased noise and directs effects such as pollution affecting building fabric) when compared to realistic scenario, but no further emphasis on walking and cycling initiatives.

**Recommendations**

9.19 In terms of effects against the objectives, the ‘Do minimum’ scenario has least adverse effect on the SEA objectives. This is what would be expected as there are very few schemes included in the scenario hence the least number of adverse effects. Conversely, there are no positive effects against any of the objectives.

9.20 The optimistic funding scenario has the greatest number (six) of significant adverse effects against the objectives, particularly environmental, including three large adverse effects. However, it also has the greatest number of positive effects, overall.

9.21 The realistic scenario has two significant positive effects and five significant adverse effects against the objectives. It is recommended that the realistic scenario therefore provides the most balanced approach.
10. Predicting and Evaluating the Effects of LTP3

Preferred Option

10.1 The draft preferred option comprised an LTP3 Strategy (2011-2021) (plus appendices) and an LTP3 Delivery Plan (2011-2014).

10.2 The previous step in the SEA involved developing, refining and appraising three Strategic Alternatives developed by T&W JTWG in response to their local transport goals and challenges. Three Strategic Alternatives which were assessed in a qualitative comparative fashion were as follows (see Section 9):

- Do Minimum scenario;
- The Realistic scenario;
- The Optimistic scenario.

10.3 Following the appraisal of the strategic alternatives, the T&W JTWG sought to define the preferred option for the LTP. This was largely based on the realistic scenario that was assessed at the Strategic Alternatives stage, along with some interventions that were part of the optimistic scenario and some additional interventions that were not assessed at the Strategic Alternatives stage.

Final LTP3

10.4 The draft LTP3 was subject to public consultation from 18th October 2010 till 10th December 2010. Following the consultation further revisions have been made to the LTP3 document to respond to the received consultation comments, incorporate the SEA recommendations, rationalise the Plan’s content, improve flow of the document and update it where necessary.

10.5 The Final LTP3 also consists of two elements: Strategy 2011 – 2021 and Delivery Plan 2011 – 2014. The Strategy outlines the wider context of LTP3, the vision, objectives, challenges and interventions. The Strategy also sets out the plans and policies for a long term development of transport in Tyne and Wear. The Delivery Plan sets out priorities and plans over three years (April 2011 to March 2014) that address the priorities and targets set out in LTP3. The Delivery Plan also sets out what the arrangements are for overseeing delivery, managing risks and monitoring outcomes. It is proposed to review the Delivery Plan on an annual basis, taking into account the available funding and changing priorities. The final LTP3 Strategy and Delivery Plan are presented and discussed below.

Assessment of Final LTP3

10.6 In order to assess the Final LTP3 its policies and interventions were grouped into “components” where it is expected that the effects will be similar and therefore they can be assessed together.

10.7 The initial assessment of the draft LTP3 was undertaken in October 2010 and focused on the Consultation Draft Strategy (see Appendix G). The preparation of this Environmental Report involved the review of the earlier assessment to take account of the post consultation changes to LTP3 and to assess both the Strategy and Delivery Plan simultaneously. Table 10.1 demonstrates the assessment components and the changes that occurred since the previous assessment of the draft LTP3.
<table>
<thead>
<tr>
<th>Components</th>
<th>Policies in Draft Preferred Strategy</th>
<th>Policies in Final Preferred Strategy</th>
<th>Interventions in Final Delivery Plan</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Description</td>
<td>Number</td>
</tr>
<tr>
<td>Improving safety</td>
<td>Policy 2</td>
<td>We will work to improve road safety</td>
<td>Policy 2</td>
</tr>
<tr>
<td></td>
<td>Policy 3</td>
<td>We will seek to reduce road casualties amongst children and young people</td>
<td>Policy 3</td>
</tr>
<tr>
<td></td>
<td>Policy 4</td>
<td>We will seek to curb excessive road speeds by all possible measures</td>
<td>Policy 4</td>
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<tr>
<td></td>
<td>Policy 5</td>
<td>Where there is support from residents and where resources permit, we will seek to introduce a 20 mph speed limit in residential areas</td>
<td>Policy 5</td>
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<tr>
<td></td>
<td>Policy 6</td>
<td>We will encourage new residential developments to be designed on “Home Zone” principles</td>
<td>Deleted</td>
</tr>
<tr>
<td></td>
<td>Policy 7</td>
<td>We will enhance safety and security for all transport users</td>
<td>Policy 6</td>
</tr>
<tr>
<td>Maintaining and Managing Infrastructure</td>
<td>Policy 8</td>
<td>We will keep our transport networks in good condition</td>
<td>Policy 7</td>
</tr>
<tr>
<td></td>
<td>Policy 9</td>
<td>We will maintain our local highway assets in a safe and serviceable condition</td>
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<tr>
<td></td>
<td>Policy 10</td>
<td>We will maintain our local bridge assets in a safe and serviceable condition</td>
<td>Deleted</td>
</tr>
<tr>
<td>Components</td>
<td>Policies in Draft Preferred Strategy</td>
<td>Policies in Final Preferred Strategy</td>
<td>Interventions in Final Delivery Plan</td>
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## Promoting Sustainable Transport Modes

