

Lincolnshire Local Transport Plan 4

Strategic Environmental Assessment Report

March 2013

Prepared for

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Acronyms and Abbreviations

AQMA	Air Quality Management Area
DfT	Department for Transport
EC	European Community
EIA	Environmental Impact Assessment
EQIA	Equality Impact Assessment
EU	European Union
HAR	Heritage at Risk
HIA	Health Impact Assessment
HRA	Habitat Regulations Assessment
LCC	Lincolnshire County Council
LDF	Local Development Framework
LTP	Local Transport Plan
ODPM	Office of the Deputy Prime Minister
PPP	Plans, Programmes or Policy
PRoW	Public Rights of Way
RSS	Regional Spatial Strategy
SEA	Strategic Environmental Assessment
SAC	Special Area of Conservation
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
SUDS	Sustainable Urban Drainage System

1 Introduction

1.1 Background

In June 2012 Lincolnshire County Council (LCC) commissioned Mouchel to undertake a Strategic Environmental Assessment (SEA) of the emerging Lincolnshire County Council Local Transport Plan 4 (LTP4). The LTP4 will cover a 10 year period from 2013/ 14 to 2022/ 23, with an accompanying implementation plan initially covering the years 2013/ 14 and 2014/ 15.

The SEA process is concerned with identifying possible effects that plans, programmes and strategies may have on the existing environment, and therefore increase the consideration of environmental issues in the decision making process. SEA is an iterative process which ensures environmental considerations are integrated into the development of the LTP4 at the earliest opportunity, and that the Plan has, as far as is practicable, met environmental concerns.

One of the requirements of the SEA process is to prepare an Environmental Report. This document is the Environmental Report and details the SEA of the LTP4. It sets out the framework for undertaking the SEA of the Plan together with the scope of the assessment, evidence base and review of relevant plans, programmes and policies to inform the assessment. It includes a discussion of the likely significant effects of the implementation of the LTP4 and recommendations are made in relation to ways in which likely adverse effects on the environment can be reduced or beneficial effects can be enhanced. The report includes proposals for relevant environmental indicators to monitor the effects of the implementation of the LTP4.

The findings of the SEA are being made available to stakeholders, including statutory consultees, local authorities, and the public, in order to help all those with an interest in transport within Lincolnshire to understand the effects of the proposed Plan. This report should be read alongside the LTP4 document.

1.2 Structure of this Report

This Environmental Report sets out the findings of the assessment of the effects of implementing the LTP4. The structure of this report follows guidance set out in the guidance 'A Practical Guide to the Strategic Environmental Assessment Directive' (ODPM, 2005) and comprises of the following sections:

Chapter 1: This chapter describes the background to emergence of the LTP4 and gives an overview of the county of Lincolnshire.

Chapter 2: Sets out the legislative requirement to undertake the SEA and how this report fulfils those requirements.

Chapter 3: Details the approach that has been used for the SEA, steps taken and tasks involved.

Chapter 4: Develops the strategic environmental framework that is used to evaluate the environmental effects of the LTP4.

Chapter 5: Provides a summary of the Habitats Regulation Assessment undertaken.

Chapter 6: Details the Health Impact Assessment.

Chapter 7: Testing the LTP4 objectives – provides detail on the compatibility of the LTP4 objectives against the SEA objectives, and the internal compatibility of both sets of objectives.

Chapter 8: Develops the strategic alternatives and evaluates the predicted effects of the Plan.

Chapter 9: Considers ways of mitigating any adverse effects as a result of the Plan.

Chapter 10: Outlines proposals to monitor the effects of the Plan.

Additional to the main report, there are appendices which provide supporting information, these are:

Appendix 1: Consultation comments received following the submission of the Scoping Report and how these have been addressed in this report.

Appendix 2: An updated table of relevant plans, programmes and policies in light of comments received at the scoping stage.

Appendix 3: Updated Scoping Report in light of comments received during consultation.

Appendix 4: Full option appraisal matrices.

1.3 Local Transport Plans

Good transport is a vital factor in building sustainable local communities. It contributes to the achievement of stronger and safer communities, healthier children and young people, equality and social inclusion, environmental objectives and better local economies.

The Government's 1998 White Paper on transport, 'A New Deal for Transport: Better for Everyone', introduced the concept of Local Transport Plans (LTPs) to steer the development of national transport policies at the local level. The Transport Act 2000 (now amended by the Local Transport Act 2008) then made it a statutory requirement for local transport authorities outside of London to produce LTPs having regard to Government guidance and policies on the environment. The Act makes particular reference to climate change mitigation and adaptation, but authorities should consider how their strategies and implementation plans relate to all relevant environmental issues, including air quality, noise, landscape and biodiversity.

LTPs define the area's plans and strategies for maintaining and improving the local transport network within economic, environmental and social constraints and set out programmes of expenditure on transport improvements in line with national and local transport policy. This covers all forms of transport (including freight).

Public participation is a key part of developing LTPs to involve the wider community. LTPs have regard for objectives set out in Sustainable Community Strategies and other local documents.

LTPs are developed in the context of, and with close links to a number of wider policy documents, including Local Development Frameworks (LDFs). Partnership working with wider policy areas such as health and education are vital to delivering LTPs and wider policy objectives.

1.4 Development of Lincolnshire Local Transport Plan 4

In July 2000 a first LTP (LTP1) was published for LCC covering the five year transport planning period 2001/02 - 2005/06. In March 2006 a second LTP (LTP2), was published covering the five year period 2006/07 - 2010/11. LTPs 1 and 2 were developed in the context of County Structure Plans and the emerging Regional Plan. In July 2010 the Secretary of State revoked the Regional Spatial Strategy (RSS) which had been adopted in the East Midlands in 2009. In addition, a number of LTP progress reports have been produced for the periods 2003, 2004 and 2005.

A third and current LTP (LTP3) was adopted in early 2011. At the time LTP3 was prepared, there was great uncertainty around the future of transport nationally following the change of Government in May 2010 and the subsequent Comprehensive Spending Review announced in October 2010. As a result, the Council adopted a 'light touch' approach for LTP3, with the adopted Plan covering just two years – 2011/12 and 2012/13.

The emerging fourth Lincolnshire Local Transport Plan (LTP4) covers the 10 year period 2013/14 to 2022/23 and is based on the principles set out in White Paper published in January 2011 'Creating Growth, Cutting Carbon Making Sustainable Local Transport Happen' this supersedes 'Delivering a Sustainable Transport System' previously published by the Department for Transport (DfT) in November 2008. The White Paper focuses on transport's contribution to meeting two key government objectives:

- to help create growth in the economy; and
- to tackle climate change by cutting carbon emissions.

Other important themes within the White Paper that the LTP4 needs to reflect include:

- decentralising power to enable local delivery;
- enabling sustainable transport choices;
- encouraging active travel to improve health and wellbeing;
- making public transport more attractive;
- managing traffic to reduce carbon emissions and tackle congestion; and
- supporting the role of local transport in society.

The Lincolnshire LTP4 is set within an overall vision, 'Vision for 2030', of how LCC envisages their transport system developing in the longer term. Key local priorities for the vision include:

- there is a well managed and safe road network to maximise the reliability of journeys and reduce the impact of traffic on communities;
- there is good inter- and intra- regional access to support growing economy;
- our streets in built-up areas are seen primarily as places where people can carry on their activities in a pleasant environment;
- our sensitive and rural areas are managed in ways that retain, and where possible, enhance the value of the natural environment; and
- there is good access by a choice of modes to services, jobs and for leisure within Lincolnshire.

Unlike previous local transport plans, where the delivery programme was fixed for periods of five and two years; it is a rolling programme, with a implementation plan for the first two years, which will be rolled forward once the results of the next comprehensive spending review is known.

The LTP4 will provide a framework policy for the development of implementation plans; the first of these will be for two years with further revisions of specific policies during the life of the LTP4.

1.5 Overview of the County of Lincolnshire

The LTP4 covers LCC's administrative boundary, incorporating the districts of North Kesteven, South Kesteven, West Lindsey, South Holland, the Borough of Boston and Lincoln City. The districts that comprise the county of Lincolnshire and the county border are shown in Figure 1.1; with the Lincolnshire County Council local transport area shown in Figure 1.12.

The county is predominantly rural and has a geographical area of 2,286 sq miles. Population is centred around the cathedral city of Lincoln which has a rich history dating back to its foundation as a Roman colony. Other centres of population in the county include Gainsborough, Louth, Mablethorpe, Skegness, Boston, Sleaford, Grantham, Stamford and Spalding. More than a third of the population live in settlements of fewer than 3,000 residents.

The county has the fifth largest highway network of any local authority at 5,534 miles. However, within this total, there are no motorways and only 41 miles of dual carriageway. Much of the road network for which LCC is responsible is narrow and tortuous, with almost 80% being C class or unclassified roads. A large proportion of the road network falls well below current design standards with resulting low speeds and safety issues.

The rail network is limited, with just Grantham lying on the main inter-city network (the East Coast Main Line), and only 9 of the 22 largest towns having a rail connection.

Figure 1.1 - Lincolnshire County Districts.

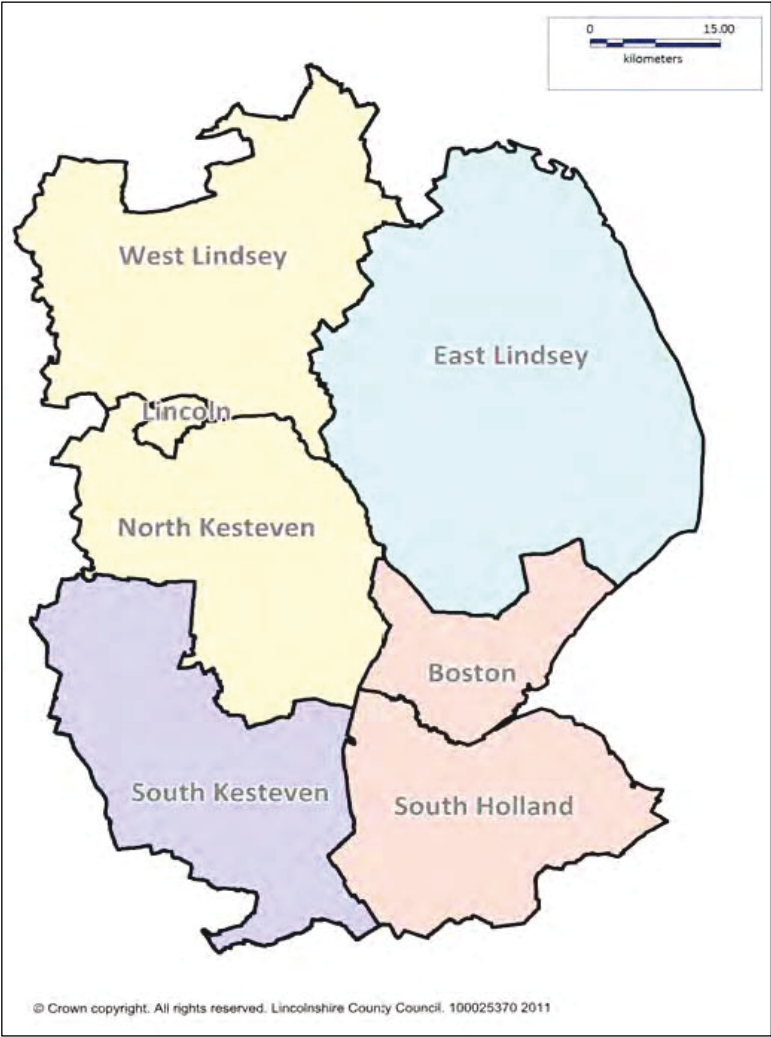
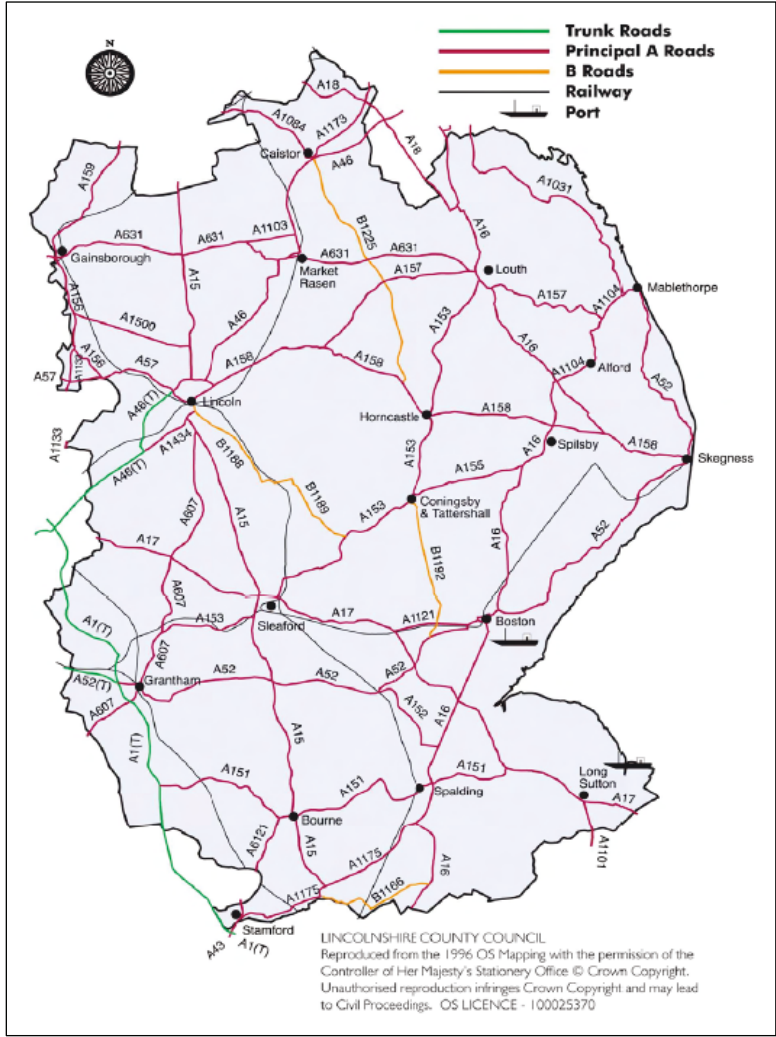


Figure 1.2 - Lincolnshire Strategic Transport Network



2 Legislative Requirements

2.1 Strategic Environmental Assessment of Transport Plans

In the European Union (EU) an SEA is required for all member states on all plans and programmes by European Community (EC) Directive (2001/42/EC) 'on the assessment of the effects of certain plans and programmes on the environment', known as the 'SEA Directive'. The Directive is implemented in England through the 'Environmental Assessment of Plans and Programmes Regulations' (Statutory Instrument 1633 2004) and makes SEA mandatory for the following plans and programmes:

- a. Which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent for projects listed in Annexes I and II to the Environmental Impact Assessment (EIA) Directive (85/337/EEC); or
- b. Which in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive (92/43/EEC).

2.1.1 Compliance with the SEA Directive

This Environmental Report has been prepared in accordance with the SEA Directive. Table 2.1 shows where the requirements of the Directive have been addressed in this report.

Table 2.1 - SEA Directive requirements and where they have been addressed in this report

Requirements / Where covered in Guide	(Section / Appendix / End notes)
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I)	This is the Environmental Report
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	Chapter 1, Section 7.1, Appendix 2
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Table 4.1, Appendix 3
c) The environmental characteristics of areas likely to be significantly affected	Appendix 3
d) Any existing environmental problems which are relevant to the plan programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC	Table 4.1

Requirements / Where covered in Guide	(Section / Appendix / End notes)
e) The environmental protection objectives, established at international, 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	Section 4.2, Appendix 2
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects)	Chapter 8, Appendix 4
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme	Chapter 9
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 8
i) A description of measures envisaged concerning monitoring in accordance with Article 10	Chapter 10
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Included in this report
Consultation: Authorities with environmental responsibility, when deciding on the scope and level of detail of the information to be included in the environmental report (Art. 5.4)	An account on the consultation undertaken in the scoping phase is provided in Appendix 1
Authorities with environmental responsibility and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2)	The schedule for consultation is outlined in Table 3.1
Other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7)	N/A
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)	Pending

Requirements / Where covered in Guide	(Section / Appendix / End notes)
<p>Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted shall be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> • The plan or programme as adopted; • A statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and • The measures decided concerning monitoring (Art. 9 and 10). 	Pending
Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10).	Proposals for monitoring outlined in Section 10
Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).	Complete

2.2 Other Supporting Assessments

Department for Transport guidanceⁱ recommends that:

'Alongside the preparation of the LTP and SEA, there will be a number of other Assessment activities that may be required (e.g. Equality Impact Assessment (EqIA) and Health Impact Assessment (HIA)). Where appropriate the SEA should draw on the findings of these other assessments... Another assessment activity that local authorities should expect to undertake for their LTP)... is Habitats Regulations Assessment (HRA). The purpose of the HRA process is to protect the integrity of 'European sites'.'

As such, alongside the SEA, a Habitats Regulations Assessment, Equality Impact Assessment (in the form of an Impact Assessment) and Health Impact Assessment have been undertaken.

2.2.1 Habitats Regulations Assessment

A Habitats Regulations Assessment (HRA) is undertaken during the development of a programme or plan that is likely to have an adverse effect on any designated

ⁱ Strategic Environmental Assessment for Transport Plans and Programmes and WebTAG "In draft" Guidance. Department for Transport (2009).

Natura 2000 sites. Natura 2000 sites are designated by the EC Directive on the Conservation of Wild Birds 79/409/EEC 1979 (Special Protection Areas (SPAs) and the EC Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EEC 1992 (Special Areas of Conservation (SACs)).

If an internationally protected site within or near to Lincolnshire is likely to be significantly affected by the LTP4, an 'appropriate assessment' under the Conservation (Habitat, & c.) Regulations 1994 (as amended 1997, 2000) will be undertaken. This will determine whether the significant effects in the screening are likely to be 'adverse and whether mitigation is required. In order to comply with Article 6(3) of the Habitats Directive it is a requirement to ensure the LTP4 will not have any adverse effects on Natura 2000 sites in order for the plan to be adopted.

A HRA of the LTP4 is being undertaken in parallel to the SEA as the Natura 2000 sites; The Humber Estuary, The Wash Estuary, Gibraltar Point, Saltfleetby – Theddlethorpe Dunes, Baston Fen and Grimsthorpe are located within Lincolnshire. Please refer to Chapter 5 of this report for further details relating to the HRA.

2.2.2 *Health Impact Assessment*

A Health Impact Assessment (HIA) aims to study upstream health determinants in an integrated way rather than concentrating on single risk factors. Its overall objective is to provide decision-makers with sound information on implications on health of any given policy and to mitigate the negative effects on health and well-being (whether physical and/ or mental health).

HIA is not a statutory requirement for the LTP4; however this is regarded as best practice and therefore the HIA process has been integrated into the SEA process. Please refer to Chapter 6 of this report for further details relating to the HIA.

3 Methodology

3.1 Approach to the SEA

The approach to the SEA stages completed to date (A to C) has been to provide an expert judgement based system of prediction and assessment that is transparent and auditable.

Current best practice guidance has been used to inform the process:

- A Practical Guide to the Strategic Environmental Assessment Directive (Department of Communities and Local Government, previously the Office of the Deputy Prime Minister, 2005).

This guidance has been used in conjunction with other best practice guidelines that include:

- Strategic Environmental Assessment for Transport Plans and Programmes and WebTAG Guidance (Department for Transport “In draft Guidance 2009).

The SEA process is undertaken in five main stages as outlined in Table 3.1, to date Stages A to C have been completed, the table details the timescales of the work undertaken and future work to be completed.

Table 3.1 - SEA Stages and Work Undertaken

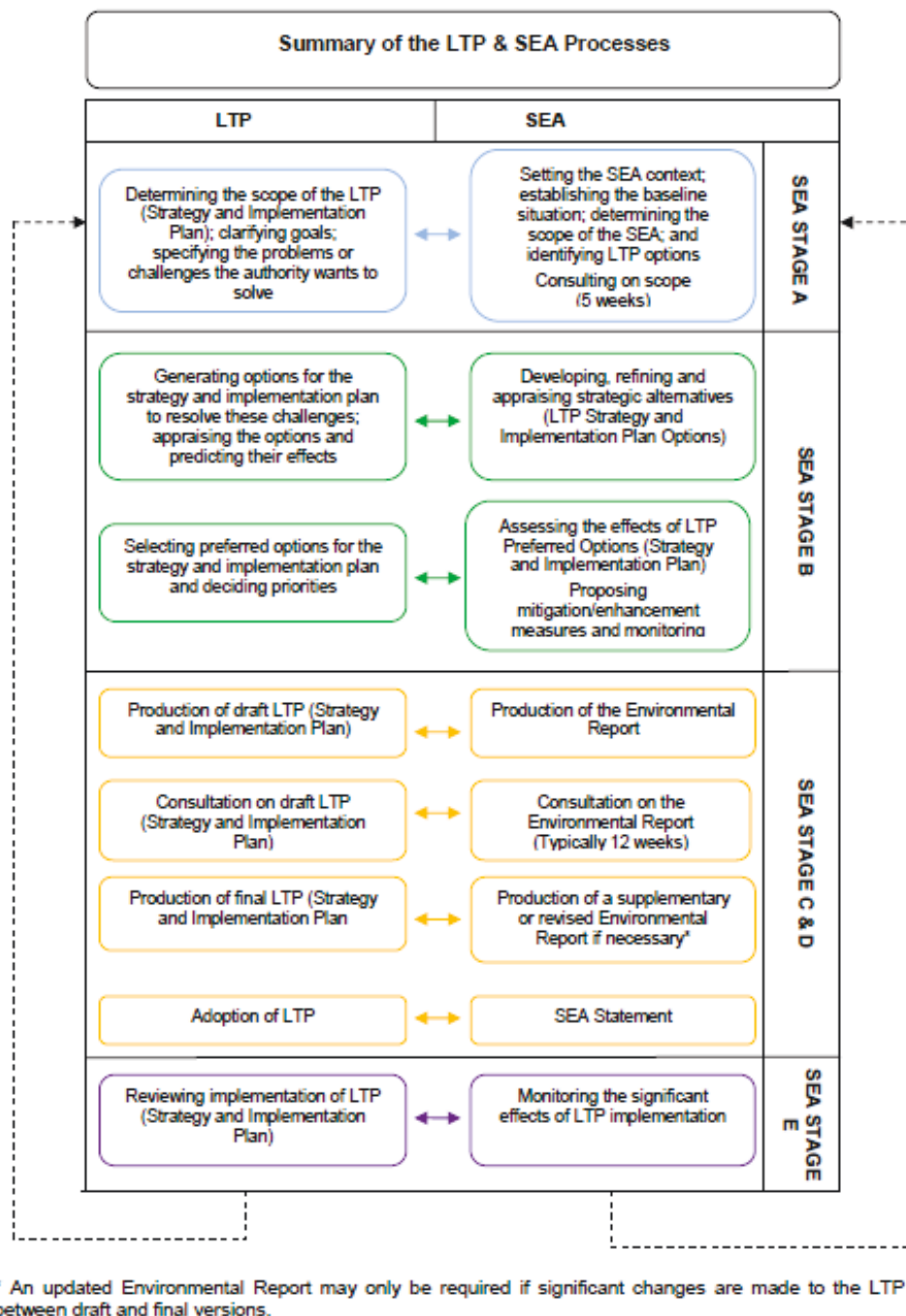
SEA Stages	SEA Tasks	Timescales and Work Undertaken
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope.	• A1: Identifying other relevant policies, plans and programmes, and SEA objectives.	<p>The SEA Scoping Reportⁱⁱ was prepared and consulted upon for 5 weeks during July 2012 and August 2012. The Environment Agency, English Heritage and Natural England are designated as statutory consultation bodies under the SEA Regulations and must be consulted on the scope and level of detail of information to be included in the Environmental Report.</p> <p>Furthermore, to ensure public participation the Scoping Report and accompanying appendices were also made available on LCC's website.</p>
	• A2: Collecting baseline information	
	• A3: Identifying environmental problems.	
	• A4: Developing the SEA objectives.	
	• A5: Consulting on the scope of the SEA.	
Stage B: Developing and refining options and assessing effects	• B1: Testing the plan or programme objectives against the SEA alternatives.	<p>Documented consultation responses relating to the Scoping Report were reviewed and addressed. A list of comments received from consultees, along with a description of how each one has been addressed, is provided in Appendix 1.</p>
	• B2: Developing the Strategic options.	
	• B3: Predicting the effects of the Draft plan or programme including alternatives.	
	• B4: Evaluating the effects of the Draft plan or programme including alternatives.	

ⁱⁱ Strategic Environmental Assessment of the Lincolnshire Local Transport Plan – Scoping Report (Mouchel 2012)

SEA Stages	SEA Tasks	Timescales and Work Undertaken
	• B5: Considering ways of mitigating adverse effects.	A working draft of the LTP4 was issued to Mouchel for appraisal in June 2012. This included a full set of LTP4 objectives.
	• B6: Proposing measures to monitor the environmental effects of implementing the plan or programme.	
Stage C: Environmental Report	• C1: Preparing the Environmental Report.	This is the Environmental Report.
Stage D: Consulting	• D1: Consulting on the draft plan and the Environmental Report.	The SEA Environmental Report will be consulted on between March and April 2013. It will be made available to the above statutory consultees, as well as being made available to other consultees and the wider public.
	• D2 (i): Assessing significant changes.	
	• D2 (ii): Appraising significant changes resulting from representations.	
	• D3: Making decisions and providing information.	
Stage E: Monitoring the significant effects of implementing the plan on the environment	• E1: Finalising aims and methods for monitoring.	The monitoring methods are outlined in Chapter 10.
	• E2: Responding to adverse effects.	

The stages in the SEA process should be aligned with the completion of the LTP4. Figure 3.1 details the links between the SEA process and the LTP process.

Figure 3.1 - LTP and SEA Processes and Links



3.2 Health Impact Assessment

The World Health Organisation sets out a number of principles that need to be considered in relation to integrating health impact assessment within SEA.

The following table sets out the key principles that need to be considered and at what stage in the SEA process these will be addressed and documented.

Figure 3.2 - Integrating HIA into the SEA Process

Key Principles of Health Impact Assessment	Stage of Integration into the Strategic Environmental Assessment
Include, routinely, an initial screening to determine the broad relevance to people's health of the policies, plans or programme under consideration;	Relevance to the Local Transport Plan
Take into account any health concerns expressed by relevant health authorities and of the public;	Stage A 1- 5 and consultation of Scoping Report.
Consider the range of health determinants, and how they are likely to be modified, in positive and/or negative ways, as a result of the policies, plans or programmes that were subject to the SEA;	Stage A 1 - Health Plans, Programmes and Policies have been collated; Stage A 2 - Health baseline data has been collected Stage A 3 – Health key issues have been identified Stage B - All the above will be used to inform the appraisal of the LTP4 alternatives/options
Consider the positive as well as the negative effects of proposed policies and programmes;	Stage B
Consider how the expected health effects might be distributed across different groups within the population who are affected;	Stage B
Contain recommendations with respect to actions that could be undertaken to enhance the potential positive health effects identified and to mitigate or remove the negative ones;	Stage B
Seek to involve the public through consultation and participation;	Stakeholder workshops are to be carried out as part of the LTP4 and SEA process and health authorities will be consulted. The results will be collated and used to inform the SEA process.
Give due account to issues raised by the public and/or organisations representing members of the public who may be affected;	Stage C - the results of Stakeholder consultation will be collated and will state where they have been addressed within the SEA
Consider the need for cost-effective monitoring of any anticipated impact(s) on people's health.	Stage C Stage D Stage E

4 Developing the SEA Framework

4.1 Introduction

The SEA framework provides a structure to describe, analyse and compare environmental effects of the LTP4. It has been developed drawing on information collated during the review of relevant plans, programmes and policies (PPPs) (section 4.2), review of baseline information (section 4.3) and identification of key environmental issues (section 4.4). The SEA framework was prepared and consulted upon as part of the scoping process.

4.2 Relationship with other Plans, Programmes and Policies

As part of the Scoping Stage of the SEA a review was undertaken of relevant plans, policies and programmes (PPPs) in relation to their implications for the LTP4 and this SEA. The Strategy may be influenced in many ways by other plans and programmes and by external sustainability objectives, such as those laid down in policies and legislation.

The task is a requirement of the SEA Directive Annex 1(a) where it states the Environmental Report should contain ‘an outline of the...relationship with other relevant plans or programmes’.

A wide range of PPPs have been identified during the Scoping Stage of the SEA, this has been updated further in light of consultation comments received on the Scoping Report. It is recognised that no list of PPPs can be definitive.

A full review of international, national, regional and local PPPs is presented in Appendix 2.

4.3 Updated Environmental Baseline

The next task completed was the collection of baseline information to establish the current state of the study area, and to identify trends in economic, environmental and social parameters and to assess current environmental and sustainability issues that are evident in the area.

This is a requirement of the SEA Directive Annex 1(b) (c) which outlines that the Environmental Report should provide information on ‘the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme’ and ‘the environmental characteristics of areas likely to be significantly affected’.

To consider how the emerging Plan may affect the environment, it is essential to understand the current environment characteristics of the area and how the environment is likely to change in the future. The baseline information provides a basis for predicting and monitoring the effects of the implementation of the Plan. It

also helps to identify the environmental and sustainability issues and alternative ways of dealing with them.

Updated baseline information is provided in Appendix 3, this incorporates additional information included as a result of consultation comments made on the Scoping Report.

4.4 Identifying Environmental Issues and Problems

Environmental issues and problems have been identified from the baseline information to define the key social, environmental and economic issues that need to be taken into account when preparing the LTP4. In some cases these are constraints which must be overcome, or impacts which must be avoided, in other cases these may be opportunities which should be pursued where possible, or supported indirectly by transport management policies in other instances.

The SEA is based on testing the options for the LTP4 against a list of SEA objectives. These SEA objectives have been drawn up taking account of the principal environmental issues relevant to the LTP4 area.

The following Table 4.2 summarises the issues identified through the review of the relevant plans, policies and programmes and considering the baseline data available for Lincolnshire.

Table 4.1 - SEA Key Environmental Issues

Key Environmental Issues	Opportunities for Mitigation/ Enhancement
Population	
The population of Lincolnshire has continued to increase (1991 census 584,538, 2010 mid year estimate 703,000). The increasing population adds pressure for new infrastructure and development.	Increasing population will require improved transport infrastructure.
The 2010 mid-year population estimates show that Lincolnshire's population structure has a higher proportion of people of retirement age (21%) compared to the national average (16%). This is projected to increase to 31% of the county's population by 2033, compared to 23% nationally.	Given that the elderly are less likely to have access to cars increasing public transport provision must be made available for the elderly, particularly in rural areas.
Lincolnshire is less ethnically diverse than England and the East Midlands with 93% of the population being White British, compared with a national average of 82.8%.	No ethnic group should be disproportionately affected by the LTP4.
In the 2010 Indices of Multiple Deprivation Lincolnshire's districts all ranked as slightly more deprived than in 2007 Results indicate that 12% of Lincolnshire's population currently live in areas categorised within England's 20% most deprived areas.	Transport provision for the most deprived areas will improve social exclusion and enable people to access jobs.
Health	
The health of people in Lincolnshire is mixed compared to the England average. On average deprivation is lower than the national average. However, life expectancy is seven years lower for men and 4.6 years lower for women in the most deprived areas of Lincolnshire than in the least deprived areas.	The LTP4 should aim to increase Lincolnshire's health status and should consider the need for access to important amenities such as health care and the provision of schemes to facilitate physical exercise particularly in the most deprived areas.
The health of children in Lincolnshire is significantly better than the England average.	The LTP4 should aim to maintain, and where possible increase, Lincolnshire's health status of children. Introducing transport schemes to encourage increased physical activity in children should be considered, especially in areas with high levels of childhood obesity.

Key Environmental Issues	Opportunities for Mitigation/ Enhancement
Childhood obesity levels in Lincolnshire are comparable with national averages. People in South and North Kesteven appear to lead healthier lifestyles than people in the other local authorities in Lincolnshire and nationally, with childhood obesity rates at 8.2% and 7.1% respectively. The percentage of physically active adults was recorded as 15.14% for North Kesteven and 13.48% for South Kesteven compared with 11.26% nationally.	South Kesteven and North Kesteven should be used as a template for encouraging physical activity across the county.
The Lincolnshire Local Area Agreement has prioritised tackling alcohol, tobacco and obesity.	The LTP4 should be compliant with the Lincolnshire Local Area Agreement.
There has been a large increase in the number of people killed or seriously injured in Lincolnshire between 2006 (403) to 2011 (484). The largest increase was in East Lindsey from 88 to 140.	Safety on the transport network should be a priority of the LTP4. In particular measures to improve safety in East Lindsey should be a priority.
Access to Amenities/ Services	
In rural areas of Lincolnshire, access to facilities and services is limited and has been compounded by the gradual loss or centralisation of services.	The LTP4 should seek to improve access to facilities and services through the provision of transport infrastructure and services. Therefore, helping to reduce social exclusion.
Lincolnshire has an extensive highways network totalling 9018km, with 66km of dual carriageway.	The LTP4 should prioritise the maintenance and improvement of existing highways.
Cycle flows across the county have grown by 14% since 2001, although there seems to have been a decline since 2005 with a dramatic increase in 2011.	The LTP4 should encourage cycling further and make provision for increasing cycle flows.
63% of people drive to work with a further 7.6% being passengers in cars which is high compared with the rest of England and Wales. Comparatively a low percentage of people walk to work which could be reflective of a lack of suitable footpaths and pavements in rural areas.	The promotion of car sharing schemes, in addition to improving the quality and quantity of public transport, public footpaths and cycle lanes, particularly in rural areas, should reduce the number of cars on the road.
Air	
Air quality across the county is generally considered to be good. However, vehicle emissions are a primary source of air pollutants at some locations, particularly in areas that suffer from congestion e.g. Lincoln and other town centres).	Measures to make transport more efficient, such as reducing congestion and restricting vehicular access to particularly susceptible areas, may help to improve Lincolnshire's air quality.
There are six Air Quality Management Areas (AQMA) in Lincolnshire, declared primarily as a result of pollution caused by traffic emissions.	The LTP4 provides an opportunity to improve air quality in the AQMA. Local Air Quality Action Plans should be compliant with the LTP4.

Key Environmental Issues	Opportunities for Mitigation/ Enhancement
Water	
The Water Framework Directive sets an objective to achieve at least 'good' status in all water bodies by 2015. Currently the majority of Lincolnshire's surface water bodies have a 'moderate' status. Bathing water quality is also particularly important in Lincolnshire coastal areas where there are a number of popular tourist resorts.	The Transport Plan should not reduce the quality of surface water bodies or bathing water, where possible, it should be enhanced.
Due to its topography many areas are susceptible to flooding in Lincolnshire. The coastal area covers three districts and is at particular risk, including many A roads contained within Flood Zone 3. The coastal zone is currently protected by an extensive network of raised engineered sea defences.	Flood Risk Areas should be considered when planning and developing new transport infrastructure to prevent flood damage. Ne transport schemes should not increase flood risk.
Groundwater is an important resource for abstraction by local farmers and the public water supply.	The LTP4 should ensure that new transport schemes will not adversely affect groundwater quality, for example from pollutant in surface water run-off.
Agriculture	
Farming is a major industry in Lincolnshire, a total of 7,191 holdings and a labour force of 15,286 in 2009. Some of the highest grade agricultural land is found in the south and east of the county. 44% of the agricultural land in Lincolnshire is Grade 1 or Grade 2. Lincolnshire is the largest producer of wheat in the UK.	The LTP4 should not lead to a reduction in the quantity or quality of agricultural land in Lincolnshire. Improving access to rural areas may make businesses more viable.
Biodiversity, Flora and Fauna	
There are six sites of international importance for biodiversity within Lincolnshire, covering three designation types; Special Protection Areas, Special Areas of Conservation and RAMSAR sites.	The LTP4 should be sensitive to sites identified as having ecological significance.
There are 92 Sites of Special Scientific Interest (SSSI) of which 65.67% of the SSSI area is considered to be in favourable condition and 33.81% is considered unfavourable but recovering, with only 0.21% in unfavourable condition and declining.	Transport plans should not adversely affect areas of important conservation value.
Tourism	
Lincolnshire's tourism industry is a significant source of employment and revenue within the County. It accounts for an estimated 15,576 full time equivalent jobs, although jobs tend to be seasonal.	Tourism could be encouraged in Lincolnshire by making areas of the county more accessible. In addition providing local people with improved access to employment opportunities within the tourist industry may help to increase employment.

Key Environmental Issues	Opportunities for Mitigation/ Enhancement
Cultural Heritage	
There are a large number of cultural heritage resources within the county including designated Scheduled Ancient Monuments, Listed Buildings, historic battlefields and conservation areas and significant areas of undesignated but nationally important archaeology.	The LTP4 should make cultural heritage assets accessible to local people and visitors, but should not compromise their quality.
Within Lincolnshire there are 162 heritage sites on the Heritage at Risk (HAR) programme, 19 of these sites are categorised as priority category A 'immediate risk of further rapid deterioration or loss of fabric, no solution agreed', these are the highest prioritised HARs.	The LTP4 should respect and where possible enhance their surroundings.
Material Assets	
The amount of waste being produced has been increasing over the past 10 years in line with regional trends. A swell as increasing the percentage of recycling in Lincolnshire, the county council plans to have an energy from waste plant which is expected to deal with 37% of municipal solid waste.	It is important that access to waste facilities is sufficient for the efficient transport of waste.
Sand and gravel production in Lincolnshire represents a significant portion of the total output from the East Midlands.	Access to and from production sites should be adequate for the efficient export of sand and gravel.
Local Development Framework Core Strategies plan to develop new affordable housing.	The LTP4 should be integrated with the LDFs to ensure that the new housing is located in locations which are accessible by sustainable modes of travel.
Climate Change	
In Lincolnshire there is significant potential to generate energy from renewable sources, particularly using wind, the tides and biomass. Since 2004, the generation of energy from renewable sources has been increasing steadily.	The potential for renewable energy developments should be considered in the LTP4.
There was a 10% decrease in CO ₂ emissions in Lincolnshire from 2007 to 2009. Emissions released in 2009 were 4,571kt of CO ₂ , of which 31% were from road transport.	The LTP4 should aim to reduce CO ₂ emissions from road transport further, facilitating a reduction in cars on the road and encouraging people to travel by more sustainable transport methods.
Climate Change Implications	
Climate change will have many implications such as impacts on health, flooding, river quality, water resources and quality, biodiversity, agriculture, and historic assets.	The LTP4 should have the foresight to consider the implications of climate change and potential adaption strategies.

Key Environmental Issues	Opportunities for Mitigation/Enhancement
Important transport links and ports could be affected by climate change. Built structures such as bridges, promenades, pylons, roads and railway lines will become more vulnerable to higher winds, flooding, storm events and changes in soil moisture.	Where transport links and structures are susceptible to the impacts of climate change, strategies should be developed for their preservation. Similarly, the susceptibility of an area to climate change should be considered when constructing new infrastructure.
Landscape	
There are high quality landscapes including the Lincolnshire Wolds Area of Outstanding Natural Beauty. These should be conserved and enhanced.	Any transport schemes developments associated with the LTP4 should not adversely impact Landscapes.

4.5 SEA Objectives

A series of SEA objectives were developed at the scoping stage, taking into account the relationship between LTP4 and the objectives of other PPPs, along with findings of the baseline information review. These objectives have formed the basis for the SEA evaluation of different LTP4 options. Following consultation a total of 23 objectives were developed, these are listed in Table 4.2.

The SEA objectives are compared with the LTP4 objectives to assess whether they are compatible in Chapter 7.

Table 4.2 - SEA Objectives

SEA Objectives	Potential Indicators
SEA Topic Biodiversity, Flora and Fauna	
Environment	
1. To ensure protection of biodiversity and geodiversity at designated sites and European protected species	Total area of sites of Special Scientific Interest (SSSI) land
	% area of land designated as SSSI within the local authority area in favourable condition
	Change in areas designated for their intrinsic environmental value, including sites of international, national, regional, sub-regional or local significance: a) Loss, b) Addition
	Area of land designated as a Local Nature Reserve (LNR)
	Area of land designated as Special Area of Conservation (SAC)
	Area of land designated as Special Protected Area (SPA)
	Area of land designated as Ramsar
	Area of land designated as Site of Nature Conservation Interest (SNCI)

SEA Objectives	Potential Indicators
	Area of land designated as a local Geological Site
	Number of transport related activities with conditions to imposed to ensure working practices and works to protect/ enhance protected species
	Area of SSSIs in adverse condition as a result of transport related development
	Number of planning applications with conditions to ensure works to manage/ enhance the condition of SSSI/ SAC/ SPA/ Ramsar features of interest
2. To protect, maintain, restore and enhance general biodiversity and geodiversity across Lincolnshire	% area of land designated as SNCI within the local authority area in favourable condition
	Number of biodiversity enhancement schemes implemented through transport related activities for example wild-flower planting on roadside verges and street trees
	Number of biodiversity enhancement schemes implemented through transport related activities to promotes priority species/habitats in Biodiversity Action Plans
	BAP habitat created/ managed as result of granting planning permission and which meets Biodiversity Action Plan targets
SEA Topic Soil	
3. Promote the conservation and wise use of land, reduce contamination, and protect soil quality and quantity, particularly in areas of the best and most versatile agricultural land	Permitted loss of Grade 1 and 2 land (ha) Agricultural Land
	% of transport related development on brownfield sites
	% of Part 2A sites cleared up/ discharged
	Number of transport related pollution incidents
SEA Topic Water	
4. Prevent pollution to the water environment and protect resources	The percentage of river length assessed as
	a) good biological quality
	b) good chemical quality
	Bathing Water Quality
5. Reduce vulnerability to flooding	Km of roads at risk from flooding: river, tidal and Fluvial
SEA Topic Air	
6. Maintain and where possibly Improve air quality	Number of Local Air Quality Management Areas (LAQMA)
	NO ₂
	PM ₁₀ levels
SEA Topic Climate	
7. Mitigate climate change	Carbon dioxide emissions by sector and per capita emissions. a) transport

SEA Objectives	Potential Indicators
	b) industrial and commercial sources c) domestic sources
8. Adapt to the impact of climate change	Number of transport applications granted with sustainable urban drainage system (SUDS)
	Km of roads at risk from flooding: river, tidal and fluvial
	Number of flood prevention schemes carried out on major roads
	Length of green infrastructure network , including greenways
	Number of trees planted on existing road network
SEA Topic Cultural Heritage & Landscape	
9. Conserve and enhance the historic environment, heritage assets and their setting	Number of heritage sites classified as 'heritage at risk' on the national register
	Number of archaeological sites at risk
	Number of transport related applications refused in conservation areas because of their adverse effects
	Number of transport schemes where contributions are made to the enhancement of heritage assets or their setting
	The number of transport schemes resulting in the loss of heritage assets or adversely affecting their setting
10. To protect and enhance attractive landscapes and townscapes in terms of both their visual quality and their character	Number of transport related applications refused because of adverse effects on the designated landscape areas
	Number of visual impact assessments undertaken as part of any transport related planning applications
	Number of transport related schemes where contributions are made to the enhancement of landscape or visual setting
SEA Topic Material Assets	
Economic	
11. Improve access to education facilities and employment opportunities	% of new residential development within 30 minutes public transport time of a: GP, Hospital, Primary School Secondary School, Employment Centre and retail centres
	% of the resident population travelling 20 km < 30Km work
	Areas suffering from severance
12. Protect and enhance green infrastructure and open space	Number of urban parks
	Number of green roofs granted planning permission
	Total km of public Rights of Way (PRoW) network
	Total km of new cycle routes during monitoring period
	Major additional open space land provided in association with other development
	Area of open space permitted to be converted to other uses specifically transport related
	Area of land designated as a Local Nature Reserve (LNR)

SEA Objectives	Potential Indicators
	Area of land designated as Country or Regional Park
	Number of Country Parks recognised by the Country Parks recognised by the Country Parks Accreditation Scheme
	Number of Green Spaces with a Green Flag Award
13. Encourage tourism	Visitor numbers
	Visitor spend
14. Protect agricultural land	Permitted loss of Grade 1 and 2 land (ha) Agricultural Land
	% of Part 2A sites cleared up/ discharged
	Number of transport related pollution incidents
15. Ensure accessibility is maintained for major infrastructure	Number of travel plans & Transport Assessments (TA) received for all major infrastructure projects i.e. waste, housing, employment, schools, hospitals, mineral extraction, crude oil extraction
	Traffic flow of HGV vehicles through residential areas
16. To ensure that transport related activities use natural resources more efficiently and sustainably, in particular land, mineral aggregates, water and fuel.	Number of new development promoting clean transport technology for example: car parks for electric vehicles, bike sharing scheme, car clubs, cycle parking
	Number of SWMPs conditioned on transport related planning permissions
17. To promote sustainable design and construction techniques for both new and existing transport schemes	Number of transport developments accredited to CEEQUAL
	Number of SWMPs conditioned on transport related planning permissions
SEA Topic Population & Human Health (includes transport)	
Social	
18. Help support communities to maintain facilities for social cohesion and enabling equal access to basic services, amenities, & open space; easily, safely and affordably	<p>% of residents who think that the following aspects of their area are most in need of improving:</p> <ul style="list-style-type: none"> a) activities for teenagers; b) levels of traffic congestion c) road and pavement repairs d) public transport e) Levels of crime f) sport and leisure facilities; g) level of pollution h) access to nature i) parks and open spaces. J) cultural facilities (for example, cinemas, museums)

SEA Objectives	Potential Indicators
	<p>Area of open space permitted to be converted to other uses specifically transport related</p> <p>Major additional open space land provided in association with other development</p> <p>% of new residential development within 30 minutes public transport time of a: GP, Hospital, Primary School Secondary School</p> <p>% of the resident population travelling 20 km < 30Km work</p> <p>Total road accidents – KS1</p> <p>Total road accidents – Children</p> <p>Total road accidents – slight injury</p> <p>% of total pedestrian road accident casualties</p> <p>% of total cyclist road accident casualties</p>
19. Increase accessibility to sustainable transport for both local residents, tourists and employers	<p>The percentage of the resident population who travel to work:</p> <p>a) by private motor vehicle</p> <p>b) by public transport</p> <p>c) on foot or cycle</p> <p>Total km of new cycle routes during monitoring period</p> <p>Total km of public Rights of Way (PRoW) network</p> <p>% of households within walking distance of hourly daytime bus service</p> <p>Estimated traffic flows for all vehicle types (million vehicle km)</p> <p>Percentage of new holiday accommodation and attractions within 800m of a public transport route</p> <p>Number of additional bus services for all rural areas</p> <p>Number of visitor numbers to tourist attractions</p> <p>Number of real time bus stops</p> <p>Number of workplace, school and visitor travel plans submitted as part of planning applications</p> <p>% of freight being transported by sustainable transport modes such as train rail and water</p> <p>Number of park and rides</p> <p>Number of park and rides leading to adverse impacts i.e. congestion in areas previously unaffected</p>
20. Create conditions to improve health, promoting healthy lifestyles, especially routine daily exercise and reduce health inequalities	<p>% of overweight/obese children</p> <p>a) age 4-5yrs</p> <p>b) age 10- 11 yrs</p> <p>Asthma rates in children</p> <p>The percentage of the resident population who travel to work:</p> <p>a) by private motor vehicle</p>

SEA Objectives	Potential Indicators
	b) by public transport
	c) On foot or cycle
	Total km of new cycle routes during monitoring period
	Total km of new footpaths created
	% of people satisfied with local sports provision (all adults)
	% of respondents who claim to undertake 30 minutes of moderate physical activity at least 3 days per week
	Age standardised mortality rates for
	a) all cancers 2006 (yrs)
	b) circulatory diseases 2006 (yrs)
	c) respiratory diseases 2006 (yrs)
	Self-reported measure of people's overall health & wellbeing
21. Increase accessibility to open space and green infrastructure	Major additional open space land provided in association with other development
	Area of open space permitted to be converted to other uses specifically transport related
	Area (ha) of Local Nature Reserve per 1,000 population
	Total km of new cycle routes during the monitoring period
	Length of green infrastructure network, including greenways
	Total km of public Rights of Way (RoW) network
22. Ensure that transport developments/schemes do not have a disproportionate effect on local residents	Number of complaints related to noise from
	a) Roads b) Construction c) Maintenance
	Number of roads schemes/developments registered with considerate constructors scheme
23. Ensure active voluntary and community engagement in decision making in transport planning	Attendees at stakeholder workshops
	Number of consultation responses

5 Habitats Regulation Assessment Summary

The proposals included in the Lincolnshire LTP4 have been screened for their potential to have significant impacts on Natura 2000 sites. The following effects arising from the LTP4 may give rise to potential impacts:

- Changes in air quality through pollution;
- Increases in noise and light levels (as a result of vehicles, construction or new infrastructure); and
- Changes in soil or water chemical composition (through road spray and construction activities).

Natura 2000 sites have been identified and considered in detail. Potential impacts on habitats and species are dependent upon distribution, composition, structure, function and species mobility and migration.

A total of 16 sites designated as being of European nature conservation importance were identified. These comprise the following 11 SACs, five SPAs and five Ramsar sites:

- Barnack Hills & Holes SAC
- Baston Fen SAC
- Fenland SAC
- Gibraltar Point SPA and Ramsar
- Grimsthorpe SAC
- Hatfield Moor SAC
- Humber Estuary SAC/SPA/Ramsar
- Nene Washes SAC
- Nene Washes SPA/Ramsar
- Orton Pit SAC
- Saltfleet-Theddlethorpe Dunes & Gibraltar Point SAC
- The Wash & North Norfolk Coast SAC
- The Wash SPA/Ramsar
- Thorne Moor SAC
- Thorne and Hatfield Moors SPA; and
- Woodwalton Fen Ramsar

No significant impacts to Natura 2000 sites will directly result from the implementation of the LTP4. However, based on the findings of the HRA screening

process, it is possible that significant impacts could arise from some specific schemes or projects implemented in accordance with the LTP4. There is also potential for multiple plans to have in-combination effects with schemes implemented in accordance with the LTP4. Because of this uncertainty, the potential for schemes to affect Natura 2000 sites included within the HRA should be considered again when carrying out further HRA work at the project level or when preparing more detailed lower tier plans.