<table>
<thead>
<tr>
<th>Components</th>
<th>Policies in Draft Preferred Strategy</th>
<th>Policies in Final Preferred Strategy</th>
<th>Interventions in Final Delivery Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Description</td>
<td>Number</td>
</tr>
<tr>
<td>Policy 1</td>
<td></td>
<td>We will help people make informed travel choices by giving them accurate information</td>
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<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy 12</td>
<td></td>
<td>We will ensure that access issues are given due consideration for service and land use planning</td>
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<tr>
<td>Policy 13</td>
<td></td>
<td>We will promote developments which lead to higher levels of walking, cycling and public transport</td>
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<tr>
<td>Policy 14</td>
<td></td>
<td>We will continue to invest in and promote a range of Smarter Choices measures</td>
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<tr>
<td>Policy 15</td>
<td></td>
<td>We will seek to achieve greater uptake and delivery of effective Travel Plans</td>
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<tr>
<td>Policy 20</td>
<td></td>
<td>We will encourage the development of Car Clubs as an alternative to individual car ownership</td>
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<tr>
<td>Policy 22</td>
<td></td>
<td>We will seek to improve air quality</td>
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<tr>
<td>Policy 23</td>
<td></td>
<td>We will support the use of priority measures on key road corridors to encourage the use of sustainable modes</td>
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<tr>
<td>Policy 24</td>
<td></td>
<td>We will give priority to and invest in walking and cycling</td>
<td></td>
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<tr>
<td>Policy 25</td>
<td></td>
<td>We will seek to reduce car dominance in</td>
<td></td>
</tr>
<tr>
<td>Components</td>
<td>Policies in Draft Preferred Strategy</td>
<td>Policies in Final Preferred Strategy</td>
<td>Interventions in Final Delivery Plan</td>
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<tr>
<td>residential areas</td>
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<td>dominance in residential areas</td>
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<tr>
<td>Policy 26</td>
<td>Deleted</td>
<td>We will seek to allocate a proportion of funding to schemes and activities that encourage cycling</td>
<td>Deleted</td>
</tr>
<tr>
<td>Policy 27</td>
<td>Deleted</td>
<td>We will carry out cycle audits on significant highway and traffic schemes</td>
<td>Deleted</td>
</tr>
<tr>
<td>Policy 28</td>
<td>Policy 23</td>
<td>We will continue to support the work of the Tyne and Wear Joint Local Access Forum</td>
<td>Policy 23</td>
</tr>
<tr>
<td>Policy 29</td>
<td>Policy 24</td>
<td>We will give priority to and invest in public transport</td>
<td>Policy 24</td>
</tr>
<tr>
<td>Policy 30</td>
<td>Policy 25</td>
<td>We will work to ensure delivery of the Metro Reinvigoration project</td>
<td>Policy 25</td>
</tr>
<tr>
<td>Policy 31</td>
<td>Policy 26</td>
<td>We will examine ways in which Metro can better accommodate the needs of cyclists</td>
<td>Policy 26</td>
</tr>
<tr>
<td>Policy 32</td>
<td>Policy 27</td>
<td>We will seek to increase bus use</td>
<td>Policy 27</td>
</tr>
<tr>
<td>Policy 33</td>
<td>Policy 28</td>
<td>We will seek to develop and improve local rail services</td>
<td>Policy 28</td>
</tr>
<tr>
<td>Policy 34</td>
<td>Policy 29</td>
<td>We will examine ways to develop the Cross-Tyne ferry service and keep options for other river-based transport services under review</td>
<td>Policy 29</td>
</tr>
<tr>
<td>Policy 35</td>
<td>Policy 30</td>
<td>We will examine ways in which hackney carriages taxis and private hire vehicles can become a more integrated part of public transport provision</td>
<td>Policy 30</td>
</tr>
<tr>
<td>Policy 36</td>
<td>Policy 31</td>
<td>We will examine ways in which the community transport sector can become a more integrated part of public transport provision</td>
<td>Policy 31</td>
</tr>
<tr>
<td>Policy 37</td>
<td>Policy 32</td>
<td>We will examine how facilities for coaches and their passengers can be improved</td>
<td>Policy 32</td>
</tr>
<tr>
<td>Policy 38</td>
<td>Policy 33</td>
<td>We will examine how scholars travel</td>
<td>Policy 33</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Policies in Draft Preferred Strategy</th>
<th>Policies in Final Preferred Strategy</th>
<th>Interventions in Final Delivery Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td><strong>Description</strong></td>
<td><strong>Number</strong></td>
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<tr>
<td>---</td>
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</tr>
<tr>
<td>39</td>
<td>services can be provided more fairly and cost-effectively</td>
<td>34</td>
</tr>
<tr>
<td>41</td>
<td>Where resources permit, we will seek to maintain current travel concessions</td>
<td>36</td>
</tr>
<tr>
<td>45</td>
<td>We will seek to deliver improvements to encourage motorcycle use</td>
<td>19</td>
</tr>
<tr>
<td>48</td>
<td>We will support new low-carbon transport initiatives</td>
<td>38</td>
</tr>
<tr>
<td>16</td>
<td>We will seek to coordinate the provision and pricing of publicly-owned car parks</td>
<td>12</td>
</tr>
<tr>
<td>17</td>
<td>We will ensure that (in publicly-owned car parks) disabled parking bays are available</td>
<td>13</td>
</tr>
<tr>
<td>18</td>
<td>We will seek to identify suitable sites for off-road lorry parking provision</td>
<td>14</td>
</tr>
<tr>
<td>19</td>
<td>We will use a combination of education and enforcement to curb pavement parking</td>
<td>15</td>
</tr>
<tr>
<td>40</td>
<td>We will seek to increase the availability of Park and Ride sites</td>
<td>35</td>
</tr>
<tr>
<td>42</td>
<td>We will manage our networks to provide for the safe and efficient flow of freight, by road and rail</td>
<td>37</td>
</tr>
<tr>
<td>43</td>
<td>We will pursue major scheme investment to improve our transport networks</td>
<td>39</td>
</tr>
<tr>
<td>Components</td>
<td>Policies in Draft Preferred Strategy</td>
<td>Policies in Final Preferred Strategy</td>
</tr>
<tr>
<td>------------</td>
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<td>-------------------------------------</td>
</tr>
</tbody>
</table>
| Policy 44  | We will improve links to our airports, ports, rail and motorway system | Policy 40 We will improve links to our airports, ports, rail and motorway system | • Metro Reinvigoration;  
• New Tyne Tunnel;  
• Urban Traffic Management and Control (UTMC);  
• Smart Ticketing;  
• Infrastructure for Low Carbon Vehicles (‘Plugged in Places’).  
Subject to the availability of funding, following the outcome of the Comprehensive Spending Review, the Highways Agency has a list of:  
- Improvement Schemes with possible start date 2011 – 2014:  
  • A1(T) Newcastle Lay-by Improvements  
- Maintenance Schemes with possible start date 2011 – 2014:  
  • A19 Moor Farm to Killingworth Resurfacing  
  • A19 Middle Engine Lane & Railway  
  • A1 Blaydon and Blaydon Haugh Viaduct Joints  
  • A1M Vehicle Restraint System Phases 1, 2 and 3  
  • A1 Allerdene Railway Northbound  
  • A194(M) Peareth Hall to Follingsby Interchange  
  • A19 Coast Railway  
  • A1 Gateshead Western Bypass, Lady Park to Lobley Hill (North and Southbound carriageways)  
  • A1 Derwenthough Entrance  
  • A1 Kingsway to Dunston |
<table>
<thead>
<tr>
<th>Components</th>
<th>Policies in Draft Preferred Strategy</th>
<th>Policies in Final Preferred Strategy</th>
<th>Interventions in Final Delivery Plan</th>
</tr>
</thead>
</table>
|            | Number | Description | Number | Description | - A1 Blaydon Haugh Viaduct  
- A19 Holystone Interchange North and South  
- Possible Major Development-led Improvements 2011 – 2014:  
- A1 Improvements associated with Newcastle Great Park  
Gateshead – Potential major investment proposal – New crossings of the Tyne in the vicinity of the MetroCentre and in east Gateshead, removing traffic from the A1 and routes through Gateshead town centre |
Assessment Results