6 Health Impact Assessment

The Population and Human Health related SEA objectives are presented in Table 4.2, items 18 - 23.

Health issues were assessed as part of the baseline review and are presented within the scoping report. This considered the profile of health in Lincolnshire, and the levels of obesity and physical activeness that are present. Mitigation measures for addressing health issues are summarised in Table 6.1 below.

Table 6.1 - Key Health Issues and Mitigation

Key Health Issues Identified	Mitigation recommendations to be incorporated into Preferred Strategy
<p>Life Expectancy</p> <p>The health of people living in Lincoln is generally in line with the England average. Life expectancy is lower for both men and women in Lincoln compared to the England average.</p> <p>Levels of deprivation are lower than average, although there are 22,730 children living in poverty in Lincolnshire.</p> <p>The Lincolnshire Local Area Agreement has prioritised tackling physical activity, smoking, child obesity, alcohol misuse, and road injuries and deaths.</p>	<p>The LTP4 should aim to increase Lincolnshire's health status and should consider the need for access to important amenities such as health care and the provision of schemes to facilitate physical exercise.</p> <p>The LTP4 should be compliant with the Lincolnshire Local Area Agreement, in particular facilitating the reduction of road injuries and deaths.</p>
<p>Disease</p> <p>The rates of early deaths in Lincolnshire from heart disease and strokes have improved in recent years, but still remain higher than the average for England.</p>	<p>Regular physical activity helps prevent and manage diabetes; therefore it is essential to promote the health benefits of cycling and walking through campaigns and increased access to information.</p>
<p>Obesity and physical activity</p> <p>Obesity levels are increasing in the UK in part due to an increasing dependence on motor vehicles resulting in lower levels of physical activity through travel. Obesity in children in 2010-2011 was 9.4% in Lincolnshire which is a slight improvement on previous years and is comparable with the national average.</p> <p>The proportion of physically active adults in 2011 was recorded at 11.26% which is similar to the national average of 11.45%. Figures for North Kesteven show that physical activity is the highest in the county.</p> <p>Cycle flows across the county have grown by some 14% since 2001, although there was a decline between 2005 and 2010 with a particularly sharp fall in 2010. Cycling figures for 2011 were similar to those for 2006-2008</p>	<p>The LTP4 should aim to maintain, and where possible increase, Lincolnshire's high health status of children. Introducing walking and cycling schemes to encourage increased physical activity in children should be considered especially in the most effected areas.</p> <p>Regular physical activity helps prevent and manage obesity; therefore it is essential to promote the health benefits of cycling and walking through campaigns and increased access to information.</p> <p>North Kesteven should be used as a template for encouraging physical activity across the county.</p> <p>Cycling should be promoted where possible in the LTP4.</p>

Key Health Issues Identified	Mitigation recommendations to be incorporated into Preferred Strategy
<p>Travel to School</p> <p>Car (including car sharing) and walking are the predominant modes of travel at primary schools making up 91.5% of all journeys (47.6% by car and 43.9% on foot in 2009).</p> <p>At secondary schools, there is much greater use of public transport (41.4% compared with 5.1% at primary schools), with the amount of cycling doubling (albeit only to 6.1% compared with 2.8% at primary schools). The percentage arriving on foot is reduced reflecting the wider catchment areas.</p>	<p>School Travel Plans should be promoted, with incentives for walking and cycling rather than travelling by car.</p>
<p>Road Safety</p> <p>The rates of death and injury on Lincolnshire's roads are significantly worse than the national average. There has been a large increase in the number of people Killed or Seriously Injured in all districts between 2009 and 2011 rising from 459 to 484. East Lindsey shows the highest figures with 140 KSI in 2011.</p>	<p>Safety on the transport network should be a priority of the LTP4.</p> <p>Awareness should be raised of accident hot spots and highways improvements particularly in these areas should be carried out.</p> <p>Road safety initiatives, speed cameras, interactive signs and highways improvements in areas with high incident levels are all potential ways to improve road safety.</p> <p>Reducing the speed limit to 20mph in residential areas would also help to improve road safety.</p> <p>Measures to improve road safety in East Lindsey should be a priority.</p>
<p>Deprivation</p> <p>Index of Multiple Deprivation figures show that in 2010 Lincolnshire's district councils were ranked as being slightly more deprived than in 2007. 12% of Lincolnshire's population live within England's 20% most deprived areas which is a 1% increase on 2007 data.</p>	<p>The LTP4 should implement policies to ensure that the transportation-related elements of deprivation do not rise.</p> <p>Social exclusion can be reduced by ensuring that transport is affordable and available to all residents through public transport schemes.</p> <p>Low income households, need access to health, employment and education services, access should be affordable and where possibly accessed by foot or cycle.</p> <p>Low income families are likely to suffer from health inequalities; therefore it is essential to promote the health benefits of cycling and walking through campaigns and increased access to information.</p>

Key Health Issues Identified	Mitigation recommendations to be incorporated into Preferred Strategy
<p>Rate of Employment</p> <p>The employment rate of those of working age in Lincolnshire is 77.7% which is higher than the national average of 76.1%.</p> <p>Approximately 3.4% of the working age population in Lincolnshire are claiming unemployment benefit.</p>	<p>The LTP4 should consider how transport initiatives can address areas with high unemployment by ensuring that access to employment and education opportunities is provided and improved.</p> <p>All future growth areas should be linked to employment areas.</p> <p>Mitigate against identified areas of severance by improving access and incorporating cycling and pedestrian accessibility into the design of all new infrastructure and existing infrastructure.</p>
<p>Crime</p> <p>Crime in Lincolnshire is lower than the national average with 64 crimes per 100,000 of population in the 12 months to September 2011 compared to the national average of 74. Lincoln has a higher crime rate than the other districts and boroughs of the county.</p>	<p>Ensure that all new cycle parking is designed to prevent crime. For example, cycle parking is located in well lit areas with surveillance cameras.</p>
<p>Air Quality</p> <p>Air quality across the county is generally considered to be good. However vehicle emissions are a primary source of air pollutants at some locations, particularly in areas that suffer from congestion (e.g. Lincoln and other town centres), as well as within settlements situated along the county's strategic road network. As a consequence there are 6 AQMAs in Lincolnshire, declared primarily as a result of pollution caused by traffic emissions. These AQMAs are located in Lincoln, two in Boston, one in Stamford and three in Grantham.</p>	<p>Minor highways improvements should be considered to reduce congestion.</p> <p>Support adoption of low emission vehicles through parking charges tiered to vehicle emissions.</p> <p>Demand management measures e.g. increasing parking charges.</p> <p>Encouragement of car sharing to reduce vehicle movements and hence emissions.</p> <p>Promotion of more sustainable options for the journey to school rather than the car.</p>
<p>Climate Change</p> <p>There are a number of potential health impacts as a result of climate change including increases in heat related illness, UV level exposure and vector-borne diseases. As such climate change may put an additional strain on the UK health care system.</p>	<p>The health impacts of climate change should thus be minimised by incorporating both mitigation and adaptation measures into the UK's health and social care infrastructure. It is crucial that access is improved and maintained to hospitals and GP's surgeries for all areas.</p> <p>Work with emergency planners should be carried out and flood prevention schemes should be implemented.</p> <p>The LTP4 should ensure that built structures such as bridges, promenades, pylons, roads and railway lines are maintained to ensure that they are robust against extreme weather conditions, and that the materials used in the maintenance of existing and new infrastructure are robust to heat and snow.</p>

7 Testing the Objectives

7.1 Introduction

To help deliver the ‘Vision for 2030’ outlined in Section 1.4, the LTP4 sets out a series of eight specific transport objectives shown in Table 7.1, below. Stage B1 of the SEA guidance requires the SEA to test these Plan objectives against the SEA objectives. This exercise identifies where there are tensions or synergies that exist between the different objectives, and any clear conflicts that should be addressed. It is primarily used to inform development of the LTP4 and secondarily, to refine the LTP4 objectives. Compatibility testing was also undertaken internally for both sets of objectives.

Table 7.1 - Local Transport Plan Objectives

1.	To assist the sustainable economic growth of Lincolnshire, and the wider region, through improvements to the transport network
2	To improve access to employment and key services by widening travel choices, especially for those without access to a car
3	To make travel for all modes safer and, in particular, reduce the number and severity of road casualties
4	To maintain the transport system to standards which allow safe and efficient movement of people and goods
5	To protect and enhance the built and natural environment of the county by reducing the adverse impacts of traffic, including HGVs
6	To improve the quality of public spaces for residents, workers and visitors by creating as safe , attractive and accessible environment
7	To improve the quality of life and health of residents and visitors by encouraging active travel and tackling air quality and noise problems
8	To minimise carbon emissions from transport across the country

7.2 Testing the LTP4 Objectives against the SEA objectives

The LTP4 objectives (Table 7.1) have been tested for compatibility against the SEA objectives (Table 4.2); using a standard matrix approach, professional judgement and peer review.

The assessment outcomes were recorded as compatible, incompatible, unrelated or unclear (a relationship between objectives exists, but there is no direct compatible or incompatible relationship). The symbols in Table 7.2 were used in the assessment matrices to indicate the compatibility of the objectives.

The results of the assessment are shown in Table 7.3 below.

Table 7.2 - Compatibility Key

+	Compatible
0	Unrelated
?	Unclear
—	Incompatible

Table 7.3 - LTP4/ SEA Objectives Compatibility Matrix

	SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23
LTP4 1	?	?	?	?	0	?	?	0	?	?	+	?	+	?	+	?	?	+	+	0	?	0	0
LTP4 2	?	?	0	?	0	?	?	0	0	0	+	0	+	0	+	0	0	+	+	+	+	+	0
LTP4 3	0	0	0	0	0	0	0	0	0	0	+	0	+	0	+	0	0	+	0	+	+	+	0
LTP4 4	0	0	0	0	0	+	+	0	0	0	+	0	+	0	+	+	+	+	+	0	0	0	0
LTP4 5	+	+	+	+	0	+	+	0	+	+	0	+	+	+	0	+	0	+	0	0	+	+	0
LTP4 6	?	?	+	+	0	0	0	0	+	+	0	+	+	0	0	0	0	+	+	+	+	0	0
LTP4 7	0	0	0	0	0	+	+	0	+	0	0	0	+	+	0	0	0	+	+	+	0	+	0
LTP4 8	0	0	0	0	0	0	+	0	0	0	0	0	0	0	?	+	0	0	?	+	+	0	0

7.2.1 *LTP4 Objectives Summary*

None of the LTP4 objectives are fundamentally incompatible with the SEA objectives. In general the LTP4 objectives are either compatible (67/ 184) or unrelated (95/ 184) to the objectives of the SEA. All of the LTP4 objectives are compatible with at least four SEA objectives.

LTP4 objective 5 which aims to (protect and enhance the built and natural environment of the county by reducing the adverse impacts of traffic, including HGVs) is the most compatible with the SEA objectives as it closely aligns with environmental protection objectives.

The compatibility of LTP4 objective 1 (assisting sustainable economic growth through improvements to the transport network) with many of the SEA objectives is unclear. There is the potential for both beneficial and adverse effects as a result of improvements to the transport network. For example, the construction of new roads has the potential to adversely impact biodiversity, the water environment and air quality through changes in land use and increased traffic pollution. In contrast, junction improvement schemes at 'congestion hotspots' may improve the traffic network by improving traffic flow and subsequently reducing pollution to local air quality. In general, the uncertainties exist for LTP 4 objective 1 over the nature of physical developments (new constructions or expansions) to improve the transport network and the potential effects on the natural environment.

The compatibility of LTP4 objective 2 (improving access to employment and key services by widening travel choices) with five SEA objectives is also unclear. For example, wider range of travel choices could include extending the bus networks, which could potentially increase the number of bus trips taken, and have an adverse effect on local air quality. Conversely, travel choices could include improved access to bicycles or other sustainable methods of travel, which may reduce the number of car trips taken and thus improve local air quality.

7.2.2 *SEA Objectives Summary*

SEA objective 13 (encourage tourism) and SEA objective 18 (to support communities to maintain facilities for social cohesion and equal access) are compatible with the majority of the LTP4 objectives. This indicates that these SEA objectives would be well supported by the LTP4 objectives.

The compatibility of the SEA objectives 1 and 2 is unclear with LTP4 objectives 1, 2 and 6 and highlights the potential for negative and beneficial effects on biodiversity at designated and undesignated sites as a result of the Plan. The potential for the LTP4 objectives to involve physical development (new construction or expansion) means there is the potential for beneficial and adverse effects on biodiversity.

SEA objective 8 (adapt to the impact of climate change) and SEA objective 23 (to ensure voluntary and community engagement in transport planning decision making) are unrelated to any LTP4 objectives.

7.3 Internal Compatibility of the LTP4 Objectives and SEA Objectives

The compatibility of the LTP4 objectives (Table 7.4) and the SEA objectives (Table 7.5) have been internally compared to one another in case inconsistencies may have environmental implications. The standard matrix approach and compatibility key (Table 7.2) were used for the assessment.

The results of the assessment for the LTP4 objectives are shown in Table 7.4 and the SEA objectives in Table 7.5 below.

Table 7.4 - Internal compatibility of the LTP4 objectives

LTP4 Objectives	1								
	2	+							
	3	0	0						
	4	+	+	+					
	5	?	0	+	+				
	6	0	+	+	+	+			
	7	?	+	+	+	0	+		
	8	?	?	0	+	0	0	+	
		1	2	3	4	5	6	7	8
LTP4 Objectives									

7.3.1 Internal Compatibility of LTP4 Objectives Summary

From a total of 28 possible results; 16 scored as compatible, 8 were unrelated and 4 were unclear. None of the LTP4 objectives were fundamentally incompatible with one another.

Objective 4 which involves the maintenance of the transport system is compatible with all the other objectives. Objective 3 which aims to 'make travel for all modes safer' and 6 'to improve the quality of public spaces' are also either compatible or unrelated to the other objectives.

Objective 1 which seeks to improve the transport network has an unclear relationship with objectives 5, 7 and 8. This is due to uncertainties over the nature of 'improvements to the transport network' and the potential effects on the environment.

The compatibility of objective 2 with objective 8 is also unclear. Options to increase travel choices may increase carbon emissions, for example, by increasing the number of bus trips.

7.3.2 *Internal Compatibility of the SEA objectives Summary*

None of the SEA objectives are fundamentally incompatible, with the majority of objectives either compatible or unrelated to one another. All of the objectives are compatible with at least three objectives.

SEA objective 23 seeks to ensure community engagement in transport planning is compatible with all of the other objectives as all of the other objectives can incorporate an element of community engagement.

The compatibility of objective 11 is unclear with 9 of the other objectives. The objective seeks to improve access to education facilities and employment which has the potential to be incompatible with objectives that aim to improve environmental protection to biodiversity, soil quality, water resources, air quality and landscapes, where there could be negative impacts from construction works.

Encouraging tourism, objective 13, has the potential for incompatibility with other objectives dealing with the protection of biodiversity and sites of ecological sensitivity. SEA objective 15 and 18 seek to maintain access for major infrastructure and social cohesion; they have the potential to be incompatible with objective 6 to maintain or improve air quality.

Table 7.5 - Internal Compatibility of the SEA Objectives

SEA Objectives	1																						
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	1																						
	2	+																					
	3	+	+																				
	4	+	+	+																			
	5	+	0	+	+																		
	6	0	0	0	0	0																	
	7	0	0	+	+	+	+																
	8	+	0	+	+	+	0	0															
	9	+	+	+	+	+	+	+	+														
	10	+	+	+	+	+	+	+	+	+													
	11	?	?	?	?	?	?	?	0	?	?												
	12	0	+	+	+	0	0	0	0	0	+	0											
	13	?	?	0	0	0	0	0	0	0	0	0	+										
	14	0	0	+	0	0	0	0	0	0	0	0	+	0									
	15	0	0	0	0	+	?	0	0	0	0	+	0	0	0								
	16	+	+	+	+	0	+	+	0	+	+	0	0	0	+	0							
	17	0	0	+	+	+	+	+	+	+	+	+	0	0	+	+	+						
	18	0	0	0	0	0	?	0	0	0	0	+	+	0	0	+	0	+					
	19	0	0	0	0	0	+	+	0	0	0	+	+	0	0	0	+	+	+				
	20	0	0	0	0	0	+	+	0	0	0	0	+	0	0	0	0	0	+	+			
	21	0	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0	0	+	+	+		
	22	0	0	0	0	0	+	0	0	0	0	+	+	0	+	0	0	0	+	+	+	+	
23	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SEA Objectives																							

8 Developing Strategic Alternatives and Predicting and Evaluating the Effects of the Draft Plan

8.1 Introduction

The SEA Regulations require that the significant environmental effects of a plan or programme are identified, described and evaluated. The likely significant effects on the environment need to be stated in the Environmental Report accompanied by measures to be taken to avoid, reduce or mitigate them.

In this section the likely significant environmental effects of implementing the LTP4 are assessed along with the likely effects of continuing with the LTP3 or 'business as usual' which is assessed as an alternative option to the LTP4.

The LTP3 and LTP4 have been divided into the following policy categories in Table 8.1 for assessment.

Table 8.1 - LTP3/ LTP4 Policy Groups

LTP3 Policy Categories	LTP4 Policy Categories
Supporting the Economy	Supporting Growth and Tackling Congestion
Delivering Accessibility	Lincoln
Safer Roads	Boston
Tackling Congestion – General	Grantham
Tackling Congestion – Lincoln	Gainsborough
Tackling Congestion – Grantham	Supporting the Larger Market Towns
Tackling Congestion – Boston	Improving Accessibility
Better Air Quality	Safer Roads
Reducing Carbon	Asset Management
Other Quality of Life Issues	Transport and the Environment

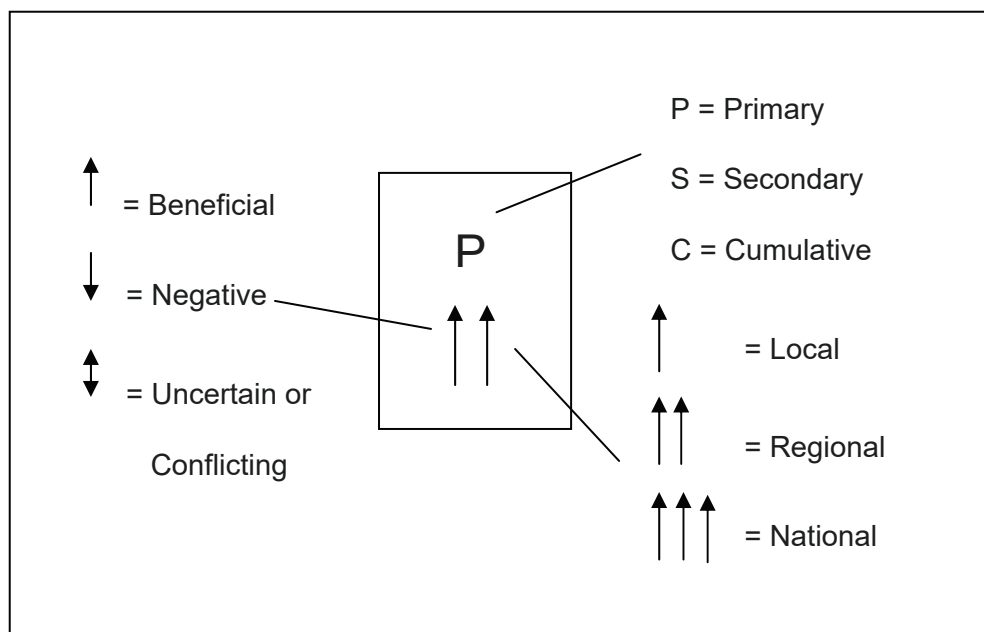
8.2 Methodology

The methodology involved screening each policy within the LTP3 and LTP4 against each SEA objective.

The assessment identified where impacts of the policies would be positive or negative in relation to the SEA objectives. The assessment also identified where the impacts would be uncertain as a result of a lack of available baseline information, insufficient knowledge of cause and effects, or because multiple impacts might result in counteracting positive and negative effects.

The assessment identifies where the policies associated with the LTP3 and the LTP4 would have primary, secondary or cumulative impacts in relation to the SEA objectives. Additionally the assessment indicated where impacts are likely to be experienced on a local, regional or national scale.

The full option appraisal matrices are presented in Appendix 4 for which the key is as follows:



The following tables provide a synopsis of the LTP3 and LTP4 policies and an assessment of the environmental, economic and social impacts. Table 8.3 is a summary of the predicted effects of the LTP3 policies, and Table 8.4 is a summary of the LTP4 policies. The key for the tables is shown in Table 8.2.

Table 8.2 - Impacts Key

Key	
+	Overall positive impact
0	No impact
?	Overall impact unclear
–	Overall negative impact

Table 8.3 - LTP3 Policies Summary

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
Supporting the Economy			
<p>Summary:</p> <p>Environment</p> <p>New road infrastructure may help to alleviate congestion and thus improve air quality. However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, open space and water and may reduce air quality by encouraging car use. Similarly, upgrading/relocating the bus station in Gainsborough and improvements at key junctions have the potential for improving local air quality by encouraging the use of sustainable transport and reducing congestion but also have the potential for negative environmental effects depending on the location and design.</p> <p>Economic</p> <p>In general, measures to reduce congestion, encourage the use of sustainable forms of transport and improve connectivity through new roads will support Lincolnshire's economy by providing access to education and employment opportunities and major infrastructure and also by encouraging tourism. However, the construction of new roads will require the use of agricultural land, a major economic asset in Lincolnshire.</p> <p>Social</p> <p>In general all of the policies have social benefits except for where new infrastructure has been proposed and there is the potential for disproportionate negative effects on local residents. For instance, where land will be taken by Compulsory Purchase Orders.</p>	?	+	?
Delivering Accessibility			
<p>Summary:</p> <p>Environment</p> <p>By improving facilities for cyclists and pedestrians and reducing the need to travel by private car, residents will have alternative options for travel and private car use may be reduced.</p>	+	+	+

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
<p>Should this be the case, there will be local air quality improvements and a reduction in carbon emissions. Continued expansion of InterConnect, CallConnect and IntoTown bus services along with a direct rail link from London to Lincoln will provide a sustainable alternative to car use which should lead to an improvement in local air quality and a reduction in carbon emissions.</p> <p>Economic</p> <p>Improving the accessibility of rail stations and maximising the benefits from Network Rails plans to upgrade the East Coast Main Line may have important economic benefits for Lincolnshire by encouraging tourism and improving employment and business opportunities. Policies will help to improve access to education and employment opportunities and help to promote tourism in Lincolnshire by improving connectivity.</p> <p>Social</p> <p>Overall, delivering accessibility is beneficial to social objectives. Engaging local communities with the railway will help foster a sense of ownership and encourage its use. Improving facilities for cyclists and pedestrians will also promote healthy lifestyles and improve access to basic services. Increasing local internet connectivity will also to reduce social inequalities and provide equal access to basic services. Expansion of InterConnect, CallConnect and IntoTown bus services will help to improve access to basic services especially for people living in the more rural areas. Both policies will help to provide people with access to sustainable transport.</p>			
Safer Roads			
<p>Summary:</p> <p>Environment</p> <p>Major highways improvements should help to improve traffic flows and as such improve local air quality and reduce carbon emissions. Educational safety and training schemes for cyclists and pedestrians may improve confidence and lead to an increase in the number of people choosing to cycle and walk as opposed to travelling by car and as such lead to an improvement in local air quality and a reduction in carbon emissions.</p>	+	+	+

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
<p>Economics</p> <p>In terms of economics major highways improvements will help to improve access to education and employment opportunities and to major infrastructure. Road safety initiatives for people with Special Educational Needs and School Safety Zones will also help to provide access to employment and educational opportunities.</p> <p>Social</p> <p>There is a significant social benefit associated with road safety schemes, safety enforcement measures and minor highways improvements including a reduction in the number of accidents, injuries and deaths on the road network, an improvement in health via the promotion of healthy lifestyles and improvements in the safe access to basic services.</p>			
Tackling Congestion – General			
<p>Summary:</p> <p>Environment</p> <p>Traffic management measures to improve traffic flows, improvements and expansions of public transport services and measures to encourage the use of sustainable modes of transport should all lead to an improvement in local air quality and a reduction in carbon emissions whether directly or indirectly.</p> <p>Economic</p> <p>These measures should also benefit Lincolnshire economically by improving access to facilities and amenities and helping to encourage tourism.</p> <p>Social</p> <p>In general all of the policies have social benefits. For instance, by increasing the accessibility of sustainable transport, providing access to basic services, promoting healthy lifestyles through cycling and pedestrian improvements and improving access to information.</p>	+	+	+

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
Tackling Congestion – Lincoln			
<p>Summary:</p> <p>Environment</p> <p>The development of new roads and a park and ride facility may help to alleviate congestion and thus improve air quality. However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, water, heritage assets, open space and the landscape and may lead to a reduction in air quality by encouraging car use. Bus corridors and improvements in rail passenger services would likely lead to a reduction in car journeys and an improvement in local air quality and reduction in carbon emissions.</p> <p>Economic</p> <p>Generally all of the proposed policies would have a positive impact on the economy. However, the proposed new road infrastructure and the park and ride facility will require the use of agricultural land, a major economic asset in Lincolnshire. Economically the new bus station will improve access to educational and employment opportunities.</p> <p>Social</p> <p>Socially the policies will improve access to basic services and increase access to sustainable transport. Additionally pedestrianisation of High Street between Wigford Way and Tentercroft Street will encourage people to walk thus encouraging healthy lifestyles. However, there is the potential for disproportionate negative effects on local residents with the development of new road infrastructure and park and ride facilities. For instance, where land will be taken by Compulsory Purchase Orders.</p>	?	+	?
Tackling Congestion – Grantham			
<p>Summary:</p> <p>Environment</p> <p>Many of the proposed alterations and improvements to the bus service and schemes to promote sustainable travel, including integration of bus and rail services, will lead to a reduction in car use and thus improvements in local air quality and carbon emissions. Additionally, new</p>	+	+	+

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
<p>road infrastructure may help to alleviate congestion and thus improve air quality.</p> <p>Economics</p> <p>In terms of economics improved bus and rail services will improve access to educational and employment opportunities.</p> <p>Social</p> <p>Socially, sustainable transport improvements and promotion will improve social cohesion through providing access to basic services and sustainable transport.</p>			
Tackling Congestion – Boston			
<p>Summary:</p> <p>Environment</p> <p>The development of a distributor road to the West of Boston may help to alleviate congestion and thus improve air quality. However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, water, heritage assets, open space, green infrastructure and the landscape and may lead to a reduction in air quality by encouraging car use. The Market Place Enhancement scheme will however, help to protect heritage assets and improve the streetscape and thus encourage tourism. Enhancements to the bus service, including real time information, and the continuation of Boston IntoTown will help to encourage people to use the bus rather than the car and thus improve local air quality. Similarly, cycling and pedestrian improvements should lead to a reduction in car use. Traffic management improvements may also help to improve local air quality by reducing congestion.</p> <p>Economic</p> <p>Measures to reduce congestion will support Lincolnshire's economy by providing access to education and employment opportunities and major infrastructure. However, the construction of new roads will require the use of agricultural land, a major economic asset in Lincolnshire. All the above schemes will help to improve access to education and employment opportunities.</p> <p>Social</p> <p>Refurbishing footpaths and making the Market Place more pedestrian friendly may help to</p>	?	?	?

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
promote walking and thus healthy lifestyles. Other continued walking and cycling improvements will help to promote healthy lifestyles by promoting exercise. The new road infrastructure has the potential to provide access to basic services depending on its design and location. However, there is the potential for disproportionate negative effects on local residents. For instance, where land will be taken by Compulsory Purchase Orders.			
Better Air Quality			
<p>Summary:</p> <p>Environment</p> <p>Introducing new AQMAs should have environmental benefits by leading to an improvement in local air quality by reducing NO_x and PM₁₀ levels.</p> <p>Economic</p> <p>Policies to introduce new AQMAs are unlikely to have any effect on Lincolnshire's economy, either positive or negative.</p> <p>Social</p> <p>Improvements in local air quality should have health related benefits for local residents, particularly for residents who have existing respiratory conditions such as asthma.</p>	+	0	+
Reducing Carbon			
<p>Summary:</p> <p>Environment</p> <p>Encouraging sustainable travel and the use of low carbon technologies will help to reduce carbon emissions and promote the sustainable use of natural resources. A new street lighting campaign with dimming and part time lighting may also have ecological and landscape benefits. The use of alternative fuels could result in both improvements in local air quality and reductions in carbon emissions. Such policies promote the sustainable use of natural resources.</p> <p>Economic</p>	+	0	0

LTP3 Policy Categories - 'Business as Usual' Option	Environment	Economic	Social
<p>Measures to reduce carbon emissions are not considered to have any economic impacts, either positive or negative, as they focus primarily on environmental benefits.</p> <p>Social</p> <p>Measures to reduce carbon emissions are not considered to have social impacts, either positive or negative, as they focus primarily on environmental benefits.</p>			
Other Quality of Life Issues			
<p>Summary:</p> <p>Environment</p> <p>Improving facilities for pedestrians and cyclists, and travel related health initiatives are likely to increase the number of people choosing to walk or cycle as opposed to travel by car and as such improve local air quality and reduce carbon emissions. Also, routing HGV's away from communities by weight restrictions should help to improve local air quality.</p> <p>Economic</p> <p>Rerouting HGV's is likely to restrict their access to major infrastructure and may have an economic impact on businesses within Lincolnshire. Enhancing the streetscape will have landscape benefits which may encourage tourism in the county.</p> <p>Social</p> <p>There will also be health related benefits with improving facilities for pedestrians and cyclists, and travel related health initiatives. Furthermore, speed management measure and the rerouting of HGV's should reduce the number of injuries and accidents sustained on the road network. Travel initiatives will incorporate community involvement in travel planning and the provision of access to sustainable transport and to basic services facilitating social cohesion.</p>	+	?	+

Table 8.4 - LTP4 Policies Summary

LTP4 Policy Categories	Environment	Economic	Social
Supporting Growth and Tackling Congestion			
<p>Summary:</p> <p>Environment</p> <p>Policies seek to increase sustainable modes of travel for residents, businesses, new developments and schools, which should have a secondary positive effect on improvement to local air quality and a reduction in carbon emissions. Improvements in sustainable travel and better travel planning should also lead to reduction in the use of natural resources (such as fuel).</p> <p>Economy</p> <p>Strengthening of rail's role for commuting, use of travel planning and improving traffic flows through intelligent transport systems should reduce congestion on Lincolnshire's road network. This should support the economy by maintaining or improving access for major infrastructure.</p> <p>Social</p> <p>In general all of the policies have social benefits. For instance, by increasing the accessibility of sustainable transport, providing access to basic services, promoting healthy lifestyles through cycling and pedestrian improvements and improving access to information.</p>			
Lincoln			
<p>Summary:</p> <p>Environment</p> <p>The development of new roads, road improvement schemes, and a park and ride facility may help to alleviate congestion and thus improve air quality. Improvements to rail and bus services are likely to a reduction in car journeys and an improvement in local air quality and reduction in carbon emissions. 'Access LN6' policies are likely to result in increased use of sustainable travel (rail, bus, cycling and walking) and a potential reduction in car journeys, reducing emissions and use of natural resources (such as fuel). However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, water, heritage assets, open</p>	?	+	?

LTP4 Policy Categories	Environment	Economic	Social
<p>space, green infrastructure and the landscape and may lead to a reduction in air quality by encouraging car use.</p> <p>Economic</p> <p>Generally all of the proposed policies would have a positive impact on the economy. Economically the new bus station will improve access to educational and employment opportunities. However, the proposed new road infrastructure and the park and ride facility may result in the loss of agricultural land, a major economic asset in Lincolnshire.</p> <p>Social</p> <p>Socially the policies will improve access to basic services and increase access to sustainable transport. Additionally pedestrianisation of High Street between Wigford Way and Tentercroft Street will encourage people to walk thus encouraging healthy lifestyles. In particular residents in the LN6 area of South West Lincoln and North Hykeham should benefit from improved rail, bus, cycling and walking facilities. However, there is the potential for disproportionate negative effects on local residents with the development of new road infrastructure and park and ride facilities. For instance, where land will be taken by Compulsory Purchase Orders.</p>			
Boston			
<p>Summary:</p> <p>Environment</p> <p>The development of a distributor road to the West of Boston may help to alleviate congestion and thus improve air quality. Delivery of the Waterways Project should encourage people to cycle potentially reducing air pollution and carbon emissions from cars. The Market Place Enhancement scheme will help to protect heritage assets and improve the streetscape and thus encourage tourism. Enhancements to the bus service, including real time information, and the continuation of Boston IntoTown will help to encourage people to use the bus rather than the car and thus improve local air quality. Traffic management improvements may also help to improve local air quality by reducing congestion. However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, water, heritage assets, open space, green infrastructure and the landscape and may lead to a reduction in air quality by encouraging car use.</p>	?	+	?

LTP4 Policy Categories	Environment	Economic	Social
<p>Economic</p> <p>Measures to reduce congestion will support Lincolnshire's economy by providing access to education and employment opportunities and major infrastructure. However, the construction of new roads may result in the loss of agricultural land, a major economic asset in Lincolnshire.</p> <p>Social</p> <p>Refurbishing footpaths and making the Market Place more pedestrian friendly, and the improvement of cycling facilities through the Waterways Project, may help to promote walking and cycling and thus healthy lifestyles. Other continued walking and cycling improvements will help to promote healthy lifestyles by promoting exercise. The new road infrastructure has the potential to provide access to basic services depending on its design and location. However, there is the potential for disproportionate negative effects on local residents. For instance, where land will be taken by Compulsory Purchase Orders.</p>			
Grantham			
<p>Summary:</p> <p>Environment</p> <p>Many of the proposed measures and improvements to bus and rail accessibility and integration will promote sustainable travel and result in a reduction in car use and thus improvements in local air quality and carbon emissions. A priority list of improvement works for non-motorised users provide additional links and facilitate increased cycling and walking, and potentially reduce car usage. Additionally, new road infrastructure may help to alleviate congestion and thus improve air quality.</p> <p>Economic</p> <p>In terms of economics improved bus and rail services will improve access to educational and employment opportunities and potentially make Grantham more attractive to tourists.</p> <p>Social</p> <p>Socially, sustainable transport improvements and promotion will improve social cohesion through providing access to basic services and sustainable transport. Additional links for cyclists and pedestrians should encourage increased physical activity and promote healthy</p>	+	+	+

LTP4 Policy Categories	Environment	Economic	Social
lifestyles.			
Supporting the Larger Market Towns			
<p>Summary:</p> <p>Environment</p> <p>Partnership working between the County Council, district councils, developers and other bodies to deliver transport improvements and to improve the movement of traffic in larger market towns should result in reduced congestion and thus improve local air quality. New road infrastructure may also alleviate congestion and thus improve air quality. However, new road infrastructure has the potential for significant negative effects on biodiversity, soil, open space, green infrastructure and water and may reduce air quality by encouraging car use.</p> <p>Economic</p> <p>In general, measures to deliver transport improvements and improve connectivity through new roads will h Lincolnshire's economy by providing access to education and employment opportunities and major infrastructure and also by encouraging tourism. However, the construction of new roads may result in the loss of agricultural land, a major economic asset in Lincolnshire.</p> <p>Social</p> <p>In general all of the policies have social benefits except for where new infrastructure has been proposed and there is the potential for disproportionate negative effects on local residents. For instance, where land will be taken by Compulsory Purchase Orders.</p>	?	+	?
Improving Accessibility			
<p>Summary:</p> <p>Environment</p> <p>By improving public transport infrastructure and providing more accessible and up to date information on bus services it will encourage the use of public transport in the county. This should have a positive effect on reducing pollution to the air and carbon emissions. Continued expansion of InterConnect and CallConnect bus services along with a direct rail link from</p>	+	+	+

LTP4 Policy Categories	Environment	Economic	Social
<p>London to Lincoln will provide a sustainable alternative to car use which should lead to an improvement in local air quality and a reduction in carbon emissions. By investing in broadband infrastructure in rural areas there is the potential to reduce the need to travel at all, eliminating the negative impacts from travel on environmental receptors.</p> <p>Economic</p> <p>Measures to improve public transport infrastructure, accessibility of travel information and number of services on major rail routes may have important economic benefits for Lincolnshire by encouraging tourism and improving access to business and employment opportunities.</p> <p>Social</p> <p>Unsurprisingly for measures that seek to increase accessibility to transport, many policies will directly and indirectly have a positive effect on social objectives. In particular they will strongly support improving access to sustainable transport, which will have a secondary effect of increasing access to basic services. Other potential benefits include increased access to green infrastructure through the development of new cycle ways.</p>			
Safer Roads			
<p>Summary:</p> <p>Environment</p> <p>Educational safety and training schemes for cyclists and pedestrians may improve confidence and lead to an increase in the number of people choosing to cycle and walk as opposed to travelling by car and as such lead to an improvement in local air quality and a reduction in carbon emissions.</p> <p>Economic</p> <p>Road safety initiatives for people with Special Educational Needs and School Safety Zones will also help to provide access to employment and educational opportunities.</p> <p>Social</p> <p>There is a significant social benefit associated with road safety programmes and safety enforcement measures, including a reduction in the number of accidents, injuries and deaths</p>	+	+	+

LTP4 Policy Categories	Environment	Economic	Social
on the road network, an improvement in health via the promotion of healthy lifestyles and improvements in the safe access to basic services.			
Asset Management			
<p>Summary:</p> <p>Environment</p> <p>The use of targeted maintenance and preventative works should reduce the need for larger scale reconstruction and surfacing works on roads and bridges over the short to medium term. This should have a positive effect on the environment by reducing the adverse impacts from physical works on environmental receptors. Improvements to traffic control systems will allow road users to plan their journeys more efficiently and help to reduce congestion on the roads and thus improve local air quality and minimise carbon emissions.</p> <p>There are potential negative environmental effects relating to the policy to only address culvert failures when they occur or there is a clear indication that a culvert is on the brink of failure. In the event of culvert failure there are potential adverse effects on biodiversity, the water environment and soils. There are also potential negative on biodiversity and soils due to physical works to increase safety.</p> <p>Economic</p> <p>Targeted maintenance and upgrading of safety at bridges should result in fewer closures to the transport network. This should maintain access for business and tourism and have a positive effect on the economy.</p> <p>Social</p> <p>Overall the asset management measures have a number of positive social effects. Targeted maintenance and surveys should reduce the likelihood of reconstruction to transport infrastructure and the adverse effects of construction on local residents.</p> <p>However, by only addressing culvert failures when they occur or there is a clear indication of failure, there is the potential for personal injury due to damage to transport infrastructure from sudden culvert failure.</p>	?	+	?
Transport and the Environment			

LTP4 Policy Categories	Environment	Economic	Social
<p>Summary:</p> <p>Environment</p> <p>Encouraging sustainable travel and the use of low carbon technologies will help to reduce carbon emissions and promote the sustainable use of natural resources. A new street lighting campaign with dimming and part time lighting may also have ecological and landscape benefits. The use of alternative fuels could result in both improvements in local air quality and reductions in carbon emissions. Such policies promote the sustainable use of natural resources.</p> <p>Economic</p> <p>Rerouting HGV's is likely to restrict their access to major infrastructure and may have a negative economic impact on businesses within Lincolnshire. Enhancing the streetscape will have landscape benefits which may encourage tourism in the county.</p> <p>Social</p> <p>Measures to reduce the impact of traffic will have social benefits in reducing the adverse effects of transport schemes and developments.</p>	+	?	+

8.3 Results of the Assessment and Comparison of Alternatives

In general, it is anticipated that both the LTP3 and LTP4 would have an overall positive effect on environmental, economic and social objectives with none of the policy categories identified as having an overall negative effect; however, individual policies do have the potential to have negative effects.

Unsurprisingly, both plans are considered to be particularly beneficial to the economic objectives; directly by development of new infrastructure to improve access and commuting opportunities for major infrastructure and businesses, and indirectly by reducing congestion and improving journey times on the transport network.

Overall, both plans are anticipated to have positive effects on environmental and social objectives. However, there are uncertainties with regards to the development of new road infrastructure and the potential adverse effects on environmental protection objectives and disproportionate impacts on local residents.

In comparison of the LTP4 and existing LTP3 policies, the LTP4 policy categories are predicted to have a slightly higher proportion of positive effects on the SEA objectives than the LTP3. The LTP4 contains a number of policies that support Government objectives to 'create growth in the economy' and 'tackle congestion', through strengthening rail's role for commuting and continuing to promote sustainable travel in new developments, businesses and schools. The policies are also likely to have secondary benefits for both the environment by improving local air quality and reducing carbon emissions and communities by increasing travel options available.

In addition, there are a number of policies aimed at improving sustainable transport infrastructure, services and the information available for travel which are likely to contribute to environmental, economic and social benefits.

Having assessed the environmental impacts of the alternative plans the preferred strategy is implementation of the LTP4.

9 Considering Ways of Mitigating Adverse Effects

9.1 Introduction

The SEA Regulations require measures to avoid, reduce or mitigate these impacts.

The likely significant effects from the policy options on the environment have been identified in the Section 8. Where policies are deemed to have an adverse or uncertain environmental impact mitigation has been proposed. This is presented in Table 9.1. In addition, environmental enhancements have also been proposed for some of the policies.

The policies are grouped by the identification of similar issues and potential mitigations and enhancements.

Key	
+	Overall positive impact
0	No impact
?	Overall impact unclear
–	Overall negative impact

Table 9.1 - Proposed Mitigations and Enhancements of the LTP4

Topic	Predicted Impacts	Score	Mitigation	Enhancement	Relevant LTP4 Policy
New Road Infrastructure – Policies 10, 11, 13, 14, 24, 27, 32, 39, 43, 45					
Biodiversity	Loss of valuable habitat to development. Disturbance of habitat and protected species during construction.	—	Project specific ecological assessments must be undertaken. Ensure construction environmental management plans are in place before works begin	Corridors under or over roads should be constructed to prevent habitat fragmentation. Embankments should be designed to support wildlife populations.	n/a
Soil	Loss of good quality agricultural land to development. Contamination of soil from polluted road run-off.	—	Minimise agricultural land take for new build schemes. Careful handling storage and reuse of good quality top soil excavated for new build schemes. Ensure construction environmental management plans are in place before works begin. Site Waste Management Plans to be completed for all highways improvements. SUDS drainage designs incorporating pollution control measures to be provided.	n/a	n/a
Water	Increased surface run-off and pollution of the water environment. Some developments are proposed	—	Ensure construction environmental management plans are in place before works begin.	n/a	n/a

Topic	Predicted Impacts	Score	Mitigation	Enhancement	Relevant LTP4 Policy
	in areas with a flood risk of 1% per annum.		<p>SUDS drainage facilities and water treatment facilities should be constructed using a suitable treatment train for surface run-off water. Discharges to Source Protection Zone 1 will require a risk assessment to demonstrate pollution of groundwater will not occur.</p> <p>Ensure that road infrastructure will not exacerbate flood risk.</p> <p>Surface Water Management Plans should be completed for all highways improvement schemes.</p>		
Air	Potential for reduced congestion and thus improved air quality, but also for a reduction in local air quality by increasing the concentration of air pollutants associated with vehicle use.	—	<p>Detailed air quality assessment for all proposed new infrastructure schemes.</p> <p>Traffic management to promote efficient driving schemes.</p>	n/a	10,11,13, 14,27,32, 39,43,45
Climate	<p>Facilitating more people to travel by car will increase carbon emissions and contribute to the causes of climate change.</p> <p>New road infrastructure needs to be planned with the consequences of climate change in mind.</p>	?	<p>Restrain personal car use and promote alternative means of travel.</p> <p>Make public transport fares competitive with the cost of motoring.</p> <p>Traffic management to promote efficient driving schemes.</p>	<p>Consideration for demand management measured e.g. new roads could be 'tolled' to reduce 'induced demand'.</p> <p>New highways schemes should be constructed to make them resilient to the projected climatic changes in</p>	13,14,27,3 2,39,43,45

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
				precipitation and temperature, including operational strategies for managing these systems during extreme weather events.	
Cultural Heritage and Landscape	Negative impact on the landscape and heritage assets	—	Visual impact assessments should be undertaken to assess and mitigate the impact of the new road infrastructure on landscape. Screening and landscaping. Undertake historic environment assessments, including the assessment and evaluation of archaeology.	n/a	10,11
Material Assets	Improvements in accessibility to basic services, major infrastructure and employment and educational facilities. Agricultural land will be used for the road scheme.	—	Minimise loss of agricultural land for new building schemes. Locally sourced sustainable materials should preferentially be used for construction. Ensure CEEQUAL standards are applied to all new highways schemes.	Low carbon methods of road construction and maintenance should be used to both reduce carbon emissions and minimise resource use i.e. cold asphalt processes, recycled road plantings.	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Population & Human Health	Disproportionate impacts on local residents who may have their land taken by CPO or experience a reduction in property value. Severance caused by new infrastructure.	–	Preferentially make use of brownfield sites. Minimise severance by maintaining access or providing alternative access to severed land (for example bridges / crossing points).	Incorporate cycling and pedestrian accessibility into the design of new infrastructure, including appropriate crossings, to mitigate against severance and encourage active travel.	n/a
Safer Roads – Education, Training and Publicity – Policies 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78					
Air	Pedestrian and cyclist training will lead to an increase walking and cycling as opposed to car use.	+	n/a	n/a	n/a
Climate	Reduced car use will lead to a reduction in carbon emissions.	+	n/a	n/a	n/a
Material Assets	Will improve safe access to schools and encourage the use of sustainable forms of transportation.	+	n/a	Mitigate against severance by incorporating cycling and pedestrian accessibility into the design of all new infrastructure, including safe crossings.	66, 67, 74, 75
Population & Human Health	Will help to provide access to basic services, promote healthy lifestyles, road safety and improve access to sustainable transport.	+	n/a	Promote increased community engagement in safety initiatives.	39
Better Air Quality – Policies 115, 116					
Air	Consolidation of AQMA should improve local air quality.	+	n/a	Introduce low emission zones in city and town centres.	116

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
				Deter car use with congestion charging and high parking charges.	
Population & Human Health	Improving local air quality will have health benefits for local residents.	+	n/a	n/a	n/a
Reducing Carbon – Policies 109,110,111,112,113,114					
Biodiversity, Flora and Fauna	Reducing night time lighting may have benefits for ecology e.g. bats	+	n/a	n/a	n/a
Climate	Reducing carbon emissions will help to mitigate climate change	+	n/a	Electric vehicle charging points should be available throughout the County. Working with operators to increase the use of sustainable bio fuels and uptake of low carbon vehicles.	109,110,111,112,113,114
Cultural Heritage and Landscape	Reducing night time lighting will help to improve streetscape	+	n/a	n/a	n/a
Material Assets	Technology to reduce carbon promotes sustainable design and the efficient use of natural resources.	+	n/a	Work with local providers of low carbon technologies LED street lighting.	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Population & Human Health	Safety may be a concern for residents if streets are not lit in the dark.	?	Motion sensors to turn street lights on in the presence of people to mitigate safety concerns.	n/a	112
Reducing the Impact of Traffic – Policies 119,120,121					
Air	Restricting HGVs from passing through communities by weight will improve local air quality.	+	n/a	n/a	121
Material Assets	Restricting HGV access will reduce access to industry and major infrastructure.	–	Provide suitable alternative access.	Consider transferring freight to rail.	121
Population & Human Health	Speed management measures and HGV diversion will improve the lives of local people.	+	n/a	n/a	119
Quality of Public Spaces and Better Streetscapes – Policies 117,118					
Cultural Heritage and Landscape	Enhance the attractiveness of the urban landscape.	+	n/a	n/a	118
Material Assets	Encourage tourism.	+	n/a	Materials should be locally sourced, recycled, reused and contain low embodied carbon.	n/a
Population & Human Health	Refurbishing pathways and removing parking will help to promote healthy lifestyles.	+	n/a	n/a	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Public Transport Improvements – Bus Services – Policies 17,22,28,44,47,48					
Air	Encourage more people to travel by bus as opposed to by car, improving local air quality.	+	n/a	Make public transport fares competitive with the cost of motoring.	n/a
Climate	Reduced car trips will reduce carbon emissions.	+	n/a	Further mitigate climate change by working with operators to increase the use of sustainable biofuels and the uptake of low carbon vehicles. Make public transport fares competitive with the cost of motoring.	17,22,28,44,47,48
Material Assets	Provide sustainable access to education and employment opportunities and encourage tourism.	+	n/a	Ensure public transport information for accessing key attractions is targeted at tourists.	n/a
Population & Human Health	Provide sustainable access to basic services.	+	n/a	Information should be made accessible to those with disabilities and where English is a second language.	n/a
Public Transport Improvements – Bus Infrastructure – Policies 15, 49, 50					
Air	Improved infrastructure may lead to more people travelling by bus as opposed to by car and thus have a positive effect on local air quality.	+	n/a	Provide up to date information to ensure public transport to increase accessibility.	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Climate	Encouraging people to travel by bus as opposed to by car will reduce national carbon emissions.	+	n/a	Make public transport fares competitive with the cost of motoring.	n/a
Material Assets	Improve access to education and employment opportunities, encourage tourism and provides the opportunity to promote sustainable design.	?	Materials should be locally sourced, recycled, reused and contain low embodied carbon. Ensure CEEQUAL standards are applied to schemes.	Integrate bus stops and stations with sustainable travel links.	15,49,50
Public Transport Improvements – Rail Services – Policies 23,25,26,57					
Air	Encourage travel by rail rather than car improving local air quality.	+	n/a	Make public transport fares competitive with the cost of motoring.	n/a
Climate	Reducing the number of car trips reduces carbon emissions.	+	n/a	Make public transport fares competitive with the cost of motoring.	n/a
Material Assets	Improve access to education and employment opportunities and encourage tourism.	+	n/a	Plan needs to provide easy affordable access to town centres so that they maintain economic viability.	23,25,26,57
Population & Human Health	Improve access to basic services and sustainable transport.	+	n/a	Information should be made accessible to those with disabilities and where English is a second language.	23,25,26,57