10.8 The results of the assessment of the Final LTP3 are discussed in this section with a summary shown in Table 10.2.

<table>
<thead>
<tr>
<th>SEA Objective</th>
<th>Improving Safety</th>
<th>Maintaining and Managing Infrastructure</th>
<th>Promoting Sustainable Transport Modes</th>
<th>Parking</th>
<th>Freight</th>
<th>Major Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Air quality</td>
<td>0</td>
<td>0</td>
<td>++</td>
<td>0</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2. Biodiversity &amp; Green Infrastructure</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. European sites</td>
<td>The HRA Screening concluded that there are no likely significant effects from the schemes set out in the Plan on any of the seven international sites (alone or in combination with other plans and projects).</td>
<td></td>
<td></td>
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<tr>
<td>4. Climate change mitigation</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>5. Climate change &amp; flood resilience</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>6. Natural resources &amp; waste</td>
<td>0</td>
<td>++</td>
<td>++</td>
<td>-</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>7. Water quality</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>8. Land use</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>9. Heritage</td>
<td>0</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>10. Landscape &amp; townscape</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Social Objectives, Including Health and Inequality Issues</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>11. Accessibility</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12. Noise</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>13. Health</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>0</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>14. Equality</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15. Road safety</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>16. Crime</td>
<td>++</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Scale of Effect (SE):
+++ Large beneficial  ++ Moderate beneficial  + Slight beneficial
--- Large adverse  -- Moderate adverse  - Slight adverse

Those effects which are either moderate or major are deemed to be significant

Improving Safety

10.9 As this component is primarily concerned with improving safety, it generally has no effect against the environmental objectives; with just a slight beneficial effect on enhancing the quality of the townscape (SEA Objective 10) due to the introduction of 20mph speed limits and encouraging the use of sustainable modes.

10.10 On the social objectives, this component delivers several significant beneficial effects. Firstly, there is a large beneficial effect on improving road safety (SEA Objective 15) as would be expected as this is the primary aim of this group of policies.
10.11 Secondly, it has a moderate beneficial effect on reducing crime and the fear of crime (SEA Objective 16). This includes provision of well-lit facilities at transport interchanges and the introduction of CCTV at bus shelters. The policies and interventions within the component are also likely to benefit public health (SEA Objective 13) in terms of creating a safer environment, which should help reduce the number of accidents and injuries and promote healthier and more active modes of travel. Therefore, moderate beneficial effects have been predicted against this objective, which is an enhancement from minor positive effects predicted earlier for the draft LTP3. This is because the Final LTP3 shows that a significant proportion (18%-28%) of allocations for 2011/2014 will be channelled into local safety schemes, road safety education and accessibility measures in each district in Tyne and Wear. An action plan will be produced and reviewed regularly to assess the success of these interventions. This enhances the degree of certainty for the predicted effects.

10.12 Minor beneficial effects are predicted against SEA Objective 12 (Noise), due to positive effects of traffic calming measures on average noise levels. There are further slight beneficial effects identified against the EqIA objectives (Objectives 11 and 14); this is related to the policies having potential to create a more welcoming environment for travel and community cohesion as well as safety and security measures promoting greater equality of opportunity for ethnic minorities, older, mobility impaired and young residents.

10.13 There are no adverse effects identified in this group of policies.

10.14 This component is concerned with maintaining the transport network to ensure that it is in good condition and is safe and serviceable; this includes all transport infrastructure. It also includes managing the network to provide for the safe and efficient flow of traffic. With limited resources available, maintenance measures are prioritised in the Delivery Plan to avoid the liabilities for future years that can be created from short-term cuts in maintenance.

10.15 The component will have a moderate beneficial effect on improving road safety (SEA Objective 15). This is because regular maintenance is likely to identify safety concerns and can deal with them appropriately. Further, slight beneficial effects are predicted against SEA Objective 11 (Improving accessibility to services), SEA Objective 13 (Improving health and well being) and SEA Objective 14 (Promoting greater equality). This is related to metro capital maintenance, improvements to bus stop/stations and other transport infrastructure, better accommodating buses, cycles and pedestrians and reducing accident rates. Slight beneficial effects are also expected against SEA Objective 12 (Noise), as network management measures, smoothing traffic, are likely to help reduce average noise levels.

10.16 Slight beneficial effects have also been predicted against SEA objective 5 (climate resilience), as a result of LTP3 Chapter 12 referring to infrastructure maintenance includes climate change adaptation considerations. This is an improvement from the first iteration of the assessment, arising from the incorporation of the SEA recommendations.