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Public Transport Improvements – Rail Infrastructure – Policies 16,24,35,36,58					
Air	Encourage people to travel by train rather than the car improving local air quality.	+	n/a	n/a	n/a
Climate	Reduced car trips will reduce carbon emissions.	+	n/a	n/a	n/a
Material Assets	New infrastructure presents the opportunity for sustainable design. Rail improvements will encourage tourism and improve access to education and employment opportunities.	?	Materials should be locally sourced, recycled, reused and contain low embodied carbon. Ensure CEEQUAL standards are applied to schemes.	Integrate rail stations with sustainable travel links.	n/a
Walking and Cycling Improvements – Policies 2,6,7,8,9,18,29,55,56,66,67,72,75,97					
Air	Encourage people to walk and cycle rather than travel by car improving local air quality.	+	n/a	Encourage businesses to offer 'cycle to work' schemes to provide alternatives to car use.	n/a
Climate	Reducing car use will reduce carbon emissions.	+	n/a	Encourage businesses to offer 'cycle to work' schemes to provide alternatives to car use.	n/a
Cultural Heritage and Landscape	Reducing traffic through the designation of Community Travel Zones in certain areas will help to enhance and protect heritage assets and the streetscape.	+	n/a	n/a	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Material Assets	Will help to conserve natural resources by the promotion of sustainable transport	+	n/a	Ensure that appropriate cycling and pedestrian access is provided to enable cycling and walking to be practical alternatives to other modes of transport. Secure cycle parking should be provided.	n/a
Population & Human Health	Will promote healthy lifestyles, improve access to basic services and sustainable transport and help to engage the local community.	+	n/a	Promote cycle campaigns and cycle proficiency.	2,6,7,8,18, 29,55,67,75,97
Traffic Management – Policies 3,4,5,9,19,31,38,42					
Air	Will improve traffic flows, reducing congestion and improving local air quality.	+	n/a	n/a	n/a
Climate	Reducing congestion will also help to reduce carbon emissions	+	n/a	n/a	n/a
Material Assets	Reduced congestion will help to improve access to education and employment opportunities and major infrastructure as well as promoting sustainable design.	+	n/a	n/a	n/a
Population & Human Health	Improve access to basic services.	?		n/a	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Improvements to the Existing Road Network – Policies 13,20,21,33,100					
Biodiversity, Flora and Fauna	Depending on the location and scale of the improvements may have negative impacts.	?	Project specific environmental assessment.	n/a	n/a
Soil	Depending on the location and scale of the improvements may have negative impacts.	?	Project specific environmental assessment. SWMP should be competed with all planning applications for highways improvements.	Ensure contaminated land is dealt with appropriately.	n/a
Water	Depending on the location and scale of the improvements may have negative impacts.	?	Project specific environmental assessment. SUDS drainage facilities and water treatment facilities should be constructed to treat surface run-off water. Ensure that road infrastructure does not exacerbate flood risk.	n/a	n/a
Air	Reduce congestion and improve local air quality.	+	n/a	n/a	n/a
Climate	Reduce carbon emissions	+	n/a	Highways infrastructure should be made resilient to the projected climatic changes in precipitation and temperature, including operational strategies for managing these systems	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
				during extreme weather events.	
Cultural Heritage and Landscape	Depending on the location and scale of the improvements may have negative impact. Reducing street clutter may help to improve streetscape.	?	Project specific environmental assessment.	n/a	75, 82, 97
Material Assets	Depending on the location of the improvements may have to use agricultural land and open space. Should improve access for major infrastructure.	?	Project specific environmental assessment. Ensure CEEQUAL standards are applied to schemes.	n/a	n/a
Population & Human Health	Depending on the location and scale of the improvements may have disproportionate impact on local residents.	?	Project specific environmental assessment.	n/a	n/a
Parking Alterations – Policies 14,30					
Biodiversity, Flora and Fauna	Park and Ride may have a cumulative negative impact on biodiversity across Lincolnshire.	—	Project specific EIA for proposed Park and Ride Schemes.	Ensure CEEQUAL standards are applied to new P&R's	14
Soil	Park and Ride will reduce local soil quality.	—	Project specific EIA for proposed Park and Ride Schemes.	The Park and Ride should not be promoted as a long term solution, but should be used as a larger strategic	14

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
				implementation plan.	
Water	Park and Ride will increase surface run-off, located close to several watercourses	—	<p>Project specific EIA for proposed Park and Ride Schemes.</p> <p>SUDS drainage facilities and water treatment facilities should be constructed to treat surface run-off water.</p> <p>Ensure that road infrastructure does not exacerbate flood risk.</p>	Where possible avoid construction in areas with a high flood risk.	14
Air	Park and Ride will reduce the number of cars driving into the centre of Lincoln and improve local air quality. However, it will reduce air quality for local residents.	?	<p>Project specific EIA for proposed Park and Ride Schemes.</p> <p>Detailed travel plans should be created to help reduce the impact of the increase in cars in the local area.</p>	Include cycle parking and electric vehicle recharging points at Park and Ride Sites	14
Cultural Heritage and Landscape	Depending on the location and design the Park and Ride facility may have a negative impact on heritage assets and landscape.	?	Project specific EIA for proposed Park and Ride Schemes.	n/a	14
Material Assets	Will use agricultural land. Will improve access to education and employment opportunities, encourage tourism, promote resource efficiency and sustainable design.	—	<p>Project specific EIA for proposed Park and Ride Schemes</p> <p>Ensure that the minimal amount of agricultural land is used.</p>	Locate the Park and Ride site on a Brownfield site.	14
Population &	Park and Ride may disproportionately affect local	—	Project specific EIA for proposed Park and Ride Schemes	Consideration should be given to access to GP's and	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Human Health	residents, through noise and visual disturbance, and an increase in the number of cars in the local area.		Ensure alternative modes of travel are available to everyone and affordable. Residents and local communities should be given notice of the changes and consulted through-out.	hospitals and high costs should not hinder the access.	
Reducing the Need to Travel – 59,60					
Air	Fewer car journeys and thus improved local air quality.	+	n/a	n/a	n/a
Climate	Reduced car trips will reduce carbon emissions.	+	n/a	n/a	n/a
Material Assets	Increasing rural internet connectivity will help to improve access to education and employment facilities.	+	n/a	Promote mixed use developments.	n/a
Population & Human Health	Improve access to basic services and help to prevent social inequalities.	+	n/a	n/a	n/a
Travel Planning – Policies 3,4,5,6,8,19					
Air	Encourage people to use sustainable methods of transport and not use the car for short trips improving local air quality.	+	n/a	n/a	n/a

<i>Topic</i>	<i>Predicted Impacts</i>	<i>Score</i>	<i>Mitigation</i>	<i>Enhancement</i>	<i>Relevant LTP4 Policy</i>
Climate	Reduced car trips will reduce carbon emissions.	+	n/a	n/a	n/a
Material Assets	Will improve access to education and employment opportunities, major infrastructure and improve access to sustainable transport.	+	n/a	n/a	n/a
Population & Human Health	Improve access to basic services and sustainable transport, promote healthy lifestyles and encourage community engagement.	+	n/a	Promote increased community engagement in travel planning.	n/a
Asset Maintenance – Policies 96,98,99,100,108					
Biodiversity, Flora and Fauna	Culvert failure could have negative impacts on species and habitats.	–	Priority culvert maintenance programme	n/a	n/a
Soils	Culvert failure could have negative impacts on soils.	–	Priority culvert maintenance programme	n/a	n/a
Water	Culvert failure could have result in pollution to the water environment.	–	Priority culvert maintenance programme	n/a	n/a
Population and Human Health	There is the potential for personal injury as a result of damage to transport infrastructure from culvert failure.	–	Priority culvert maintenance programme	n/a	n/a

9.2 Cumulative effects

There are many potential interactions between transport use and the environment and many of the impacts predicted for the various sections are cumulative in their nature.

Cumulative negative effects on landscape, soils and biodiversity are anticipated from the new transport measures proposed in LTP4 in combination with the development pressure on land use in general.

It is anticipated that there would be a cumulative positive effect on social issues and human health through active travel. The combination of a reduction in traffic and an increase in walking and cycling would combine to improve human health through a combination of increased physical activity and reduced air and noise pollution.

The predicted positive effect on carbon emissions and air quality depends upon a reduction in traffic arising from the cumulative modal shift from the combination of improved public transport measures and promotion of walking and cycling.

10 Proposing Measures to Monitor the Environmental Effects of Plan or Programme Implementation

10.1 Proposals for Monitoring

10.1.1 Requirements

The SEA Directive requires 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).”

The LTP Implementation plan will set out prioritised investment programmes to deliver the schemes in line with the LTP4 strategy. They will also contain performance indicators so that the success of the plan in achieving the goals can be measured and appropriate mitigation taken if performance is not on track.

Aims and methods for SEA monitoring will be finalised during preparation of the SEA Environmental Statement which will accompany the adopted version of LTP4, and will be integrated with the LTP performance indicators. The finalised monitoring arrangements will be designed to provide information that can be used to highlight specific performance issues and significant effects, and lead to more informed decision-making.

The SEA Directive specifically requires monitoring to identify unforeseen adverse effects and to enable appropriate remedial action to be taken. It may be difficult to implement monitoring mechanisms for unexpected effects, or to attribute such effects to implementation of LTP4 when they occur. However, in line with European Commission guidance, this provision may be understood as covering effects which differ from those which were predicted, or unforeseen effects which are due to changes of circumstances.

10.1.2 Indicators and Targets

In order to monitor the effects of the LTP4 it is necessary to have indicators that can be assessed throughout the duration of the LTP4. A number of generic indicators for each SEA objective are presented in Table 4.2. These indicators will be finalised during consultation and finalised specific indicators for the LTP4 will be detailed in the SEA Environmental Statement.

Appendix 1: Consultation on the scope of the SEA

SEA Scoping Report Consultation Response	Natural England
Contact Name	Kate Wheeler
Date Received	28 August 2012
Comment	Mouchel Response
1. Protection of biodiversity at designated sites and European protected species Specific reference should be made to enhancing, maintaining and restoring biodiversity and geodiversity and in order to achieve this there should be a policy context for protecting important nature conservation sites across the Lincolnshire plan area.	SEA objective 1 has been amended to include the protection of geodiversity. Indicators for SEA objective 1 have been amended to include for monitoring the area of wildlife and geological sites. SEA objective 2 has been amended to specifically mention the protection, maintenance and restoration of biodiversity and geodiversity across Lincolnshire.
2. Enhance general biodiversity across Lincolnshire Specific reference to protecting, maintaining and restoring of biodiversity and geodiversity should be made.	See response to 1.
3. Promote the conservation and wise use of land Natural England suggests that the objective could be improved through the inclusion of the specific need to protect and enhance important resources such as important soils through appropriate management and handling.	SEA objective 3 has been amended to specifically address the protection of soil quality, specifically in the best agricultural land.
4. Prevent Pollution to the water environment and protect resources Natural England welcome the inclusion of this objective.	No action required.
5. Improving access to the public SEA objectives 11, 18 and 19 encourage access for education, access to sustainable transport and the promotion of conditions that will improve health and healthy lifestyles. Natural England specifically	We have proposed new SEA objectives (12 and 21) that promote the protection and access for open space and green infrastructure. Indicators of the total area of green space and

SEA Scoping Report Consultation Response	Natural England
Contact Name	Kate Wheeler
Date Received	28 August 2012
Comment	Mouchel Response
promote the opportunities to encourage this through the provision of greater green infrastructure.	infrastructure are proposed to monitor its success.
6. Improving access to Green Infrastructure (GI) Natural England promote the importance of GI and endorse the multifunctional benefits that it can bring. NE suggest that greater links between health benefits and the natural environment could be made through the promotion of GI.	See response to 5 above and the creation of new SEA objectives to specifically address the promotion of GI and improving its accessibility to the public.
7. Alternative Indicators (1) Natural England have proposed some suggested indicators following the abolishment of Local Area Agreements and national indicators. The indicators suggested are: <ul style="list-style-type: none"> • Biodiversity/geodiversity/landscape • Number of planning applications with conditions to ensure works to manage/enhance the condition of SSSI/SAC/SPA/RAMSAR features of interest • Areas of SSSIs in adverse condition as a result of development • Numbers of applications where protected species are considered either as conditions for protection and enhancement or for where works require protected species licences. • BAP habitat creation as a result of granting planning permission • 	These indicators have been added to SEA objectives 1 and 2.
8. Alternative Indicators (2) Natural England's Accessible Natural Greenspace Standard (ANGSt) document provides a set of benchmarks for ensuring access to places near to where people live. NE quote this document and the standards therein as a suitable indicator.	An indicator has been added to SEA objective 21 which will monitor the area of Local Nature Reserves per 1,000 population within Lincolnshire. The other suggested indicators have not been included because the number of LNRs per 1,000 population is considered to be

SEA Scoping Report Consultation Response	Natural England
Contact Name	Kate Wheeler
Date Received	28 August 2012
Comment	Mouchel Response
	the most appropriate to assess in light of the objectives of the LTP4 and how it will affect potential LNR impact across Lincolnshire.
9. Alternative Indicators (3) Indicators could be established that will assess changes in landscape character for National Character Areas. The plan promoter should also consider the Sustainable Community Strategy and whether any indicators within that could be suitable for the SEA.	An indicator has been added to SEA objective 10 which will assess the enhancement of landscape. The Sustainable Community Strategy has been reviewed for potential indicators.
10. Review of policies, plans and programmes Natural England welcome the list that was provided although recommend that it is kept up to date through the SEA process.	Comments noted.

SEA Scoping Report Consultation Response	English Heritage
Contact Name	Ann Plackett
Date Received	13 August 2012
Comment	Mouchel Response
1. Climate Change Climate change and its impact upon the Historic Environment should be considered within the scoping report	Noted. Section 5.2.8 has been included in the updated Scoping Report (Appendix 3).
2. Sustainable access for Tourism The importance of Lincolnshire as a tourist destination is noted. English Heritage (EH) promote the removal of 'street clutter' and sustainable access to heritage attractions.	Noted. Section 5.21 has been amended in the updated Scoping Report (Appendix 3), in line with English Heritage's comments.
3. Cultural Heritage and the NPPF English Heritage suggest that the SEA should cover the heritage assets that are defined in the glossary of the NPPF and the concept of harm as defined in the NPPF.	Noted. Section 5.25 has been amended in the updated Scoping Report (Appendix 3), in line with English Heritage's comments.
4. Additional Information English Heritage suggest that greater baseline information should be presented within the scoping report that reflects the heritage assets in the county. They present information on assets which are not addressed in the scoping report and advise as to how these are applicable to the context of the LTP4.	Noted. Section 5.25 has been amended in the updated Scoping Report (Appendix 3), in line with English Heritage's comments.
5. Landscape and Visual Amenity English Heritage propose that the time-depth of landscapes should be considered and the Historic Landscape Characterisation should be referred to. Secondly, the possible impacts on townscape conservation should be included as a consideration within the SEA, as well as the other considerations such as noise that can affect the setting of heritage assets	Noted. Section 5.26.4 has been amended in line with the comments in the updated Scoping Report.
6. Adoption of NPPF SEA Objective 9 should be reworded to address the changes within the NPPF. The suggested wording of the Objective is "conserve and enhance the historic environment, heritage assets and their setting"	The SEA objective has been amended to reflect English Heritage's comments.

SEA Scoping Report Consultation Response	English Heritage
Contact Name	Ann Plackett
Date Received	13 August 2012
Comment	Mouchel Response
7. Alternative Indicators (1) English Heritage have suggested that the indicators for Objective 9 should be amended to reflect all heritage that is at risk and have provided a link to the national register. An indicator for Objective 9 that also records enhancement would also be beneficial. Two indicators are suggested for deletion.	The indicators for Objective 9 have been amended to address English Heritage's comments.
8. Alternative Indicators (2) Four alternative indicators are proposed for Objective 10. Indicators considering the AONB and the buffer zone in relation to World Heritage Sites are suggested for deletion as they are not applicable. An indicator on landscape enhancement is proposed and greater information on how the indicator of good urban design would be measured is requested	Indicators 1 and 3 have been removed as suggested and indicator 5 for good urban design has been removed as following EH's comments we agree that it would be problematic to monitor. A new indicator has been included which will measure where landscape enhancement has taken place.
9. Alternative Indicators (3) The response states that the indicators for visitor numbers and visitor spend do not measure sustainability which is the purpose of the objective.	We agree with the response and have the amended the objective to reflect the fact that it would be difficult to monitor the sustainability of tourism.
10. Relevant Plans, Policies and Programmes English Heritage has proposed two documents for inclusion - 'The Historic Environment: A Force for our Future' was superseded by the 'The Government's Statement on the Historic Environment for England' (2010). However, in light of the change of government, the status of this document is uncertain. We recommend that the Lincolnshire Historic Landscape Characterisation is also included.	Noted. The two documents have been reviewed and included in the updated PPPs table in Appendix 3.
11. Responses to LTP3 English Heritage also refer to their consultation response to LTP3 which was open for consultation in 2010.	These comments are either addressed above or are no longer relevant due to changes in legislation including comments relating to Question 1 which refers to PPS 5.

SEA Scoping Report Consultation Response	English Heritage
Contact Name	Ann Plackett
Date Received	13 August 2012
Comment	Mouchel Response
	A point of reference to the LTP4 SEA has been addressed below.
12. Responses to LTP3 (2) English Heritage have suggested that the Historic Landscape Characterisation study for Lincolnshire and the townscape assessments such as the Lincoln Townscape Assessment and the Extensive Urban Surveys, Conservation Area Character Appraisals and Management Plans should be referred to in the scoping report.	Noted. The Historic Landscape Characterisation study, Lincoln Townscape Assessment, Conservation Area Character Appraisals and Management Plans have been included in Section 5.26.4 of the updated Scoping Report (Appendix 3). To date an Extensive Urban Survey has not been completed for Lincolnshire.

SEA Scoping Report Consultation Response	Environment Agency
Contact Name	Jake Newby / Laura Richardson / Laura Brackenbury
Date Received	1 st November 2012
Comment	Mouchel Response
Question1 – Have all relevant plans and programmes been considered?	
<p>It is suggested that the following should be added:</p> <ul style="list-style-type: none"> • The 2009 document 'Investing for the Future: Flood and Coastal Risk Management in England' is an appropriate document for consideration. • The inclusion of Strategic Flood Risk Assessments and Water Cycle studies for the districts should be referred to. • All Catchment Flood Management Plans (CFMPs) and Shoreline Management Plans (SMPs) that are pertinent should be referred to. This includes the Flamborough Head to Gibraltar Point HECAG SMP and the Gibraltar Point to Hunstaton SMP. • The Humber and Anglian River Basin Management Plans should be included • The following Catchment Abstraction Management Strategies should also be included Nene, Grimsby, Ancholme and Louth, Welland and Witham. • The Flood and Water Management Act 2010 should also be referenced 	<p>Noted. The documents have been reviewed and a summary provided in Appendix 2.</p>
Question 2 – Does the baseline information reflect the current situation in the LTP4 area or are there additional social, environmental or economic factors that should be considered?	
<p>This question will in part be answered by reference to the above documents. The implications of increased development and growth in areas at risk of flooding and the need to manage emergency measures should be considered more closely in line with advice from Lincolnshire County Council Emergency Planners.</p>	<p>This is considered in the LTP4.</p>

SEA Scoping Report Consultation Response	Environment Agency
Contact Name	Jake Newby / Laura Richardson / Laura Brackenbury
Date Received	1 st November 2012
Comment	Mouchel Response
Question 3 – Do the issues identified in this report cover all the significant environmental and sustainability issues relevant to the LTP4 area?	
With the exception of the implications for emergency planning, we consider it covers the most significant issues.	No action required.
Question 4 – Do the SEA Objectives reflect the right aspirations for development of more sustainable approaches to transportation?	
We consider that the objectives are appropriate given the scope of the LTP. We suggest that the indicators for reducing vulnerability to flooding should also include a measure of the likely time taken to safely evacuate areas of flooding. This is within the scope of the LTP and is probably a better indicator of the LTP's success at managing the issue than the number of planning permissions granted contrary to Environment Agency advice.	Noted. At present, information on 'the likely time to safely evacuate areas of flooding' is not available. Indicators to be finalised during consultation.
Flood Risk	
The new Preliminary Flood Risk Assessment, undertaken by your Council will provide additional advice on all aspects of potential flooding including surface water etc. This document should be used to inform the strategy as well as the Environment Agency's flood maps.	Noted. The document has been reviewed and a summary provided in Appendix 2.
Groundwater protection	
Page 59 refers to mitigation measures for soil. The Environment Agency's Groundwater Protection: Principles and Practice (GP3) Part 4 – Legislation and Position Statements states: ' When planning proposals are brought forward for major new road, rail or airport developments we will require that: Road, rail track or airport drainage is via sustainable drainage systems (SuDS) designed to	Noted. This section has been amended to in line with comments.

SEA Scoping Report Consultation Response	Environment Agency
Contact Name	Jake Newby / Laura Richardson / Laura Brackenbury
Date Received	1 st November 2012
Comment	Mouchel Response
<p>current standards with discharge normally outside SPZ1 and, where possible outside SPZ2 with a suitable treatment train in place; and</p> <p>In cases where there is an existing or unavoidable need to discharge in SPZ1, we will require a risk assessment to demonstrate that pollution of groundwater would not occur. However we will oppose or prohibit the discharge if there is an unacceptable risk to groundwater or water supplies.'</p> <p>We note that that one of the mitigation measures (page 59) refers to the requirement for SUDS drainage design; however the above expands on this slightly and may be useful to include.</p>	
<p>Section 1.28 (groundwater) refers only to Source Protection Maps. We use vulnerability maps (aquifer typology) and Source Protection Zones (SPZs). The SPZs miss out key areas of Principal Aquifer that still need protecting. We can provide a map if required.</p> <p>Vulnerability maps identify where a groundwater resource is at risk from pollution (should a pollution source exist) due to the nature of the soil, unsaturated zone or inherent characteristics of the aquifer.</p> <p>SPZs show the level of risk to groundwater supplies that may result from potentially polluting activities and accidental release of pollutants on or in the ground. We reviewed our methods for SPZ delineation recently (Environment Agency, 2009) , this included the removal of the 'Zone of Special Interest' and for these areas the use of one of the other numbered Zones (SPZ1, SPZ2 or SPZ3).</p>	Noted. Vulnerability maps will be included in the finalised SEA Report.
The Water Framework Directive (2000/60/EC) and Groundwater Daughter Directive (2006/118/EC) are detailed in Appendix A. In combination these Directives replace 80/68/EEC. The old Groundwater Directive targeted the prevention of groundwater pollution via controls over the release of substances listed within the Directive.	Noted.

SEA Scoping Report Consultation Response	Environment Agency
Contact Name	Jake Newby / Laura Richardson / Laura Brackenbury
Date Received	1 st November 2012
Comment	Mouchel Response
Although the old Groundwater Directive is not repealed until December 2013, it has been effectively superseded by the Water Framework Directive and in particular the new Groundwater (Daughter) Directive and its transposition in England & Wales. Prevent and control groundwater pollution (prevent inputs of hazardous substances and limit inputs of non-hazardous substances and limit inputs of non-hazardous subs) is still a key principle.	