10.17 Moderate positive effects are predicted against SEA Objective 6 (Prudent use of natural resources and waste minimisation), as Policy 7 within the component explicitly promotes prudent use of natural resources, waste minimisation and movement up the waste hierarchy. This is an enhancement in the component's performance since the previous assessment, which stems from taking on board the SEA recommendation in this respect. Slight beneficial effects identified against SEA Objective 2 (Protecting and enhancing biodiversity and geodiversity) due to best practice environmental management procedures protecting biodiversity, , SEA Objective 9 (Maintaining historic and cultural heritage) due to specific reference to of maintenance of Ancient Monuments and Listed Structures in the policy and SEA Objective 10 (Protecting and enhancing landscape and townscape) due to maintenance providing the opportunity to protect and enhance the distinctiveness of the townscape and landscape.
10.18 There are no adverse effects identified against any of the environmental and social objectives.

**Promoting Sustainable Transport Modes**

10.19 This is a large group of policies and interventions that are related to promoting sustainable transport modes and encouraging modal shift away from the private car including Smart Travel Management, Emissions Management, Access, Public Transport, Access and Other Modes.

10.20 As would be expected, this component generally scores well when assessed against the SEA objectives. No adverse effects have been identified.

10.21 There are four significant beneficial effects for the environmental objectives: SEA Objective 1 (Air quality), SEA Objective 6 (Prudent use of natural resources and waste minimisation), SEA Objective 9 (Maintaining historic and cultural heritage) and SEA Objective 10 (Protecting and enhancing landscape and townscape). These are related to reducing car dependency and the need to travel, and thus, reducing congestion and the levels of transport related air emissions and noise pollution. There are further four significant beneficial effects against the social objectives: SEA Objective 11 (Improving accessibility to services), SEA Objective 13 (Improving health and well being), SEA Objective 14 (Promoting greater equality) and SEA Objective 15 (Improving road safety). This is related to component’s aims to deliver improvements to all forms of transport and integration between them, increasing travel options available, accessibility and equality of opportunity and reducing reliance on the private car.

10.22 Of those that are non-significant, slight beneficial effects have been identified against SEA Objective 2 (Protection of bio- and geodiversity), SEA Objective 4 (Decarbonising transport), SEA Objective 7 (Water quality) and Objective 12 (Noise). This is related to lower levels of noise/air pollution, reducing car dependency and reducing surface run-off, due to the promotion of sustainable modes and the need for fewer roads in the longer term.

10.23 Minor negative effects predicted in the previous iteration of the assessment against SEA objective 5 (Climate change resilience), have been mitigated through the amplification of the LTP3 Chapter 7 (Addressing climate change), which applies to all policies and interventions within LTP3. The chapter now places a stronger emphasis on the adaptation measures, and specifies that sound design principles for new transport infrastructure and innovative management of the existing transport network. Further, Chapters 12, 15 and 16 also include requirements for climate change adaptation. Additionally, in response to the SEA recommendation, reference has been made to importance of Rights of Way networks and Green Infrastructure networks in the overall sustainable transport system throughout document. Therefore, the reviewed scoring against this SEA objective indicates minor positive effects, as the promotion of sustainable travel and its integration with Green Infrastructure can play an important role in supporting ecosystem services that assist in the management of, and adaptation to, climate change.

10.24 On the social objectives, there are no other effects identified apart from those significant effects described above.

**Parking**

10.25 This component sets out the policies and interventions related to parking, including curbing pavement parking and coordinating the provision and pricing of publicly-owned car parks.

10.26 There is a moderate beneficial effect identified against SEA Objective 9 (Maintaining historic and cultural heritage) due to the curbing of pavement parking.

10.27 Of those environmental objectives that had non-significant effects, one is slight beneficial, four are slight adverse and the remaining have no effect. The slight beneficial effect was against SEA Objective 10 (Enhancing townscape and landscape) due to reducing traffic and parking in the town centre. The slight adverse effects are against SEA Objective 2 (Protection of bio- and geodiversity), SEA Objective 5 (Climate change adaptation and flood risk) and SEA Objective 6 (Prudent use of natural resources and waste minimisation). These are related to the requirements...
for land for off road lorry parking and park and ride sites. An additional slight adverse effect is identified against SEA Objective 8 (Efficient use of land and maintaining productive soil) due to land take being required for new Park and Ride schemes. However, the scale of effect has been tempered compared to the previous assessment iteration, which assigned moderate adverse effects against this objective. This is because the final LTP3 addresses the previous SEA recommendation, requiring out of town lorry parking to minimise loss of productive soil and consider landscape and biodiversity effects.

10.28 There were three slight beneficial effects identified against the social objectives: SEA Objective 11 (Improving accessibility to services), SEA Objective 14 (Promoting greater equality) and SEA Objective 15 (Improving road safety). This is due to the reduction in community severance, removal of pavement obstructions and the provision of Park and Ride and Park and Walk schemes.

10.29 The previous iteration of the assessment identified slight adverse effects against SEA Objective 12 (Reducing noise, vibration and light pollution) and SEA Objective 16 (Reducing crime and the fear of crime). This is related to potential effects of out of town Park and Ride schemes. These effects have been mitigated by incorporating the SEA recommendations on the consideration of noise and light pollution and ensuring suitable lighting and security presence at Park and Ride sites in the Final LTP3. Therefore, the current scoring indicates neutral effects against these objectives.

**Freight**

10.30 This component sets out the policies and interventions related to Freight, and seeks to manage the networks to provide for the safe and efficient flow of freight, by road, rail, river and sea.

10.31 There is a moderate beneficial effect identified against SEA Objective 6 (Prudent use of natural resources and waste minimisation) mainly due to the promotion of alternative fuels.

10.32 Of the remaining environmental objectives, slight beneficial effects are identified against SEA Objective 1 (Air quality), SEA Objective 4 (Decarbonising transport), SEA Objective 9 (Historic and cultural heritage) and SEA Objective 10 (Protecting townscape and landscape). These are mainly related to reducing the number of freight vehicles and reducing freight vehicles in the town centre.

10.33 A slight adverse effect is identified against SEA Objective 2 (Protection of bio- and geodiversity), related to freight consolidation centres. Another slight adverse effect is identified against SEA Objective 8 (Efficient use of land and maintaining productive soil) due to land take being required for freight consolidation centres. However, the degree of significance of this effect has been tempered compared to the previous iteration (assigning ‘moderate effect’), as the previous SEA recommendation, requiring sites for consolidation centres to minimise loss of productive soil, has been incorporated in the final LTP3.