Appendix 2: Relevant Plans, Policies and Programmes

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
International	The Convention on Biological Diversity. Rio de Janeiro (1992)	1,2	Article 6A requires each Contracting Party to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity.	Biodiversity Flora & Fauna						
International	UN Conference on Environment and Development, Rio 1992	All	Requirement that new development should be sustainable.	Biodiversity Flora & Fauna	General					
International	Ramsar Convention on Wetlands of International Importance 1971	1	An agreement ratified by the UK in 1976 to conserve and protect ensure wise use of wetlands. Designation of Ramsar Protected Wetlands.	Biodiversity Flora & Fauna						
International	Kyoto Protocol to the UN Framework Convention on Climate Change (1997)	7,9	Improved energy efficiency. Lower carbon intensive forms of energy supply (energy and transport). Reduced industrial process emissions. Improved agricultural practices and livestock management. Management of biodegradable waste.	Climatic Factors	Transport					
International	European Convention on the Protection of the Archaeological Heritage revised 1985	9	<ul style="list-style-type: none"> The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study. To this end shall be considered to be elements of the archaeological heritage all remains and objects and any other traces of mankind from past epochs: the preservation and study of which help to retrace the history of mankind and its relation with the natural environment; for which excavations or discoveries and other methods of research into mankind and the related environment are the main sources of information; and which are located in any area within the jurisdiction of the Parties; The archaeological heritage shall include structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other kinds as well as their context, whether situated on land or under water. 	Cultural Heritage & Landscape						
International	World Heritage Convention in 1972.	9, 10	To ensure, as far as possible, the proper identification, protection, conservation and presentation of the world's heritage, the Member States of UNESCO adopted the World Heritage Convention in 1972. The Convention foresees the establishment of a "World Heritage Committee" and a "World Heritage Fund". Both the Committee and the Fund have been in operation since 1976.	Cultural Heritage & Landscape						
International	Report of the World Summit on Sustainable Development. UN Johannesburg (2002)	All	Recognise the needs of everyone. Protection of the environment. The prudent use of natural resources. Climate change and energy. Sustainable communities.	General						

Level	Plan, Programme, Policy	SA Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
European	Directive 2002/49/EC relating to the assessment and management of environmental noise	20	Defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise through actions designed to a) determine exposure to environmental noise using noise mapping, b) ensuring that information on environmental noise and its effects is made available to the public, and c) adoption of action plans with a view to preventing and reducing environmental noise where necessary.	Population & Human Health	Noise					
European	Directive 2008/1/EC concerning integrated pollution prevention and control (The IPPC Directive)	4, 5, 6,	To prevent, reduce and eliminate pollution at source through the efficient use of natural resources. It is intended to help industrial operators move towards greater environmental sustainability. It sets standards and target dates for reducing concentrations of fine particles, which together with coarser particles known as PM10 already subject to legislation, are among the most dangerous pollutants for human health.	Air	Population & Human Health					
European	Directive 1966/62/EC on ambient air quality and management	6	Establishes mandatory standards for air quality and sets limits and guide values for sulphur and nitrogen dioxide, suspended particulates and lead in air.	Air	Population & Human Health					
European	Directive 2008/50/EC on ambient air quality and cleaner air for Europe	6	This directive establishes new air quality objectives for PM2.5 (fine particles), the possibility to discount natural sources of pollution and for time extensions of PM10 or up to five years (NO2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.	Air	Population & Human Health					
European	EC Directive on the Conservation of Wild Birds 79/409/EEC (1979)	1, 2	Member States have a duty to sustain populations of naturally occurring wild birds by sustaining areas of habitat in order to maintain populations at ecologically and scientifically sound levels. This applies to birds, their eggs, nests and habitats	Biodiversity Flora & Fauna						
European	EC Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EEC (1992)	1, 2	Member States are required to take legislative and administrative measures to maintain and restore natural habitats and wild species at a favourable conservation status in the community.	Biodiversity Flora & Fauna						
European	Environmental Assessment of Plans and Programmes Regulations (2004)	N/A	These Regulations implement Directive 2001/42/EC of the European Parliament and Council on the assessment of the effects of certain plans and programmes on the environment.	Biodiversity Flora & Fauna						
European	Special Protection Areas (SPA) - Council Directive 79/409/EEC	1	Birds Directive - gives powers and responsibility to protect habitats for birds designated as SPAs.	Biodiversity Flora & Fauna						
European	Special Areas of Conservation (SAC) - Council Directive 92/43/EEC	1	Habitats Directive - gives powers to protect natural habitats and of wild flora and fauna designated as SACs.	Biodiversity Flora & Fauna						
European	Pan-European Biological and Landscape Diversity Strategy, July 2003	1, 2, 9,10	The Strategy was adopted at the third Ministerial Conference "Environment for Europe" in 1995 with the objective of providing an innovative and proactive approach to stop and reverse the degradation of biological and landscape diversity values in Europe. The Strategy reinforces implementation of existing measures to ensure conservation and sustainable use of biological and landscape diversity and identifies additional actions that need to be taken over the next two decades.	Biodiversity Flora & Fauna	Cultural Heritage & Landscape					

Level	Plan, Programme, Policy	SA Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
European	Green Paper: A European strategy for sustainable, competitive and secure energy White paper: European transport policy for 2010	All	Commission proposes a common European energy policy which will enable Europe to face the energy supply challenges of the future and the effects these will have on growth and the environment. This document aims to strike a balance between economic development and the quality and safety demands made by society in order to develop a modern, sustainable transport system for 2010	Climatic Factors						
European	European Landscape Convention 2000	9,10	The European Landscape Convention introduced the concept of "landscape quality objectives" into the protection, management and planning of geographical areas. Members of the council noted that the landscape has an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource favourable to economic activity and whose protection, management and planning can contribute to job creation. It also noted that developments in agriculture, forestry, industrial, mineral production techniques, in regional planning, town planning, transport, infrastructure, tourism, recreation and, at a more general level, changes in the world economy are in many cases accelerating the transformation of landscapes.	Cultural Heritage and Landscape						
European	EC Sustainable Development Strategy Revision (2005)	All	<ul style="list-style-type: none"> • Combat climate change • Ensure sustainable transport • Address threats to public health • Manage natural resources more responsibly and stop biodiversity decline • Combat poverty and social exclusion • Meet the challenges of an ageing population 	General						
European	Directive 91/156/EEC (OJ: L78/32/91) amending Directive 75/442/EEC on waste	14	This Directive amends the original framework Directive 75/442/EEC on waste. The Directive is intended to raise the levels of environmental protection particularly by avoiding the creation of waste. It establishes an integrated and adequate network of waste disposal facilities, promotes the disposal of waste as close as possible to the production site in order to limit the hazards of shipments of waste. It also promotes clean technologies and recyclable and reusable products. Authorities must draw up waste management plans, issue permits and inspect installations. They are to take the necessary measures to prevent movements of waste which are not in accordance with their waste management plans.	Material Assets	Waste					
European	Directive 2000/60/EC establishing a framework for the Community action in the field of water policy (The Water Framework Directive)	4, 5	A framework Directive that requires all Member States to achieve good ecological status of inland water bodies by 2015.	Water & Soil						
European	Nitrates Directive (91/676/EEC)	4	Prevention of eutrophication and water pollution Human health and ecosystem protection. Nitrate Vulnerable Zones (NVZs) designated in vulnerable sites.	Water & Soil	Population & Human Health					
European	Groundwater Directive 80/68/EEC	4, 5	Requires that the entry of 'List I' substances into groundwater be prevented and that there should be no pollution of groundwater by 'List II' substances. It will be repealed by the Water Framework Directive in 2013. Replacement provisions have been provided for in the Groundwater Daughter Directive (2006/118/EC).	Water & Soil						

Level	Plan, Programme, Policy	SA Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
European	Floods Directive 2007/60/EC	4, 5	To establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods.	Water & Soil	Population & Human Health	Cultural Heritage & Landscape	Economic			

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
National	DEFRA (2004). Achieving a Better Quality of Life – Review of Progress Towards Sustainable Development	All	15 Headline Indicators of sustainable development. 147 Quality of Life Counts indicators. Headline Indicators not being met in crime – robbery, air quality, road traffic and volumes of household waste.	Population & Human Health						
National	Department for Transport (2008). Delivering a Sustainable Transport System	All	<ul style="list-style-type: none"> Support national economic competitiveness and growth, by delivering reliable and efficient transport networks; Reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change; Contribute to better safety, security 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; Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; Improve quality of life for transport users and non-transport users, and to promote a healthy natural environment. 	Population & Human Health	Transport					
National	Low Carbon Transport – A Greener Future (2009)	7, 8	<ul style="list-style-type: none"> Supporting a shift to new technologies and fuels Promoting lower carbon transport choices Using market-based measures to encourage a shift to lower carbon transport 	Transport						
National	Low Carbon Travel Guide (2009)	All	<ul style="list-style-type: none"> Creating positive choices for travellers; A holistic package of measures, which 'lock-in' the benefits; and Local application tailored to local circumstances. 	Transport						
National	Saving Lives: Our Healthier Nation White Paper (DoH 1999)	17, 18, 19, 20, 21	Promotion of health and the prevention of ill-health. Four priority areas – Cancer, Coronary Heart Disease & Stroke, Accidents and Mental Health. Address the underlying causes of ill-health, such as poverty, wordlessness, poor educational achievement, poor housing.	Population & Human Health						
National	Culture at the Heart of Regeneration, DCMS, 2004	17, 18, 19, 20, 21	3 priority areas: <ul style="list-style-type: none"> Building partnerships across government, the private and voluntary sectors and culture and regeneration practitioners. Supporting delivery by spreading good practice and measuring outcomes. Strengthening evidence to find coherent and robust methods for measuring impacts. 	Population & Human Health						
National	DETR (2000). Government Rural White Paper: Our Countryside – the Future – a Fair Deal for Rural England	11, 12, 13, 14, 17, 18, 19, 20, 21	<ul style="list-style-type: none"> A living countryside, with thriving rural communities and access to high quality public services; A working countryside, with a prosperous and diverse economy, giving high and stable levels of employment; A protected countryside, in which the environment is sustained and enhanced, and which all can enjoy; A vibrant countryside which can shape its own future and whose voice is heard by government at all levels. 	Population & Human Health						

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
National	DETR (2000). Government Urban White Paper: Our Towns and Cities: the Future – Delivering an Urban Renaissance.	11, 12, 13, 14, 17, 18, 19, 20, 21	<ul style="list-style-type: none"> People shaping the future of their community, supported by strong and truly representative local leaders; People living in attractive, well kept towns and cities which use space and buildings well; Good design and planning which makes it practical to live in a more environmentally sustainable way; Towns and cities able to create and share prosperity; Good quality services – health, education, housing, transport, finance, shopping, leisure and protection from crime. 	Population & Human Health						
National	The Air Quality Strategy for England, Scotland, Wales and Northern Ireland DETR (2000)	6	Government's and the devolved administrations' ultimate objective is to "render polluting emissions harmless". A number of set objectives for protecting human health to be included in regulations for the purposes of Local Air Quality Management relating to concentrations of, amongst others, carbon monoxide, lead, nitrogen dioxide, ozone and particulates.	Air	Population & Human Health					
National	Wildlife and Countryside Act 1981 (as amended)	1, 2	Addresses species protection and habitat loss by setting out the protection that is afforded to wild animals and plants in Britain.	Biodiversity, Flora & Fauna						
National	The Conservation (Natural Habitats) Regulations 1994 (Habitats Regulation) as amended in 1997 and in 2000 (in England only)	1, 2	The Conservation (Natural Habitats, &c.) Regulations 1994 transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations came into force on 30 October 1994, and have been subsequently amended in 1997 and (in England only) 2000. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.	Biodiversity, Flora & Fauna						
National	The Countryside and Rights of Way Act 2000	1, 2,	The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity. Schedule 9 changes the Wildlife and Countryside Act 1981, amending SSSI notification procedures and providing increased powers for the protection and management of SSSIs.	Biodiversity, Flora & Fauna						
National	UK Biodiversity Action Plan (1994)	1, 2	Conserve and enhance biological diversity within the UK. Contribute to the conservation of biodiversity through all appropriate mechanisms.	Biodiversity, Flora & Fauna						
National	Working with the grain of nature: A Biodiversity Strategy for England (2002)	1, 2	Ensure that biodiversity considerations become embedded in all main sectors of economic activity.	Biodiversity, Flora & Fauna						
National	Our energy future – creating a low carbon economy. Energy White Paper DTI (2003)	All	<ul style="list-style-type: none"> To put ourselves on a path to cut the UK's carbon dioxide emissions (60% by 2050) – the main contributor to global warming; To promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and improve our productivity; Stimulate new, more efficient sources of power generation; Cut emissions from the transport sector; Measures for promoting a shift to low-carbon vehicles and fuels are brought together in our 'Powering Future' Vehicles1 strategy, published in July 2002. That strategy is complementary to this white paper: Providing cleaner and better transport, set targets that within the next decade one in ten new cars sold in the UK will be low-carbon vehicles with emissions of 100 grammes per kilometre (g/km) CO2 or less, and that one in five new buses will also be low-carbon. 	Climatic Factors	Transport					
National	UK Climate Change Programme DETR (2000)	All	Key priority of the programme is to ensure that the UK meets its legally binding target under the Kyoto Protocol to reduce its greenhouse gas emissions to 12.5% below 1990 level by 2008-2012. Programme also designed to move towards the domestic goal of a 20% reduction in carbon dioxide emissions below 1990 levels by 2010.	Climatic Factors						

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
National	Planning (Listed Buildings and Conservation Areas) Act 1990	9, 10	Sets out the legal requirements for the control of development and alterations which affect buildings, including those which are Listed or in Conservation Areas, and the framework by which control is maintained. Conservation of the built heritage. Protection of listed buildings and conservation areas.	Cultural Heritage & Landscape						
National	Ancient Monuments and Archaeological Areas Act 1979	9, 10	Provides for nationally important archaeological sites to be statutorily protected as Scheduled Ancient Monuments.	Cultural Heritage & Landscape						
National	The Governments Statement on the Historic Environment for England (2010)	9, 10	The value of the historic environment is recognised by all who have the power to shape it; that Government gives it proper recognition and that it is managed intelligently and in a way that fully realises its contribution to the economic, social and cultural life of the nation.	Cultural Heritage & Landscape						
National	DCMS/DLTR (2001)	9, 10	The historic environment is protected and sustained for the benefit of our own and future generations.	Cultural Heritage & Landscape						
National	The National Trust Our Future – join in Our strategy to 2010 and beyond	All	This strategy is focused on four issues - cultural heritage, our natural world, climate change and local food. It also identifies plans to tackle each issue. <ul style="list-style-type: none"> • The Trust by means of the following statements pledges to address the identified issues: • We will enjoy the uniqueness, beauty and shared sense of pride and belonging that these wonderful places give us. • We will involve our visitors more closely with our conservation work. • We will partner organisations to foster and encourage our wildlife- both flora and fauna. 	Cultural Heritage & Landscape						
National	Environmental Quality in Spatial Planning. English Heritage et al (2005)	9, 10	Planning authorities should consider more ambitious initiatives for the conservation, enhancement and better management of the environment and rural areas.	Cultural Heritage & Landscape						
National	UK Sustainable Development Strategy (2005)	All	The revised objectives are: Living within environmental limits, Ensuring a strong, healthy and just society, Achieving a sustainable economy, Promoting good governance, Using sound science responsibly.	General						
National	Sustainable Communities Plan ODPM (2003)	All	The following are identified as key components of a sustainable community: <ul style="list-style-type: none"> • A flourishing local economy to provide jobs and wealth; • Strong leadership to respond positively to change; • Effective engagement and participation by local people, groups and businesses, especially in the planning, design and long term stewardship of their community, and an active voluntary and community sector; • Sufficient size, scale and density, and the right layout to support basic amenities in the neighbourhood and minimise use of resources (including land); • Good public transport and other transport infrastructure both within the community and linking it to urban, rural and regional centres; • Buildings - both individually and collectively - that can meet different needs over time, and that minimise the use of resources; • A well-integrated mix of decent homes of different types and tenures to support a range of household sizes, ages and incomes; • Good quality local public services, including education and training opportunities, health care and community facilities, especially for leisure; • A diverse, vibrant and creative local culture, encouraging pride in the community and cohesion within it; A "sense of place"; • The right links with the wider regional, national and international community. 	General						

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
National	Planning and Compulsory Purchase Act, 2004	All	This Act substantially reforming the town planning and compulsory purchase framework in the United Kingdom. It both amended and repealed significant parts of the existing planning and compulsory purchase legislation in force at the time, including the Town and Country Planning Act 1990, and introduced reforms such as the abolition of Local Plans and Structure Plans, and their replacement with Local Development Frameworks. It also sets out provision during the transition period.	General						
National	The Town and Country Planning (Local Development) (England) Regulations 2004 as amended in 2008 (England)	All	It sets out the specific Local Development Documents which Local Planning Authorities in England are required to prepare and how that should be done. The amendment has an effect on local development schemes to specify that an adopted proposals map will be amended when a development plan document is approved.	General						
National	Natural Environment and Rural Communities Act 2006	11, 12, 13, 14, 17, 18, 19, 20, 21	An Act to make provision about bodies concerned with the natural environment and rural communities; to make provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.	General						
National	DETR (2000). Government Rural White Paper: Our Countryside – the Future – a Fair Deal for Rural England	11, 12, 13, 14, 17, 18, 19, 20, 21	<ul style="list-style-type: none"> • A living countryside, with thriving rural communities and access to high quality public services. • A working countryside, with a prosperous and diverse economy, giving high and stable levels of employment. • A protected countryside, in which the environment is sustained and enhanced, and which all can enjoy. • A vibrant countryside which can shape its own future and whose voice is heard by government at all levels. 	General						
National	DETR (2000). Government Urban White Paper: Our Towns and Cities: the Future – Delivering an Urban Renaissance.	All	<ul style="list-style-type: none"> • People shaping the future of their community, supported by strong and truly representative local leaders. • People living in attractive, well kept towns and cities which use space and buildings well. • Good design and planning which makes it practical to live in a more environmentally sustainable way. • Towns and cities able to create and share prosperity. • Good quality services – health, education, housing, transport, finance, shopping, leisure and protection from crime. 	General						
National	An Environmental Vision Environment Agency (2000)	All	<ul style="list-style-type: none"> • The fundamental goals the Environment Agency want to help achieve are: • A better quality of life - people will have peace of mind knowing that they live in a healthier environment, richer in wildlife and natural diversity – an environment that they will care for and can use, appreciate and enjoy; • An enhanced environment for wildlife; • Wildlife will thrive in urban and rural areas; • Habitats will improve in their extent and quality to sustainable levels for the benefit of all species; • Everyone will understand the importance of safeguarding biodiversity; • The environmental outcomes for which we are striving: • Cleaner air for everyone; • Improved and protected inland and coastal waters; • Restored, protected land with healthier soils; • The changes we will seek: • A “greener” business world; • Wiser, sustainable uses of natural resources; • The risks and problems we will help manage, prevent and overcome: • Limiting and adapting to climate change; • Reducing flood risk. 	General	Biodiversity & Flora & Fauna	Cultural Heritage & Landscape				

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
National	Guidance Notes for the Reduction of Obtrusive Light Institution of Lighting Engineers (2005)	10, 20,	Provides guidance on reduction of obtrusive light and for sky glow. It is recommended that Local Planning Authorities specify the following environmental zones for exterior lighting control within their Development Plans. E1. Intrinsically dark landscapes. National Parks, AONB etc. E2. Low district brightness areas. Rural, small village or relatively dark urban locations. E3. Medium district brightness areas. Small town centres or urban locations. E4. High district brightness areas. Town/city centres with high levels of night-time activity. The guidance provides limitations for each of the defined areas.	General						
National	The Site Waste Management Plans Regulations 2008	16	This Regulations require any construction project in England costing over £300k (be it for new build, maintenance, alteration or installation/removal of services such as sewerage, water) will need a Site Waste Management Plan (SWMP). A SWMP sets out how building materials, and resulting waste, is to be managed during the project. The SWMP's purpose is to ensure that: building materials are managed efficiently; waste is disposed of legally; and that material recycling, reuse and recovery is maximised. It is the client's responsibility to ensure a SWMP is written, followed, and updated during the project. Although the plan needs to be written at the construction design stage, it is a requirement of the SWMP regulations to maintain it during the whole project. Therefore, the client (or principal contractor) is also responsible for updating the plan with the site day to day activity. There will be two types of SWMP depending on the cost of the project: 1. A project costing between £300 - £500k will follow a basic template 2. Anything over £500k will require a much greater level of detail.	Material Assets	Waste					
National	PPS10 Planning for Sustainable Waste Management ODPM (2005)	14, 16	Regional planning bodies and all planning authorities should, to the extent appropriate to their responsibilities, prepare and deliver planning strategies that (amongst other priorities) help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for.	Material Assets	Waste					
National	Investing for the Future: Flood and Coastal risk management in England (2009)	8	Strategy describes: <ul style="list-style-type: none"> The present scale of flood and coastal erosion risk, and the achievements in managing it so far; An analysis of the investment needed to adapt to climate change and manage the potential increased risk over the period 2010-35; Ways to manage flood and coastal erosion risk more efficiently; An analysis of the benefits of investment, and the potential to broaden the sources of investment. 	Water & Soil						
National	DEFRA 2005 Making space for water Taking forward a new Government strategy for flood and coastal erosion risk management in England	5, 8	Expanding our flood warning and flood awareness activities; encouraging measures to improve resistance and resilience to flooding, including scoping work on the development and delivery of a pilot on direct aid to individuals; and working to improve the evidence base in the case of coastal erosion, and to investigate the practical implications of a wider portfolio of coastal erosion risk management tools. (This is in response to suggestions made during the consultation on making space for water that new tools were needed to help coastal communities adapt to a changing coastline.)	Water & Soil						
National	DEFRA (February 2008) Future Water	4,5	Our vision for water policy and management is one where, by 2030 at the latest, we have: improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from our taps; sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water ensured a sustainable use of water resources, and implemented fair, affordable and cost-reflective water charges cut greenhouse gas emissions embedded continuous adaptation to climate change and other pressures across the water industry and water user.	Water & Soil	Climatic Factors					
National	Tackling health inequalities: A Programme for Action (2003)	11, 12, 13, 14, 17, 18, 19, 20, 21	This Programme for Action sets out plans to tackle health inequalities over the next three years. It establishes the foundations required to achieve the challenging national target for 2010 to reduce the gap in infant mortality across social groups, and raise life expectancy in the most disadvantaged areas faster than elsewhere.	Population & Human Health						

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National	National Planning Policy Framework	All	The NPPF sets out the Coalition Government's agenda for development and places a presumption in favour of development which is sustainable.	General	Population & Human Health	Economic	Transport	Climate	Water	Environment
National	Flood and Water Management Act 2010	4,5	The Act provides comprehensive management of flood risk, tackle bad debt in the water industry, improve the affordability of water bills and help to ensure the continuity of water supplies to the consumer.	Water & Soil						

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
Local	Strategic Flood risk Assessments for Boston Borough (2010), East Lindsey (2005), West Lindsey (2009), the Lincoln Policy Area (2010), North Kesteven (2008), South Holland (2010) and South Kesteven (2009)	5	The SFRA examines flood risk at a strategic level on a local planning authority scale. It is the responsibility of those allocating land for development to demonstrate that the flood risk to and from development will be acceptably safe throughout the lifetime of the proposed development, taking account of climate change. The SFRA should be a "live" document, updated when appropriate to reflect changes in the area and as new information becomes available. It is an important part of the evidence base for the production of the LTP4.	Water & Soil	Population & Human Health					
Local	Lincolnshire Preliminary Flood Risk Assessment (2011)	5	The Lincolnshire PFRA is a countywide preliminary assessment of flood risk from local sources, specifically to identify and significant flood risk areas that meet the national significance thresholds provided by Defra. The primary objective of the PFRA was to gather local data to identify past flooding events. It is an important part of the evidence base for the production of the LTP4.	Water & Soil	Population & Human Health					
Local	Central Lincolnshire Water Cycle Strategy (June 2010)	4,5	This strategy identifies the limitations of the existing water services infrastructure and the requirements to support the levels of growth identified.	Water & Soil	Population & Human Health					
Local	South Kesteven Detailed Water Cycle Study	4,5	This strategy identifies the limitations of the existing water services infrastructure and the requirements to support the levels of growth identified.	Water & Soil	Population & Human Health					
Local	Catchment Flood Management Plans for Grimsby and Ancholme (2009), the River Welland (2009) and Louth Coastal (2009).	4,5	CFMPs provide an overview of the flood risk and set out a preferred plan for sustainable flood risk management over the next 50 to 100 years. The CFMPs indicate areas whereby transport infrastructure is at risk and consequently will be considered in the scope of the SEA.	Water & Soil	Population & Human Health					
Local	Flamborough Head to Gibraltar Point Draft Shoreline Management Plan 2 and The Wash Draft Shoreline Management Plan 2	4,5	These will identify sustainable coastal defence options/ alternatives, taking into account the influences and needs of historic, natural and human environments. They will identify the best approach to managing erosion and flooding over the next 100 years. These SMPs will also indicate areas where transport links will need to be sustained to facilitate the viability of particular areas and where transport infrastructure will be needed to facilitate emergency plans, such as the evacuation of flooded areas.	Water & Soil	Population & Human Health					

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
Local	Water for Life and Livelihoods, River Basin Management Plan, Anglian River Basin District, 2009	4,5	The Anglian River Basin Management Plan has been created under the Water Framework Directive which introduced a formal series of 6 year cycles to focus on the protection, improvement and sustainable use of the water environment. The plan indicates the importance of the development and regeneration of transport infrastructure as an opportunity to improve the water environment.	Water & Soil	Population & Human Health					
Local	Water for Life and Livelihoods, River Basin Management Plan, Humber River Basin District, 2009	4,5	The Humber River Basin Management Plans has been created under the Water Framework Directive which introduced a formal series of 6 year cycles to focus on the protection, improvement and sustainable use of the water environment. The plan indicates the importance of the development and regeneration of transport infrastructure as an opportunity to improve the water environment.	Water & Soil	Population & Human Health					
Local	The Neene Catchment Abstraction Management Strategy 2005	4	The Neene CAM sets out how resources will be managed to ensure that there is enough water available for abstraction while simultaneously protecting the needs of the natural environment.	Water & Soil						
Local	The Welland Catchment Abstraction Management Strategy 2007	4	The Welland CAM sets out how resources will be managed to ensure that there is enough water available for abstraction while simultaneously protecting the needs of the natural environment.	Water & Soil						
Local	The Witham Catchment Abstraction Management Strategy 2004	4	The Witham CAM sets out how resources will be managed to ensure that there is enough water available for abstraction while simultaneously protecting the needs of the natural environment.	Water & Soil						
Local	The Grimsby, Ancholme and Louth Catchment Abstraction Management Strategy 2006	4	The Grimsby, Ancholme and Louth CAM sets out how resources will be managed to ensure that there is enough water available for abstraction while simultaneously protecting the needs of the natural environment.	Water & Soil						
Local	Strategic Housing Market Assessment (HMA) (Oct 2007)	All	The HMA covers the two Housing Market Areas: Central Lincolnshire - City of Lincoln, West Lindsey and North Kesteven Coastal Lincolnshire - East Lindsey and Boston To identify, clearly define and analyse the housing market(s) operating within the combined study area to enable all partners in the area to work together to develop and implement sustainable policies which lead to balanced housing markets in planning and housing terms.	Population & Human Health						
Local	Gypsy and Traveller Accommodation Needs Assessment (Sep 2007)	11, 12, 13, 14, 17, 18, 19, 20, 21	This study assesses the amount and quality of accommodation provision for Gypsies and Travellers. Provides an estimate of future pitch need. Identifies a need of 22 to 26 extra pitches (permanent and transit) 2007-2012	Population & Human Health						
Local	Central Lincolnshire Water Cycle Strategy (June 2010)	4,5	This strategy identifies the limitations of the existing water services infrastructure and the requirements to support the levels of growth identified.	Water & Soil						
Local	South Kesteven Detailed Water Cycle Study	4,5	This strategy identifies the limitations of the existing water services infrastructure and the requirements to support the levels of growth identified.	Water & Soil						