10.34 There were three slight beneficial effects identified against the social objectives: SEA Objective 12 (Reducing noise, vibration and light pollution), SEA Objective 13 (Improving health and well being) and SEA Objective 15 (Improving road safety). This is related to reducing the number of HGVs on the road and reducing vehicle numbers in the urban area.

**Major Schemes**

10.35 This component is related to the major schemes that are proposed in the Tyne and Wear region.

10.36 There were two significant adverse effects identified. Specifically, moderate adverse effects were identified against SEA Objective 8 (Efficient use of land and maintaining productive soil). This is related to land take being required for a number of the schemes.

10.37 Moderate adverse effects were also identified against SEA Objective 5 (Climate Change adaptation and flood risk). This is because a number of the schemes are in or near the flood zones. The previous assessment iteration identified large adverse effects against this objective.
but the strengthening of Chapters 7, 12, 15 and 16 in the final LTP3, as explained above, has tempered the significance of the predicted effects.

10.38 The previous iteration of the assessment identified moderate adverse against SEA Objective 12 (Reducing noise, vibration and light pollution) due to construction impacts and potential noise and light pollution at out of town car parks. However, construction impacts are likely to be mitigated through a new requirement in the final LTP2 for any construction scheme to develop and comply with a Construction Environmental Management Plan (CEMP) and a Site Waste Management Plan (SWMP). This requirement was introduced as a result of a previous SEA recommendation. Additionally, the final LTP3 also incorporates the SEA recommendation which requires avoiding the introduction of noise and excessive light pollution at out of town car parks. Therefore, the updated scoring against SEA Objective 12 indicates tempered slight negative effects.

10.39 Of the environmental objectives there were a further six slight adverse effects identified against SEA Objective 1 (Air quality), SEA Objective 2 (Protection of bio- and geodiversity), SEA Objective 6 (Prudent use of natural resources and waste minimisation), SEA Objective 7 (Water Quality), SEA Objective 9 (Historic and cultural heritage) and SEA Objective 10 (Protecting townscape and landscape). These effects are mainly related to the construction impacts of the schemes. A slight beneficial effect was identified against SEA Objective 4 (Decarbonising transport), as there is likely to be less congestion and modal shift from the private car.

10.40 Of the social objectives, there were two slight beneficial effects identified against SEA Objective 13 (Improving health and well being) and SEA Objective 15 (Improving road safety). This is related to greater access to health facilities, improvements in public transport and junction improvements.

10.41 Previous iteration of the assessment identified a slight adverse effect identified against SEA Objective 16 (Reducing crime and fear of crime), which related to fear of crime potentially being high at Park and Ride sites that are often deserted at night time. This effect has been mitigated through the incorporation of the previous SEA recommendation to use suitable lighting and security presence. Therefore, the current scoring indicates neutral effects against this objective.

Assessment of cumulative effects

10.42 The assessment of cumulative effects of the Final LTP uses the relevant SEA objectives as identified in Table 7.1 and draws on the approach for the prediction of future trends in Table 7.2. This analysis identifies the cumulative effects of LTP3 together with other plans reviewed to predict the future trends in Table 7.2.
Table 10.3 – Assessment of Cumulative Effects

<table>
<thead>
<tr>
<th>SEA Objective</th>
<th>Baseline Condition</th>
<th>Future Trends without LTP3 – Cumulative effects of other Plans only</th>
<th>Future Trends with LTP3 – Cumulative effects of LTP3 with other Plans</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure good local air quality for all</td>
<td>Poor</td>
<td>Declining</td>
<td>Stable</td>
<td>There are 7 AQMAs within Tyne and Wear which are closely associated with traffic volumes. Air quality within Newcastle city centre is poor and declining, associated with above average increases in car ownership levels. Policies contained in the borough’s development plan documents aim to improve air quality by minimising pollution. However, without LTP3 the decline in air quality was expected to continue due to increasing traffic levels and congestion. Numerous measures in the Final LTP3 (mainly in the assessment component on sustainable transport modes), including reduction of traffic growth and congestion through the encouragement of modal shift, walking and cycling and integration between all transport modes, are predicted to benefit the local air quality. Therefore, the positive cumulative effects of LTP3 with other plans is considered to result in stabilising trends in the longer term future.</td>
</tr>
<tr>
<td>Protect and enhance biodiversity, green infrastructure and geodiversity, in particular designated sites and characteristic habitats and species</td>
<td>Good</td>
<td>Stable</td>
<td>Stable</td>
<td>The borough includes many designated sites, which are generally in favourable condition, and green infrastructure which is increasingly being assessed and protected. Policies within the borough’s development plan documents seek to ensure that without the LTP3 biodiversity and geodiversity will be protected and enhanced, with positive effects on the baseline condition. The measures outlined within the Final LTP3 will support these policies, including the promotion of and integration with green infrastructure, with a positive cumulative effect on the current situation ensuring that the good condition remains stable.</td>
</tr>
<tr>
<td>Protect and where possible enhance the European sites (HRA specific objective)</td>
<td>Moderate</td>
<td>Stable</td>
<td>Stable</td>
<td>The HRA Stage 1 Screening concluded that, taking the effective and deliverable mitigation measures incorporated into the Tyne and Wear LTP3 into account, there are no likely significant effects from the schemes set out in the Plan on any of the seven international sites (alone or in combination with other plans and projects). Therefore, cumulative effects are deemed to show stable trends.</td>
</tr>
<tr>
<td>To mitigate against climate change by decarbonising transport</td>
<td>Poor</td>
<td>Decline</td>
<td>Stable</td>
<td>Without LTP3 in place transport CO₂ emissions were predicted to increase as a result of increased car ownership and growing overall traffic levels on the local highway network. This was predicted to counteract technological improvements in the energy efficiency of vehicles. LTP3 includes a number of different types of measures to reduce GHG emissions from transport, which are likely to deliver positive effects against this objective. Therefore, positive cumulative effects of the Final LTP3 with other plans are</td>
</tr>
<tr>
<td>SEA Objective</td>
<td>Baseline Condition</td>
<td>Future Trends without LTP3 – Cumulative effects of other Plans only</td>
<td>Future Trends with LTP3 - Cumulative effects of LTP3 with other Plans</td>
<td>Commentary</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
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<td>---------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>To ensure resilience to the effects of climate change and flood risk</td>
<td>Moderate</td>
<td>Decline</td>
<td>Decline</td>
<td>Tyne and Wear is at risk from flooding and intrusion from the sea. Despite policies within the borough’s Development Plan Documents which seek to locate development in areas which have lower or no risk of flooding, provisions for new development mean that the cumulative effects of planning documents without LTP3 are predicted to increase flood risk in the long term as development levels increase and flood risk increases as a result of climate change. LTP3 aims to adapt the road system to greater frequency of flooding, storms and other effects of climate change, as well as promoting a modal shift in transport choices. An increasing use of sustainable transport modes will help avoid a significant increase in land take and hard surfacing for transport infrastructure. This is likely to show some improvements in terms of the borough’s climate change adaptation response. However, a number of the planned major schemes will require some land take and some of these schemes are located within flood zones. Overall, Tyne and Wear is likely to remain susceptible to the consequences of climate change and flood risk and the condition is considered likely to continue to show declining trends.</td>
</tr>
<tr>
<td>Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy</td>
<td>Moderate</td>
<td>Improving</td>
<td>Improving</td>
<td>Without LTP3, measures to encourage waste minimisation and increase recycling rates were deemed likely to improve the current situation. Final LTP3’s assessment components perform with mixed effects against this objective but positive effects prevail. Therefore, cumulative effects of the LTP3 and other plans and policies are likely to result in continuing improving trends.</td>
</tr>
<tr>
<td>Protect and enhance the character and quality of landscape and townscape</td>
<td>Poor</td>
<td>Stable</td>
<td>Stable</td>
<td>The data show negative trends for three of the four NCAs within the study area. Development pressures are likely to further affect the landscape and countryside character through potential loss of landscape and negative effects on views. This may be offset to some extent by restoration and enhancement initiatives and regeneration projects within urban areas improving townscape quality. Without the LTP3 it is likely that the current situation will continue into the future. The Final LTP3 delivers mainly positive effects against this objective by helping promote protection, enhancement and enjoyment of the countryside, which results in cumulative stabilising effects.</td>
</tr>
<tr>
<td>Reduce noise, vibration and light pollution</td>
<td>Poor</td>
<td>Decline</td>
<td>Stable</td>
<td>The local levels of tranquility are relatively low in the area, indicating noise and light pollution. Without Final LTP3 interventions, increasing traffic levels on the local highway network is likely to increase noise and light pollution and vibration. Final LTP3 addresses the issue of noise levels through a number of direct and indirect interventions, including the promotion of sustainable modes and network management measures. Although Final LTP3 is likely to result in short term noise effects from construction effects, long term cumulative effects of Final LTP3 with other plans are deemed to show stabilising trends.</td>
</tr>
</tbody>
</table>
11. Mitigation

Introduction

11.1 The term mitigation encompasses any approach that is aimed at preventing, reducing or offsetting significant adverse environmental effects that have been identified. In practice, a range of measures applying one or more of these approaches is likely to be considered in mitigating any significant adverse effects predicted as a result of implementing LTP3. In addition, it is also important to consider measures aimed at enhancing positive effects. All such measures are generally referred to as mitigation measures.

11.2 However, the emphasis should be in the first instance on proactive avoidance of adverse effects. Only once alternative options or approaches to avoiding an effect have been examined, should mitigation then examine ways of reducing the scale/importance of the effect.

11.3 Mitigation can take a wide range of forms, including:

- Refining intervention measures in order to improve the likelihood of positive effects and to minimise adverse effects;
- Technical measures (such as setting guidelines) to be applied during the implementation stage;
- Identifying issues to be addressed in project environmental impact assessments for certain projects or types of projects;
- Proposals for changing other plans and programmes; and
- Contingency arrangements for dealing with possible adverse effects.

Mitigation of Significant Adverse Effects

11.4 As part of the earlier assessment of the LTP3 Preferred Strategy a number of mitigation measures were set out in the draft Environmental Report. JTWG has given careful consideration to these recommendations and addressed most of them as described in section 10 (please also refer to the SEA Statement for further details). In relation to the remaining significant adverse effects, the following mitigation measures have been proposed and scheme promoters have been made aware of them:

**Moderate Adverse effect against SEA Objective 8 (Ensuring efficient use of land and maintaining the resource of productive soil) for Major Schemes component**

11.5 There are a number of schemes included in the strategy that will result in the loss of productive agricultural land (refer to Appendix G). These schemes should be assessed to see whether they can be scaled down so that they do not require as much agricultural land as has been proposed in the current schemes.

**Moderate Adverse effect against SEA Objective 5 (Climate change adaptation and flood risk) for Major Schemes component**

11.6 The schemes that are located in the flood zones should be reassessed to evaluate whether they are indeed required or whether an alternative location, not in the flood zone could be identified. If the scheme proceeds then appropriate adaptation measures e.g. permeable surfaces should be investigated.
Additional mitigation measures

11.7 Additional mitigation measures have been proposed, where appropriate, in the assessment tables in Appendix G. JTWG has confirmed that Partners will consider these mitigation measures during the preparation of lower tier specific transport policy documents and schemes as they come forward. A selection of these recommendations is shown below:

Mitigation of Construction Impacts

- Good Environmental Management should be practised during any construction project:
  - Control of surface run-off;
  - Control of sediment release to watercourses e.g. silt traps;
  - Management of dust generation;
  - Hoarding to reduce noise and visual impact;
  - Translocation of species if necessary.

- Appropriate traffic management and signage

Air Quality / Emissions

- All public transport systems should conform to Best Practice in vehicle emission levels.