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Local	Lincoln Policy Area Strategic Flood Risk Assessment– Final Report (Feb 2010)	5	A Level 2 SFRA, incorporating requirements of Level 1, in accordance with guidance in PPS25. A planning tool that identifies flooding-related constraints to development across Lincoln Policy Area.	Water & Soil						
Local	River Witham Catchment Flood Management Plan (December 2009)	5	Sets out a strategic overview of the scale and extent of flooding now and in the future, and to set policies for managing flood risk within the River Witham catchment.	Water & Soil						
Local	Lincolnshire Rights of Way Improvement Plan 2007-2012	17,18,19	This is a five year strategic report which sets out how Lincolnshire County Council intends to improve the management, provision and promotion of public rights of way in Lincolnshire. Our Vision for the Rights of Way Improvement Plan in Lincolnshire is:- “To have an integrated network of rights of way that is relevant for today’s needs, bringing added benefits to residents and visitors by supporting wider interests including sustainable transport, rural economy and tourism, health benefits and quality of life issues”.	Cultural Heritage & Landscape						
Local	Lincolnshire Wolds AONB Management Plan 2004 – 2009 Draft Lincolnshire Wolds AONB Management Plan 2012-2017	9, 10, 11, 12, 13, 14, 17, 18, 19, 20,	Aims The five key aims of the Management Plan are to sustain and enhance: <ul style="list-style-type: none"> the Lincolnshire Wolds’ natural beauty and its landscape character; farming and land management in the Wolds as the primary activities in maintaining its character, landscape and biodiversity; recreational, tourism and interpretive activities and opportunities appropriate to the area; the economic and social base of the Wolds including the development and diversification of enterprises appropriate to the area; partnerships between organisations, the local community, landowners and others with an interest in the Wolds . 	Cultural Heritage & Landscape						
Local	North Kesteven Landscape Character Assessment 2007	10	Sets out assessment of the character, distinctiveness and qualities of the landscape within North Kesteven. The assessment sets out the key characteristics of the landscape character types and sub areas, pressures for change and opportunities for enhancement	Cultural Heritage & Landscape						
Local	West Lindsey Landscape Character Assessment 1999	10	Sets out assessment of the character, distinctiveness and qualities of the landscape	Cultural Heritage & Landscape						
Local	Lincoln Townscape Assessment	10	The city is divided up into a total of 108 distinct ‘Character Areas’, with each area representing a different ‘place’ in Lincoln. The LTA describes the inherited character of all parts of the City of Lincoln.	Cultural Heritage & Landscape						
Local	Lincolnshire Sustainable Community Strategy 2009-2030 and Refresh March 2010	All	Represents a shared evidence base and vision for Lincolnshire. The Local Area Agreement is the delivery plan to realise the vision. The strategy tackles issues that are important to Lincolnshire, including connections between communities, climate change flooding and road safety.	Population & Human Health						
Local	North Kesteven District Council Sustainable Community Strategy 2008-2018	All	Represents the Local Strategic Partnership’s vision for North Kesteven: “100 flourishing Sets out two main objectives to realise the vision: 1. Working in partnership to improve the quality of life, economic performance and environmental sustainability of North Kesteven; 2. Inspiring community participation in the delivery of public services and the achievement	Population & Human Health						

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Local	West Lindsey District Council Sustainable Community Strategy 2006-2016	All	<p>Represents the Local Strategic Partnership's vision for West Lindsey:</p> <p>"The Vision is that West Lindsey is seen as a place where people want to live, work, invest and visit".</p> <p><u>Healthy Communities</u></p> <ul style="list-style-type: none"> Residents of West Lindsey Enjoy Good Physical and Mental Health, and Emotional Well-Being West Lindsey Residents are informed about the ways in which they can improve and sustain their own Health and Well-Being. <p><u>Safer, Stronger Communities</u></p> <ul style="list-style-type: none"> Empowered Communities, Engaged with Partner Agencies, Helping to shape Local Service Delivery To improve the quality of life by promoting a culture of partnership with the local community to improve the local environment and reduce the incidents of Environmental Crime. Residents Feel Safe West Lindsey Provides Affordable, Sustainable Housing <p><u>Economic Development</u></p> <ul style="list-style-type: none"> A positive Economic Environment for West Lindsey: Business and employment are diverse New businesses are attracted to the area Existing businesses are growing Economic activity is strong High number of residents are economically active There is a diverse skills-mix among local residents West Lindsey balances economic growth with principles of sustainability particularly environmental sustainability West Lindsey is Accessible in the Broadest Sense 	Population & Human Health	Economic					
local	Lincoln's Sustainable Community Strategy 2008- 2023 Vision Our City Our Future	All	<p>Sets out the Local Strategic Partnership's vision for Lincoln in 2030: "A well run, creative city of sustainable neighbourhoods and ambitious people, which is internationally renowned for its culture, economy, and special character. Lincoln is a great place to live and work that unlocks the potential in all people and all places and provides an enviable quality of life".</p> <p>The strategy sets out 5 key issues that need to be addressed to realise the vision:</p> <ol style="list-style-type: none"> Our children and young people; Our health; Our economy; Our environment; Our safety 	Population & Human Health	Economic					
local	East Lindsey Draft Core Strategy 2009	All	<p>To achieve our vision of "a network of thriving, safer and healthy sustainable communities, where people can enjoy a high quality of life and an increased sense of well-being and where all new development simultaneously addresses the needs of the economy, communities and the environment"</p> <ul style="list-style-type: none"> we will:- define a hierarchy of settlements and identify broad areas for growth within a spatial strategy; protect and enhance the vitality and viability of our town centres; protect and improve essential community facilities in towns and villages; help to keep communities safe and reduce the fear of crime; require new development to contribute to improving the environmental quality of towns and villages; create economies of scale in urban development to extend benefits to villages and rural areas; ensure that service infrastructure is capable of accommodating planned growth; develop where possible on previously used land in preference to greenfield sites. 	General	Population & Human Health	Economic	Transport	Air	Water	
Local	South Kesteven District Council Core Strategy	All	<p>"A successful rural district supported by excellent social and transport infrastructure. Grantham will have developed as a key economic centre not only in Lincolnshire but also sub regionally. Stamford, Bourne and The Deepings will have equally developed their distinctive market town roles. Rural</p>	General	Population & Human Health	Economic	Transport	Air	Water	

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	2010		<p>communities will have remained viable by achieving development that supports their needs. All of this will have been achieved in ways which ensures a good quality of life, health and well being for everyone as well as celebrating the distinctiveness of the districts countryside and heritage."</p> <p>This will be achieved by:</p> <ul style="list-style-type: none"> • Creating the right balance of jobs, housing and infrastructure; • Ensuring that development is sustainable in terms of location, use and form; • Balancing the development needs of the District with the protection and enhancement of the natural and built environment; • Addressing and mitigating any negative effects of development on the built and natural environment. • Working with partners and residents to develop a place where people really matter. <p>This vision seeks to reflect both the vision of the Local Strategic Partnership, as set out in the Community Plan for South Kesteven, and that of the Council's Corporate Plan.</p>							
Local	South Kesteven District Council Site Allocations DPD 2011	All	<p>Housing Objective 1 – Make provision for at least 8250 new homes across the District (excluding Grantham) up to 2026. Ensuring a rolling five year supply of housing development which varies in terms of sites, size, type and tenure and affordability. Objective 2 – Identify suitable and deliverable sites for affordable housing schemes to meet local needs within rural villages, and ensure the provision of an appropriate amount of affordable housing on qualifying development sites.</p> <p>Employment/Commercial Objective 3 – Identify a range of suitable and available sites to support a diversity of new and existing employers (including commercial, retail, leisure and other business sectors) to promote a thriving local economy. Objective 4 – Restrict the loss of existing viable and well located employment land to other non-employment generating uses. Objective 5 – Identify opportunities to support and encourage appropriate rural employment and diversification schemes in sustainable and accessible locations throughout the District. Objective 6 – Promote and enhance the vitality and viability of the principal retail areas within the District (excluding Grantham) by concentrating new retail, leisure and service developments within identified town centres and ensuring that such schemes meet an identified retail need and capacity. Identify local centres as the focus for local retail and service needs.</p> <p>Supporting Rural Communities Objective 7 – Promote sustainable patterns of development through: the identification of appropriate housing allocations including rural affordable housing sites; promoting sustainable rural employment opportunities; improving access and public transport: and by seeking to retain and improve existing facilities.</p> <p>General Objective 8 – Ensure all allocated sites are located in accordance with the spatial strategy and policies of the Core Strategy. In particular that they:</p> <ol style="list-style-type: none"> 1. Prioritise the use of well located previously developed sites 2. Maximise the use of existing public transport, cycling and pedestrian routes 3. Have access to appropriate services and infrastructure 4. Protect and enhance wildlife sites, protected species; biodiversity; historic assets; archaeology; water quality; landscape character and open space. <p>Objective 9 –Minimise the impact of new development on the environment from construction through to occupation, by reducing the use of resources (including land); reducing carbon emissions and promoting a reduction in energy use. Objective 10 – Reduce the risk of flooding by ensuring that new development is appropriately located and designed, and that consideration is given to the use of Sustainable Urban Drainage Systems on allocated sites.</p> <p>Green Infrastructure Objective 11 – To ensure that the District has a network of multi-functional green space which increases biodiversity, provides for the sporting and recreational needs of the population, promotes healthy lifestyles and enhances the quality of the natural, historic and built environment.</p>	General	Population & Human Health	Economic	Transport	Air	Water	
Local	Central Lincolnshire Core Strategy Issues and Options (Draft Core	All	<p>Theme 1: Sustainable Development Sustainable development is the overarching aim of the plan. No objectives are as it embraces all the objectives set out under the other themes.</p>	General	Population & Human Health	Economic	Transport	Air	Water	

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	Strategy anticipated later in 2012		<p>Theme 2: A Low Carbon Future</p> <p>1. To reduce the causes of climate change and to minimise its impacts by: >locating development where it is accessible by sustainable public transport >requiring environmentally sensitive design and construction >reducing the risk of flooding >promoting the use of energy efficient measures and low carbon technologies.</p> <p>Theme 3: Growing Central Lincolnshire</p> <p>2. To ensure the use of land and maximise the contribution of land to new development by promoting the regeneration of key sites.</p> <p>3. To ensure that new development maximises and strengthens existing public transport links and creates attractive alternatives to private car use.</p> <p>4. To ensure that the infrastructure (services and facilities) needed to sustain and strengthen existing communities and support the development of Central Lincolnshire are adequately provide in a timely and sustainable manner.</p> <p>Theme 4: Strong & Prosperous Communities</p> <p>5. To improve the quality of life for everyone who lives, visits, works and invests in Central Lincolnshire; and maximise the opportunities to strengthen and enhance existing settlements by creating sustainable communities that are distinctive, clean, green and safe places.</p> <p>6. To meet strategic housing needs by delivering new homes and ensure that an appropriate proportion is affordable and accessible to those in need.</p> <p>7. To create the conditions for a healthier population by addressing environmental factors underpinning health and wellbeing; working with healthcare partners to deliver new and improved health and social care facilities; and by improving access to leisure, recreational and lifelong learning activities.</p> <p>8. To diversify and strengthen the economic base of Central Lincolnshire by providing the locations and skilled workforce to attract new businesses and new sources of employment; to meet the needs of existing companies and take advantage of opportunities to diversify into knowledge-based jobs and tourism.</p> <p>Theme 5: A Quality Environment</p> <p>9. To protect and enhance Central Lincolnshire's inherited natural and built assets and ensure these continue to contribute to local distinctiveness.</p> <p>10. To improve and provide new Green Infrastructure by enhancing, developing and providing a network of multi-functional green spaces, parks, rivers and other corridors within and around settlements that connect them to each other and the wider countryside, improving access, environmental quality and biodiversity.</p> <p>11. To ensure that new development is well designed and constructed in a sustainable manner to maximise environmental performance and community safety and encourage healthy lifestyles. In addition to these themes and objectives for the whole of Central Lincolnshire, the document has a separate chapter for each of the 3 main settlements in Central Lincolnshire: Lincoln, Gainsborough and Sleaford. These area chapters include further place-specific objectives for the 3 settlements</p>							
Local	The South Holland Local Plan (July 2006)	All	The saved policies of the South Holland Local Plan identify the Planning policies which will guide and control new development in the District until 2021, encouraging the economy to grow and allowing more housing to be built as part of a balanced strategy.	General	Population & Human Health	Economic	Transport	Air	Water	
Local	The Boston Borough Local Plan (April 1999)	All	<p>The saved policies of the Boston Borough Local Plan has the following four principal functions:</p> <p>1) to translate the strategic policies and proposals of the Structure Plan, into a more specific form and to relate them directly to areas of land in the Borough;</p> <p>2) to provide a detailed basis for development control decisions;</p> <p>3) to provide certainty and a basis for co-ordinating public and private investment in the development and use of land;</p> <p>4) to bring issues concerning the use of land before the public and to involve them in the plan-making process.</p>	General	Population & Human Health	Economic	Transport	Air	Water	
Local	The City of Lincoln Local Plan (August 1998)	All	<p>The City Council aims to:</p> <ul style="list-style-type: none"> • improve the quality of the local environment and the physical, social and economic health of the local community; • protect and reinforce Lincoln's special identity as development, change and renewal take place; • manage change with care, working towards a more sustainable, energy efficient city which offers improved quality of life and expanding opportunities for present and future generations. 	General	Population & Human Health	Economic	Transport	Air	Water	

Level	Plan, Programme, Policy	SEA Framework Objectives relevant to PPP	Aims and Objectives	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7
Local	North Kesteven Local Plan (June 2003)	All	The saved policies of the North Kesteven Local Plan identifies land for new housing and employment development, and acts as a guide for most day-to-day planning decisions.	General	Population & Human Health	Economic	Transport	Air	Water	
Local	West Lindsey Local Plan (June 2006)	All	<p>The Local Plan First Review has the following main functions:</p> <ul style="list-style-type: none"> - Amplifying National and Regional Planning Policy and the Lincolnshire Structure Plan Review and applying them to the needs and specific circumstances of West Lindsey. - Setting out planning policies devised to help safeguard and improve the environment, control development and other uses of land, and promote the economic and social well-being of those living and working in West Lindsey. - Informing the general public and other interested parties about land use issues of District-wide and local importance and providing opportunities for them to be involved in solutions for resolving land use planning problems. 	General	Population & Human Health	Economic	Transport	Air	Water	
Local	The Lincolnshire Historic Landscape Characterisation	9, 10	A Historic Landscape Characterisation project has been undertaken in Lincolnshire; this helps people to interpret the modern environment with reference to how it has developed and what is historically important about particular landscapes. The project identified 42 Historic Character Zones within 10 broad Historic Landscape Types	Cultural Heritage & Landscape						

Strategic Environmental Assessment of the Lincolnshire County Council Local Transport Plan 4

Scoping Report

July 2012

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Lincolnshire County Council



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Abbreviations

AGLV	Area of Great Landscape Value
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BREEAM	Building Research Establishment Environmental Assessment Method
BVPI	Best Value Performance Indicator
CD&E	Construction, Demolition and Extraction (Waste)
DCLG	Department for Communities and Local Government
DDA	Disability Discrimination Act
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DfT	Department for Transport
DPD	Development Plan Document
DTI	Department of Trade and Industry
EA	Environment Agency
EC	European Commission
EEC	European Economic Community
EIA	Environmental Impact Assessment
EMRLCA	East Midlands Regional Landscape Character Assessment
EQIA	Equality Impact Assessment
EU	European Union
GHG	Greenhouse Gas
GPZ	Groundwater Protection Zones

GVA	Gross Value Added
HGV	Heavy Goods Vehicle
HSE	Health and Safety Executive
HRA	Habitat Regulations Assessment
IMD	Indices of Multiple Deprivation
KSI	Killed or Seriously Injured
LA	Local Authority
LAA	Local Area Agreement
LDF	Local Development Framework
LEA	Local Economic Assessment
LNR	Local Nature Reserve
LPA	Local Planning Authority
LTP	Local Transport Plan
LSOA	Local Super Output Areas
MAGIC	Multi-Agency Geographic Information for the Countryside
MAA	Multi-Area Agreement
NIS	National Indicator Set
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
ODPM	Office of the Deputy Prime Minister
OFWAT	Office of Water Services
ONS	Office for National Statistics
PPC	Pollution Prevention & Control
PPG	Planning Policy Guidance
PPS	Planning Policy Statement

RET	River Ecosystem Target
RIF	Regional Infrastructure Fund
RSS	Regional Spatial Strategy
RQO	River Quality Objective
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Area
SPD	Supplementary Planning Documents
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Urban Drainage Systems
UDP	Unitary Development Plan
WHO	World Health Organisation

1 Introduction

1.1 The Scoping Report

Mouchel has been commissioned by Lincolnshire County Council (LCC) to undertake a Strategic Environmental Assessment (SEA) on the proposed Lincolnshire County Council Local Transport Plan 4 (LTP4) in June 2012.

This purpose of this report is to present the scoping stage. The Scoping Report sets the context and provides baseline information in order to provide a starting point from which to appraise the effects of implementing the LTP4.

To provide a sound basis for analysis, the report:

- reviews the relevant plans and programmes which will influence the LTP4;
- identifies the key environmental and sustainability issues and problems; and
- sets out an SEA Framework around which the appraisal can take place.

The main purpose of the Scoping Report is to identify significant impacts that need to be considered in the SEA.

Baseline information is set out to establish the current state of the area covered by the LTP4 and to identify trends in economic, environmental and social parameters. This information is used to assess current environmental and sustainability issues that are evident in the plan area.

A set of SEA objectives have been developed, taking into account the relationship between the LTP4 and the objectives of other plans and programmes, along with the findings of the baseline information review. These objectives will form the basis of the SEA Framework within which the evaluation of the LTP4 options/alternatives will be carried out.

1.2 Consultation

The Scoping Report is being published to seek the views of statutory and other consultees. In reading the report, consultees are asked to address the following questions.

- **Question 1:** Have all relevant plans and programmes been considered?
- **Question 2:** Does the baseline information reflect the current situation in the LTP4 area or are there additional social, environmental or economic factors that should be considered?
- **Question 3:** Do the issues identified in this report cover all the significant environmental and sustainability issues relevant to the LTP4 area?
- **Question 4:** Do the SEA objectives reflect the right aspirations for development of more sustainable approaches to transportation?

1.3 Study Area

The study area covers the whole of the county of Lincolnshire, incorporating the districts of North Kesteven, South Kesteven, West Lindsey, East Lindsey, South Holland, the Borough of Boston and Lincoln City. The study and districts are shown in Figure 1-1.

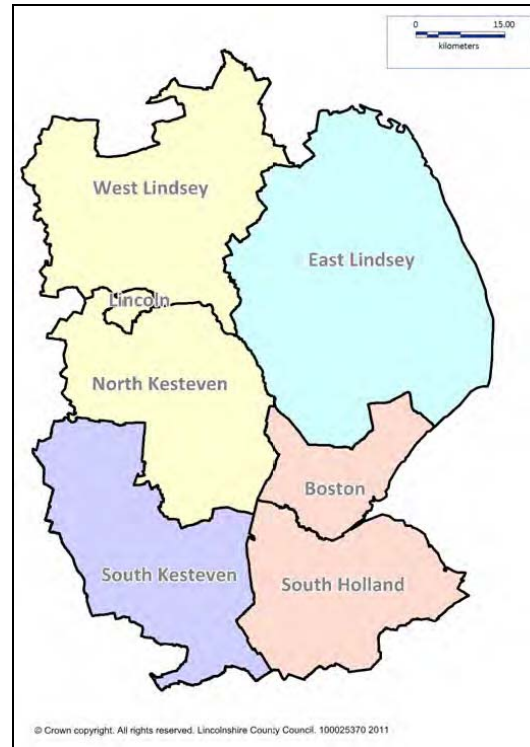


Figure 1-1 Lincolnshire County Districts

Source: Lincolnshire County Council, 2011; *Preliminary Flood Risk Assessment Report*.

The county is predominantly rural and has a geographical area of 2,309 sq miles. Population is centred around the cathedral city of Lincoln which has a rich history dating back to its foundation as a roman colony. Other centres of population in the county include Gainsborough, Louth, Mablethorpe, Skegness, Boston, Sleaford, Grantham, Stamford and Spalding.

Lincolnshire's coastline boasts some of the country's most versatile agricultural land, a successful tourism industry and internationally-renowned nature conservation sites.

1.4 Background to the Lincolnshire Local Transport Plan

The Government's 1998 White Paper on transport, 'A New Deal for Transport: Better for Everyone', introduced the concept of Local Transport Plans (LTP's) to steer the development of national transport policies at the local level. The Transport Act 2000

(now amended by the Local Transport Act 2008) then made it a statutory requirement for local transport authorities to produce LTP's.

The LTP process has brought about a step change in the way local authorities plan strategically for transport in their areas. Good transport is a vital factor in building sustainable local communities. It contributes to the achievement of stronger and safer communities, healthier children and young people, equality and social inclusion, environmental objectives and better local economies.

LTP's define the area's plans and strategies for maintaining and improving the local transport network within economic, environmental and social constraints and will set out programmes of expenditure on transport improvements in line with national and regional transport policy. This covers all forms of transport (including freight). Public participation is a key part of developing LTP's to involve the wider community. LTP's have regard to objectives set out in Sustainable Community Strategies and other local documents. LTP's are developed in the context of, and with close links to a number of wider policy documents (identified in Appendix A). Partnership working with wider policy areas such as health and education is key to delivering LTP and wider policy objectives.

In July 2000 a first LTP (LTP1) was published for Lincolnshire County Council covering the five year transport planning period 2001/02 - 2005/06. In March 2006 a second and current LTP (LTP2), was published covering the five year period 2006/07 - 2010/11. In addition, a number of LTP progress reports have been produced for the periods 2003, 2004 and 2005.

LTPs 1 and 2 were developed in the context of County Structure Plans and the emerging Regional Plan. In July 2010 the Secretary of State revoked the Regional Spatial Strategy (RSS) which had been adopted in the East Midlands in 2009. LTP3 was adopted in early 2011 and was only meant to roll forward LTP2 strategies for a further two years up to 2013.

1.5 Timescale

It is proposed that the LTP4 document will be in place by the end of March 2013. An initial consultation on the LTP4 process is taking place at the time of issue and further consultation with key stakeholders will take place in the Autumn of 2012. The LTP4 will provide a framework policy for the development of implementation plans; the first of these will be for two years with further revisions of specific policies during the life of the LTP4.

1.6 Strategic Environmental Assessment

SEA incorporates environmental considerations into policies, plans and programmes. It ensures that significant environmental effects arising from policies, plans and programmes are identified, assessed, mitigated, communicated to decision-makers, monitored and that opportunities for public involvement are provided.

In the EU an SEA is required for all member states on all plans and programmes by EC Directive (2001/42/EC) 'on the assessment of the effects of certain plans and programmes on the environment', known as the 'SEA Directive'. The Directive is implemented in England through the Environmental Assessment of Plans and Programmes Regulations (SI 1633 2004) and makes SEA mandatory for the following plans and programmes:

- a. Which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for the future development consent for projects listed in Annexes I and II of the Environmental Impact Assessment Directive (85/337/EEC); or
- b. Which in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive (92/43/EEC).

1.7 Department for Transport

Strategic Environmental Assessment for Transport Plans and Programmes TAG Unit 2.11 "In draft" Guidance April 2009 Department for Transport - Transport Analysis Guidance (TAG) ⁱ:

"Alongside the preparation of the LTP and SEA, there will be a number of other Assessment activities that may be required (e.g. Equality Impact Assessment (EqIA) and Health Impact Assessment (HIA)). Where appropriate the SEA should draw on the findings of these other assessments.

NB: SEA requires that effects on 'Population' and 'Human Health' are considered and therefore EqIA and HIA should help to inform these areas of the SEA.

Another assessment activity that local authorities should expect to undertake for their LTP, but which was not undertaken on the LTP2, is Habitat Regulations Assessment (HRA)."

1.8 Habitats Regulations Assessment

Part II of the Conservation (Natural Habitats, &c) (Amendment) Regulation 2007 outlines the due process for the protection of Natura 2000 sites with respect to development plans. This is transposed in the UK through The Conservation of Habitats and Species Regulations (SI 2010 No.490). Due to the potential for the LTP4 to have significant effects on Natura 2000 sites it is subject to Habitats Regulation Assessment (HRA).