Materials

- Environmentally-sensitive materials and technologies should be incorporated within the transport network maintenance programme
- Use of materials and technology that decarbonise the transport network should be incorporated into the maintenance programme.
- Ensure that any redundant vehicles that are scrapped are recycled where appropriate

Natural Environment

- Opportunities to support biodiversity through the creation of habitat should be considered as part of any maintenance programme.
- Control to ensure that habitat fragmentation is avoided
- The use of Sustainable Drainage Systems (SuDS) and ‘soft’ engineering solutions should be considered as a means to mitigate flood risk.
- The use of permeable materials should be considered for surfacing.
- Identify opportunities to integrate Park and Walk and Park and Ride scheme with green infrastructure network, especially pedestrian walkways and cycle paths.
- Minimisation of land take though use of existing corridors where possible.
- Incorporation of Biodiversity by Design principles.
- Consider flood risk as a concern within all schemes to ensure that resilience measures are included.
- Consider opportunities for enhancing the landscape of the National Character Areas.

Built Environment

- Ensure that any technology or materials (for example, signage) are sympathetic to the local historic and cultural heritage of the area.
• The addition or removal of signage or physical measures associated with road safety measures should be assessed in terms of the impact on the quality of landscape and townscape.

• Use of Best Practice in selection of lighting, and the use of materials that reduce noise levels from vehicles.

• Incorporation of Secured By Design recommendations

• Appropriate signage to heritage assets, particularly in rural areas, needs to be sympathetic to the surroundings.

• Parking signage needs to be appropriate to the landscape and townscape and located sensitively to the surrounding area.

Equality

• Upgrades to the transport system should include the following:
  - Removal of street clutter;
  - Installation of ramps and handrails to ensure DDA compliancy
  - Up-to-date and reliable travel information.

• Provision of audio announcements in addition to the placement of Real-Time Passenger Information (RTPI) will enhance information provision for the visually impaired, who may have issues using electronic signage.

• Conflicts between pedestrians and cyclists in street environments should be considered – specifically for residents with visual impairments who may be unaware of the mixed use of footways.

• All Park and Ride or Park and Walk schemes implemented should be accessible for disabled or mobility impaired residents, and all information on new travel options should be available in simple plain English (for those with learning disabilities), as well as in a range of languages to cater for the different ethnic groups within the area.

• Information and guidance on smart ticketing should be provided in simple, plain English to allow those with learning disabilities to understand the guidance, and in a variety of languages to ensure that all residents are able to effectively use new services.
12. Monitoring Programme

12.1 The SEA Directive states that ‘member states shall monitor the significant environmental effects of the implementation of plans and programmes……in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action’ (Article 10.1). In addition, the Environmental Report should provide information on a ‘description of the measures envisaged concerning monitoring’ (Annex I (i)) (Stage E).

12.2 SEA monitoring will cover significant social and environmental effects and it involves measuring indicators that will enable the establishment of a causal link between the implementation of the plan and the likely significant effects (both positive and negative) being monitored. In line with the SEA Directive, these significant positive and negative effects should be monitored with the implementation of LTP3.

12.3 The following significant beneficial effects (direct as well as cumulative effects) have been identified by the assessment and form the basis of the monitoring programme:

- SEA Objective 1: Ensure good local air quality for all;
- SEA Objective 6: Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy;
- SEA Objective 9: Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage;
- SEA Objective 10: Protect and enhance the character and quality of landscape and townscape;
- SEA Objective 11: To improve accessibility to services, facilities and amenities for all and avoid community severance;
- SEA Objective 13: Improve health and well-being and reduce inequalities in health (HIA specific objective);
- SEA Objective 14: To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective);
- SEA Objective 15: Improve road safety;
- SEA Objective 16: Reduce crime and fear of crime and promote community safety.

12.4 The following significant adverse effects (direct as well as cumulative effects) have been identified by the assessment and form the basis of the monitoring programme:

- SEA Objective 5: To ensure resilience to the effects of climate change and flood risk;
- SEA Objective 8: To ensure efficient use of land and maintain the resource of productive soil.

12.5 The proposed monitoring programme is outlined in Table 12.1.
Table 12.1: Proposed Monitoring Programme

<table>
<thead>
<tr>
<th>No.</th>
<th>SEA Objective against which a significant effect has been predicted (without mitigation)</th>
<th>Indicator(s) to be Used</th>
<th>Suggested frequency of analysis of monitoring data/mitigation</th>
<th>Responsibility for undertaking monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure good local air quality for all</td>
<td>Nitrogen dioxide levels in AQMAs</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take up of Electric Vehicles</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td>5</td>
<td>To ensure resilience to the effects of climate change and flood risk</td>
<td>NI 189: Flood and coastal erosion risk management</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NI 188: Adapting to climate change</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of new transport schemes in flood risk areas</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of new transport schemes with improved drainage standards</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of floodplain changing due to new/planned transport related schemes</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of new transport schemes integrated with green infrastructure (green corridors and spaces)</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td>6</td>
<td>Promote prudent use of natural resources, waste minimisation and movement up the waste hierarchy</td>
<td>Re-use of road materials and use of recycled materials in road construction and maintenance</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of recycled materials used in transport related construction</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of locations for refuse and recyclables with improved accessibility</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td>8</td>
<td>To ensure efficient use of land and maintain the resource of productive soil</td>
<td>Numbers and % of transport schemes on previously developed land</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area of grade 1, 2 or 3a agricultural land permanently lost as a result of transport schemes</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td>Number of pollution incidents attributable to transport</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils / Environment Agency</td>
<td></td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>9</td>
<td>Maintain and enhance the quality and distinctiveness of the area’s historic and cultural heritage</td>
<td>Heritage assets at risk (Listed Buildings, Conservation Areas, scheduled Monuments, Registered Parks and Gardens)</td>
<td>Annually</td>
<td>All T&amp;W Councils / English Heritage</td>
</tr>
<tr>
<td></td>
<td>% of transport planning applications with archaeological site appraisals completed as a result of Archaeological Alert Areas’ requirement</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils / County Archaeologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of LTP proposals contributing to the improvement of the built environment</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Protect and enhance the character and quality of landscape and townscape</td>
<td>Countryside Quality Counts (focus on any changes in the landscape quality due to transport effects)</td>
<td>As and when CQC results are published</td>
<td>Natural England</td>
</tr>
<tr>
<td></td>
<td>NI 195: Improved street and environmental cleanliness - levels of a) litter, b) detritus, c) graffiti and d) fly posting</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sq metres of area of pedestrianisation/ number of pedestrianisation project</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of transport schemes applications refused for reasons due to poor design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of transport schemes applications that incorporate improvements to public realm and sympathetic design</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>To improve accessibility to services, facilities and amenities for all and avoid community severance</td>
<td>NI 175: Access to services and facilities by public transport, walking and cycling</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
</tr>
<tr>
<td></td>
<td>NI 176: Working age people with access to employment by public transport</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cycling journeys</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bus punctuality</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Number of LTP3 initiatives to improve access to essential facilities</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td>Indicator</td>
<td>Reporting Frequency</td>
<td>Responsibility</td>
<td></td>
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<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>12</strong> Reduce noise, vibration and light pollution</td>
<td>Number of improvement schemes for pedestrian and cycle routes and green networks, including the RoW network</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of proposed LTP3 spend on walking, cycling and public transport measures</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Number of noise complaints received relating to transport activities</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of road network surfaced with low road noise materials</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Transport related noise levels</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Numbers and extent of Important Areas and First Priority Locations established due to transport noise</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Proportion of street lamps with downward beam</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td><strong>13</strong> Improve health and well-being and reduce inequalities in health (HIA specific objective)</td>
<td>% of people in good and not good health</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<td></td>
<td>% of people using non-motorised modes of transport</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
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<td></td>
<td>Number of bus stops adapted for easy access buses</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
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<tr>
<td></td>
<td>Pedestrian crossings with facilities for disabled</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
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<tr>
<td></td>
<td>Public transport accessibility for disabled</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
</tr>
<tr>
<td><strong>14</strong> To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)</td>
<td>Use of targeted fare concessions</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>Number of LTP3 initiatives to improve access to essential facilities, including employment, in the most deprived areas (20% most deprived nationally)</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
<td></td>
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<tr>
<td></td>
<td>% of transport schemes applications that incorporate improvements to public realm in the most deprived areas (20% most deprived nationally)</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
<td></td>
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<td></td>
<td>Number of improvement schemes for pedestrian and cycle</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
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<td></td>
<td>Improve road safety</td>
<td>Reduce crime and fear of crime and promote community safety</td>
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<tr>
<td>15</td>
<td><strong>Routes and green networks in the most deprived areas (20% most deprived nationally)</strong></td>
<td><strong>Numbers and % of transport schemes or LTP3 spend aiming to improve personal security on public transport and at its facilities</strong></td>
<td></td>
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<tr>
<td></td>
<td>constantly update</td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
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<tr>
<td></td>
<td><strong>% of proposed LTP3 spend on walking, cycling and public transport measures in the most deprived areas (20% most deprived nationally)</strong></td>
<td><strong>Number of reported crimes on public transport and at its facilities</strong></td>
<td>All T&amp;W Councils, informed by British Transport Police</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annually</td>
<td>Full record – constantly update</td>
<td>All T&amp;W Councils</td>
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<tr>
<td></td>
<td><strong>Total killed and seriously injured in traffic accidents</strong></td>
<td><strong>Percentage of residents who feel fairly safe or very safe outside during the day</strong></td>
<td>Annually</td>
<td>All T&amp;W Councils</td>
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<td></td>
<td>Full record – constantly update</td>
<td></td>
<td>All T&amp;W Councils</td>
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<td></td>
<td><strong>Children killed and seriously injured in traffic accidents</strong></td>
<td><strong>Percentage of residents who feel fairly safe or very safe outside after dark</strong></td>
<td></td>
<td>All T&amp;W Councils</td>
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<td></td>
<td>Full record – constantly update</td>
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<td></td>
<td><strong>Total slight casualties</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Full record – constantly update</td>
<td></td>
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<tr>
<td></td>
<td><strong>Casualties by transport users</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Full record – constantly update</td>
<td></td>
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</tbody>
</table>
13. Conclusions

13.1 This Environmental Report sets out the SEA process and its key findings in relation to Tyne and Wear’s LTP3.

As a result of the first iteration of the assessment, the Draft Environmental Report made a series of SEA/HIA recommendations that aimed to improve the overall sustainability performance of the LTP3. JTWG has given careful consideration to these recommendations and addressed most of them (please refer to the SEA Statement for details). In relation to other, more specific, recommendations it has been confirmed that Partners will consider them during the preparation of lower tier specific transport policy documents and schemes as they come forward. JTWG also took on board the comments arising from public consultation in the preparation of the Final LTP3. The changes made to the Final LTP3 improved its performance in such areas as ensuring resilience to climate change and resource efficiency, avoiding loss of valuable agricultural land and minimising noise and light pollution.

13.2 Overall, it is considered that the Final LTP3 meets the range of SEA/HIA/EqIA objectives identified in the SEA Framework to a large extent. It delivers potentially significant beneficial effects on a number of environmental and social (including health and inequality) SEA objectives. These include:

- Ensuring good local air quality for all;
- Prudent use of natural resources and waste minimisation;
- Maintaining and enhancing the quality and distinctiveness of the area’s historical and cultural heritage;
- Protecting and enhancing the character and quality of landscape and townscape;
- Improving accessibility to services, facilities and amenities for all and avoiding community severance;
- Improving health and well-being and reducing inequalities in health;
- Promoting a greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- Improving road safety;
- Reducing crime and fear of crime and promoting community safety.

13.3 Potentially significant adverse effects that have been predicted relate to:

- Ensuring resilience to the effects of climate change and flood risk; and
- Ensuring efficient use of land and maintain the resource of productive soil.

13.4 It is considered that the predicted adverse effects can be minimised to a satisfactory degree through the effective implementation of the SEA mitigation measures set out in this report and through adhering to the Councils’ development control policies.

13.5 The HRA Stage 1 Screening exercise concluded that, taking the effective and deliverable mitigation measures incorporated into the Tyne and Wear LTP3 into account, there are no likely significant effects from the schemes set out in the Plan on any of the seven international sites (alone or in combination with other plans and projects). Further details can be found in the separate HRA Screening Report.
14. References

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- Census; 2001;
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