HRA should be undertaken as an iterative process during the development of a programme or plan that is likely to have an adverse effect on any designated Natura 2000 sites.

1.9 Equality Impact Assessment

Local authorities have a duty under race, disability and gender legislation to carry out an Equality Impact Assessment of their LTP. The production of an EqIA can help

determine how an LTP may affect different groups of people. The DfT advises that an EqlA is carried out alongside a SEA and encompass race, gender, disability, age, religion/belief and sexual orientation.ⁱⁱ

2 Methodology

2.1 SEA Process

This Scoping Report has been developed in accordance with guidance set out in the 'Practical Guide to Strategic Environmental Assessment Directive' (Department for Communities and Local Government (DCLG), previously ODPM; 2005). The DCLG SEA guidance outlines five sequential steps, these main stages and tasks are listed in Table 2.1 SEA Stages. This report presents the findings of Task A1 to A4 of the SEA process.

Table 2.1 SEA Stages

SEA Stage	What is involved
STAGE A	Setting the context and objectives, establishing the baseline and deciding on the scope. Tasks <ul style="list-style-type: none"> • A1: Identifying other relevant policies, plans and programmes, and SEA objectives. • A2: Collecting baseline information. • A3: Identifying environmental problems. • A4: Developing the SEA objectives. • A5: Consulting on the scope of the SEA.
STAGE B	Developing and refining options/alternatives and assessing effects Tasks <ul style="list-style-type: none"> • B1: Testing the plan or programme objectives against the SEA objectives. • B2: Developing the Strategic alternatives. • B3: Predicting the effects of the Draft plan or programme including alternatives. • B4: Evaluating the effects of the Draft plan or programme including alternatives. • B5: Considering ways of mitigating adverse effects. • B6: Proposing measures to monitor the environmental effects of implementing the plan or programme.
STAGE C	Preparing the Environmental Report Tasks <ul style="list-style-type: none"> • C1: Preparing the Environmental Report.
STAGE D	Consulting Tasks <ul style="list-style-type: none"> • D1: Consulting on the draft plan and the Environmental Report. • D2(i): Assessing significant changes. • D2(ii): Appraising significant changes resulting from representations. • D3: Making decisions and providing information.
STAGE E	Monitoring the significant effects of implementing the plan on the environment Tasks <ul style="list-style-type: none"> • E1: Finalising aims and methods for monitoring. • E2: Responding to adverse effects.

The DCLG SEA guidance states that SEA should:

- Provide a long term view of how the area covered by the plan is expected to develop, taking account of social, environmental and economic effects of the proposed plan.
- Provide a mechanism for ensuring that SEA objectives are translated into sustainable policies.
- Reflect global, national, regional and local concerns.
- Provide an audit trail of how the plan has been revised to take account the findings of the SEA.
- Form an integral part of all stages of plan preparation.
- Incorporate the requirements of the SEA Directive.

2.2 SEA and LTP relationship

Figure 2-1 shows the relationship between an SEA and the development of an LTP.

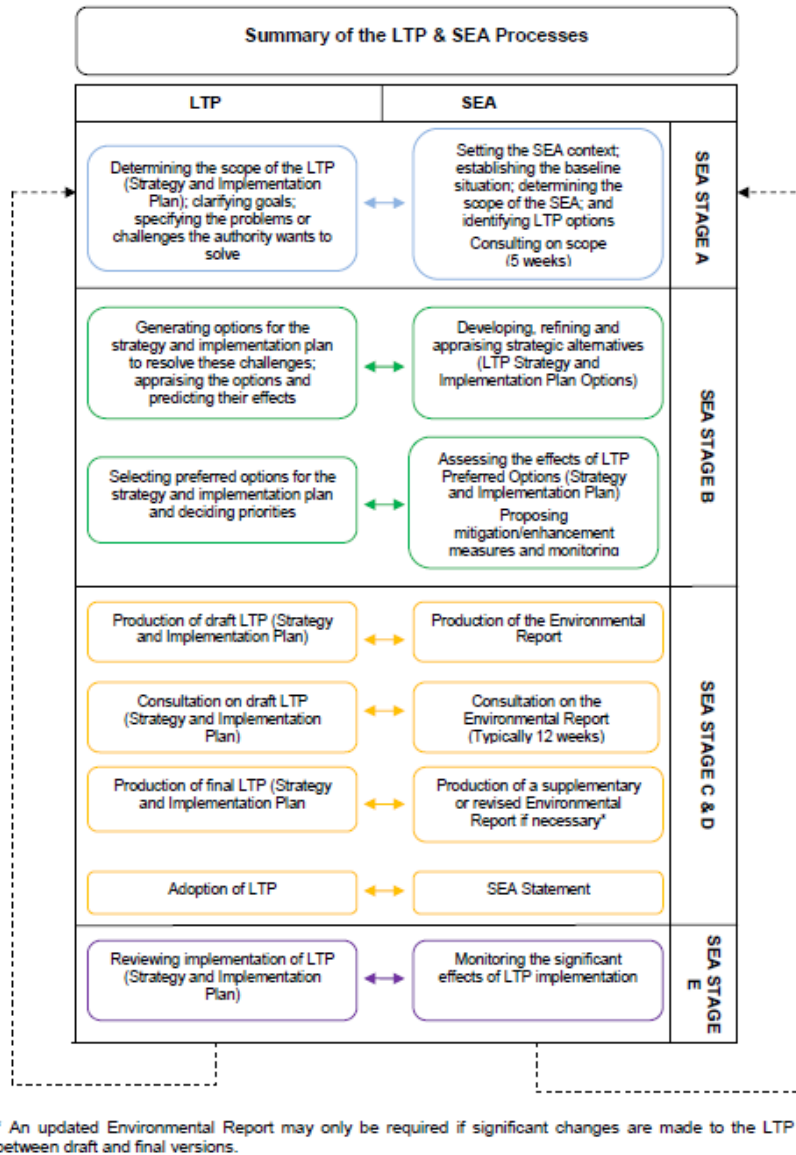


Figure 2-1 LTP4 and SEA Processes ⁱⁱⁱ

2.3 Health Impact Assessment

Health Impact Assessment (HIA) aims at studying upstream health determinants in an integrated way rather than concentrating on single risk factors. Its overall

objective is to provide decision-makers with sound information on implications on health of any given policy.

A Health Impact Assessment is not a statutory requirement for the LTP4; however the HIA process will be integrated into the SEA, process for the Lincolnshire County Council LTP4 to ensure that effects on 'Population' and 'Human Health' are considered.

The SEA method has due regard for a number of principles set down by the World Health Organisation that need to be considered in relation to integrating health impact assessment within SEA.

The following Table 2-2 sets out the principles of HIA that need to be considered and at what stage in the SEA process these will be addressed and documented.

Table 2-2 Integrating HIA into the SEA Process

Principles of HIA	Stage integrated into the SEA
Include an initial screening to determine the broad relevance to people's health of the policies, plans or programme under consideration;	Relevance to the Local Transport Plan
Take into account any health concerns expressed by relevant health authorities and of the public;	Stage A 1- 5 and consultation of Scoping Report will include health authorities.
Consider the range of health determinants, and how they are likely to be modified, in positive and/or negative ways, as a result of the policies, plans or programmes that were subject to the SEA;	Stage A 1 - Health Plans, Programmes and Policies have been collated; Stage A 2 - Health baseline data has been collected Stage A 3 – Health key issues have been identified for Lincolnshire County Council Local Transport Plan Area Stage B - All the above will be used to inform the appraisal of the LTP4 options / alternatives
Consider the positive as well as the negative effects of proposed policies and programmes;	Stage B
Consider how the expected health effects might be distributed across different groups within the population who are affected;	Stage B The EqlA will be integrated into the SEA and used to identify potential impacts to different groups
Contain recommendations with respect to actions that could be undertaken to enhance the potential positive health effects identified and to mitigate or remove the negative ones;	Stage B
Seek to involve the public through	Stakeholder workshops are to be carried out

Principles of HIA	Stage integrated into the SEA
consultation and participation;	as part of the LTP4 and SEA process and health authorities will be consulted. The results will be collated and used to inform the SEA process.
Give due account to issues raised by the public and/or organisations representing members of the public who may be affected;	Stage C - the results of Stakeholder consultation will be collated and will state where they have been addressed within the SEA
Consider the need for cost-effective monitoring of any anticipated impact(s) on people's health.	Stage C Stage D Stage E

3 Task A1: Identifying Relevant Policies, Plans and Programmes

The LCC LTP4 will be set in the context of a wide range of other relevant plans and programmes and environment objectives both within and outside the authorities' jurisdiction. Appendix A documents all the relevant plans and programmes including International, European, National, Regional (East Midlands), County (Lincolnshire), City Council (Lincoln), Borough (Boston) and Districts (North Kesteven, South Kesteven, West Lindsey, East Lindsey and South Holland) relevant to the LCC LTP4.

4 Task A2: Collecting Baseline Information

Baseline information is set out in Section 6 to establish the current state of the area covered by the LTP4, and to identify trends in economic, environmental and social parameters. This information is then used to assess current environmental and sustainability issues that are evident in the area. The baseline information is intended to provide a basis for predicting and monitoring the effects of implementation of the plan. It also helps to identify the environmental and sustainability issues and alternative ways of dealing with them.

Baseline data has been collected for the following local authorities areas:

- Lincolnshire County Council
- Lincoln City Council
- Boston Borough Council
- North Kesteven District Council
- South Kesteven District Council
- West Lindsey District Council
- East Lindsey District Council
- South Holland District Council

For each set of information collected the DCLG guidance recommends that the data enable the following questions to be answered.

- How good or bad is the current situation?
- Do trends show that the situation is getting better or worse?
- How far is the current situation from any established thresholds or targets?
- Are particularly sensitive or important elements of the economy, physical environment or community affected?
- Are the problems reversible or irreversible, permanent or temporary?
- How difficult would it be to offset or remedy any damage?
- Have there been significant cumulative or synergistic effects over time?
- Are there expected to be such effects in the future?

5 Task A3: Identifying Environmental Issues and Problems

Identifying the environmental issues and problems is an opportunity to define the key social, environmental and economic issues which need to be taken into account when preparing the LTP4. In some cases these are constraints which must be overcome, or impacts which must be avoided; in other cases these may be opportunities (e.g. stimulating the local economy and employment markets) which should be pursued where possible, or supported indirectly by policies in other instances.

There is a wealth of knowledge regarding environmental and sustainability issues within the East Midlands sub region as identified in the identification of plan, programmes and policies. Key environmental issues have also been identified through researching the baseline information.

The SEA will be based on a list of SEA objectives against which the options/alternatives for the LTP4 will be assessed (see section 6). These objectives have been drawn up taking account of the principal environmental issues relevant to the LTP4 area.

5.1 SEA Topics

The baseline information is set out in Appendix B. This section includes an overview of the current situation and covers the topics specified in Annex 1 (f) of the SEA Directive, i.e.

- Climate
- Air
- Biodiversity, Flora and Fauna
- Soil
- Water
- Population & Human Health (includes transport, economics, tourism)
- Material Assets (include housing and waste)
- Cultural Heritage
- Landscape

5.2 Climate

Carbon dioxide (CO₂) is the most abundant greenhouse gas, and accounted for about 84% of the total UK greenhouse gas emissions in 2010, the latest year for which final results are available. In 2011, UK net emissions of CO₂ were provisionally estimated to be 456.3 million tonnes. This was 8.0% lower than the 2010 figure of 495.8 million tonnes. Between 2010 and 2011 there were significant decreases in CO₂ emissions from all of the main sectors, which resulted primarily from a significant fall in energy consumption combined with fuel switching from coal to nuclear for electricity generation.^{iv}

In Lincolnshire there is significant potential to generate energy from renewable sources, and particularly using wind, the tides and biomass. Since 2004, the generation of energy from renewable sources within the county has been increasing steadily.^v There are a significant number of wind turbines in the county with many more planned.

However the County Council wants to call a halt to the unrestrained invasion of wind turbines across Lincolnshire. Planning applications for wind farms under 50Mw are determined by District Councils, with the County Council as a potential discretionary consultee. Planning applications for wind farms 50Mw and above are determined by the Secretary of State, with the County Council as a statutory consultee. The Council's Executive Members decided on 6 June 2012 to take a stronger position on wind farms, owing to a proliferation of wind farms in recent years. Although supportive of alternative energy supplies for the future, Councillors question the effectiveness of wind farm technology, and are concerned about the visual impact for residents and on tourism in the county.

In 2009, 4,571 kt of CO₂ emissions were released in Lincolnshire, which represented approximately a 10% (525 kt) decrease on the 5,096 kt that were released in 2007. In 2009, the total emissions in kt CO₂ per sector were as follows^{vi}:

- 1484.0 from domestic sources.
- 1674.7 from industrial and commercial sources.
- 1412.3 from road transport.

Table 5.1 shows emissions for each local authority in the Plan area between 2007 and 2009.^{vii}

Table 5.1 CO₂ Emission for Local Authorities in the Plan Area

Authority	Year	Industry and Commercial kt CO ₂	Domestic kt CO ₂	Road Transport kt CO ₂	Total kt CO ₂	Population ('000s mid-year estimate)	Per Capita Emissions t
Boston Borough	2007	173.7	144.4	134.7	452.8	59.1	7.7
	2008	173.0	141.4	129.1	443.5	59.1	7.5
	2009	158.5	127.9	123.7	410.1	59.0	7.0
East Lindsey	2007	326.4	343.0	314.7	984.0	140.1	7.0
	2008	321.7	338.5	304.0	964.2	140.8	6.9
	2009	282.7	310.0	295.9	888.6	140.8	6.3
Lincoln City	2007	267.5	197.9	66.3	531.7	88.2	6.0
	2008	258.7	195.1	64.6	518.3	88.0	5.9
	2009	217.3	174.9	61.9	454.1	88.5	5.1
North Kesteven	2007	250.4	241.6	245.6	737.6	103.9	7.1
	2008	257.6	238.2	232.5	728.2	105.0	6.9
	2009	227.2	217.4	221.6	666.2	105.7	6.3
South Holland District	2007	263.6	199.0	199.4	662.0	83.1	8.0
	2008	279.0	194.2	189.8	663.0	83.9	7.9
	2009	246.9	175.9	180.7	603.5	84.1	7.2
South Kesteven	2007	424.4	305.9	354.4	1084.8	129.7	8.4
	2008	415.9	301.7	334.7	1052.3	130.5	8.1
	2009	366.1	272.0	315.6	956.7	131.2	7.3
West Lindsey	2007	193.9	224.6	225.2	643.7	87.4	7.4
	2008	194.7	222.6	217.9	635.1	88.3	7.2
	2009	176.0	205.9	209.9	591.9	88.6	6.7

Total CO₂ emissions were highest in South Kesteven, which accounted for 956.7 kt CO₂ of Lincolnshire's total, and the lowest emissions were in Boston Borough with 410.1 kt CO₂ of Lincolnshire's total. All local authorities showed reductions in their total emissions between 2007 and 2009.

The highest per capita emissions in 2009 was found to be 7.3 t in South Kesteven and the lowest per capita emissions was found to be 5.1 t in Lincoln City.

Road transport is responsible for 1412.3 kt CO₂ of the total CO₂ emissions in Lincolnshire. The LTP4 strategy will need to aim to ensure that opportunities are taken to reduce the CO₂ emissions from transport use. All elements of the strategy will need to be carefully considered in terms of their likely impact on CO₂ emissions. Tackling climate change through reducing carbon emissions is one of the national transport goals. The LTP will need to demonstrate how it will contribute to achieving this goal. The SEA process provides an opportunity to both prevent CO₂ emissions levels from rising and, more importantly, to contribute to reducing CO₂ emissions.

5.2.1 *Climate Change Implications for Lincolnshire*

Climate change is predicted to result in more extreme weather events, increased temperatures and rises in the sea level which will be accompanied by economic, social and environmental impacts. Some of the potential implications of climate change for Lincolnshire are discussed in the following sections and will need to be taken into consideration during the development of policies and strategies within LTP4.

5.2.2 *Climate Change & Flooding*

Lincolnshire's coast is low lying, and as a result, has always been vulnerable to flooding from the sea. It is also vulnerable to fluvial flooding. Climate change is likely to result in sea level rises and an increase in severe weather events and storm surges. It will become more difficult to disperse the surface water that accumulates during intense rainfall events and sea level rises will make even moderate coastal sea surges from storms more damaging. These in turn, will increase the risk of flooding and it is predicted that there will be an increased frequency of severe coastal and river floods.

Flooding can have severe impacts on health due to experience of personal and economic loss and stress, and vector-borne diseases. It can also cause significant damage to properties and infrastructure.

5.2.3 *Climate Change and Water Resources and Quality*

Hotter drier summers and more extreme rainfall patterns could reduce the amount of water available and affect all stages of the water cycle. This could be particularly noticeable in longer drier summers when the availability of surface water in reservoirs and rivers for abstraction for domestic, industrial and agricultural uses would be reduced. ^{viii}

An increased likelihood of summer droughts and soil water deficits could lead to an increase in demand for irrigation and livestock may suffer from heat stress, putting more pressure on available water resources in the region.

5.2.4 *Climate Change and Biodiversity*

Climate change is likely to affect the biodiversity of both the Lincolnshire coastline and the freshwater areas. There are species and habitats of national importance along the Lincolnshire coast, the Wolds and The Wash, which is home to approximately 180,000 wading birds, ducks and geese.

Higher sea levels, storm surges and wave action accelerating coastal erosion could lead to a loss of coastal habitats currently used by wildlife. Freshwater habitats may be replaced by saline habitats; there may be an increase in the intertidal flats, or a loss of the east coast mudflats, which are important for wading birds. Species will move to accommodate these changes which will result in changes to species composition. There could therefore be a loss of species that are at the southerly edge of their distribution and an increase in species that are at the northern edge of their distribution. ^{viii}

The Lincolnshire and Rutland Limestone Natural Area lies within three counties and stretches north from Peterborough to Lincoln. It is dominated by a band of limestone with shallow soils that give rise to some of the richest grasslands in the country. These grasslands can contain 40 species of plant in a square metre of turf including nationally scarce plants such as early gentian and pasque flower, and support butterflies, glow worms, lizards, skylarks and barn owls.

In the 1940s, the Lincolnshire and Rutland Limestone area was recognised as one of the country's hotspots for biodiversity. But changes in agricultural practices and development have resulted in continued losses of this nationally important wildlife habitat. Now, only an estimated 100 hectares of flower-rich grassland remains, confined to small fragmented sites mainly on nature reserves, quarry sites and roadside verges.

Limestone grassland is so scarce and vulnerable that its survival is a conservation priority under national and local Biodiversity Action Plans. Natural England, Leicestershire and Rutland Wildlife Trust and Lincolnshire Wildlife Trust have launched a bold vision for the future of these limestone grasslands. They believe that together with land management advisors, local authorities and quarry operators the limestone grassland, geology and landscape of this Natural Area can be protected and enhanced.

Reduction in summer rainfall and wetter winters could also have a major effect on grassland, an increase in storm frequency or intensity could affect bird populations, and rising river temperatures are likely to result in a decline in fish populations. Furthermore, reductions in the flows in rivers could result in a deterioration of water quality as there could be less water to dilute licensed discharges. Increased numbers of tourists due to warmer weather could also lead to adverse impacts on biodiversity. ^{viii}

5.2.5 *Climate Change and Agriculture*

Lincolnshire has some of the best quality agricultural land in the UK and is the most productive county for wheat, oil seed rape, cereals, poultry, horticulture especially field vegetables (leeks, broccoli, cauliflower and cabbages) and bulbs. See section 5.24.

The increased coastal erosion and flooding that is likely to be associated with climate change has the potential to decrease the quality and availability of agricultural land in the region, with the potential for impacts to the economy and supply of food supply.

It is likely that some crops could no longer be grown in the area. However, there may be opportunities to grow different crops and the longer growing seasons may lead to higher yields and more locally grown produce throughout the year. There may be more opportunities for vineyards and for growing lavender, sweetcorn, grain maize, sunflowers and navy beans. Additionally there may be an increased potential for planting crops for energy production. These changes in crops however will also have implications for biodiversity.^{viii}

Additionally, climate change is likely to result in an increased threat of pests and new crop pests such as the Colorado Beetle and the European Corn Borer are anticipated.^{viii}

5.2.6 *Climate Change and Tourism*

Tourism is a significant contributor to Lincolnshire's economy. Climate change may prove beneficial to the tourism industry as summers are likely to be warmer and drier, and winters are expected to be warmer. This has the potential to increase the length of the tourist season with a resultant trend towards an all year round tourism market. This is likely to have major impacts on the economic viability of tourism and tourism related investment in resorts such as Skegness.^{viii}

5.2.7 *Climate Change & Health*

While the UK national assessment acknowledged the uncertainties surrounding predictions of likely effects of climate change, it identified a number of potential health impacts by the 2050s.

Health impacts are likely to include a reduction in the number of cold related deaths, but an increase in heat related illnesses. The elderly are most at risk from extremes of temperature. Climate change may also increase levels of UV exposure and vector-borne diseases. Higher temperatures are also likely to result in deterioration in working conditions.

Climate change and its impact on health may put additional strain on the UK health care system. It is widely acknowledged that the health impacts of climate change can be minimised by building climate change considerations (both mitigation and adaptation measures) into the UK's health and social care infrastructure. Targeting improvements in health and social services at the most at risk groups – for example by improving social services for elderly people homes – may also help to reduce the potential health impacts of climate change. Such initiatives could form part of a more holistic risk management approach to climate change issues. It is important that the LTP4 considers how access to these services may be improved.

5.2.8 | *Climate Change & Historic Environment*

The historic environment represents important cultural, social and economic benefits within Lincolnshire. However, the historic environment is vulnerable to changes in the climate. Many historic assets are potentially at risk from the direct impacts of climate change. For example, rising sea levels, increased extremes of wetting and drying, more frequent intense rainfall, changes in hydrology, and changes in vegetation patterns.

Without action to adapt to climate change and limit anthropologically induced climate change it is possible that historic assets may be damaged irreparably.

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5.2.9 | *Transport and Infrastructure*

The East Midlands and Lincolnshire contains a number of important national transport links and ports which could be affected by climate change. Built structures such as bridges, promenades, pylons, roads and railway lines will become more vulnerable to higher winds, flooding, storm events and changes in soil moisture.

Some roads, particularly those near to the coastline and rivers will be particularly susceptible to an increased risk of flooding. Consideration will need to be given to the need to develop the capability of the carriageway to cope with excess water given the likely increase in the frequency of intense rainfall events. Railways will also be susceptible to flooding.

Temperature changes also have the potential to affect roads, by causing more frequent melting of the asphalt road surface, and railways by increasing the risk of buckling on the rail tracks.

Additionally, climate change has the potential to affect emergency services as a result of extreme weather events.

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5.3 | **Air**

5.3.1 | *Air Quality Management*

Air quality across the county is generally considered to be good. However vehicle emissions are a primary source of air pollutants at some locations, particularly in areas that suffer from congestion (e.g. Lincoln and other town centres), as well as within settlements situated along the county's strategic road network. This has adverse environmental implications in terms of the effects on human health and the natural and built environment.

As part of the National Air Quality Strategy (NAQS), all local authorities are under obligation to establish air quality levels in their area. These air quality levels must meet national air quality objectives which are set by concentrations of airborne pollutants considered to be acceptable for health and the environment. If an area does not meet these objectives Air Quality Management Areas (AQMA) are declared. The authority must then draw up an Air Quality Action Plan to set objectives for improving air quality in problem areas.

There are 6 AQMAs in Lincolnshire, declared primarily as a result of pollution caused by traffic emissions. Lincoln City Council has declared 1 AQMA Figure 5-1; this covers the major road networks in the city centre and arterial routes and is for the pollutant Nitrogen Dioxide (NO₂).

Boston Borough Council has declared 2 AQMAs with one covering Boston town centre along the A16 trunk road from Queen Street roundabout through to the John Adams Way and Main Ridge East intersection. Figure 5-2. The second^{ix} covers an area from Bargate roundabout extending east in to the top part of Spilsby Road and incorporating the junctions of Freiston Road and Willoughby Road, Boston (Figure 5-2).

South Kesteven District Council has declared 2 AQMAs, with the first of these located in Grantham Figure 5-3. The areas covered in the Grantham AQMA include:

- An area of land including residential properties along Wharf Road, Grantham, Lincolnshire. Declared for the pollutant Nitrogen dioxide (NO₂) and Particulate Matter < 10 µm PM₁₀.
- An area of land including residential properties of Meres Road Grantham, Lincolnshire adjacent to the A1, declared for the pollutant Nitrogen dioxide (NO₂).
- An area of land including residential properties of Welwyn Close, Rosemary Crescent and Denton Avenue, Grantham, Lincolnshire, adjacent to the A1, declared for the pollutant Nitrogen dioxide (NO₂).
- An area of land including Rushmore Lodge at the junction of St Paul's Street, Brazenose Lane and East Street, Stamford, Lincolnshire, declared for the pollutant Nitrogen dioxide NO₂.

The second AQMA is in the area incorporating Brooke Street and Manthorpe Road, Grantham, declared for the pollutant Nitrogen dioxide (NO₂).

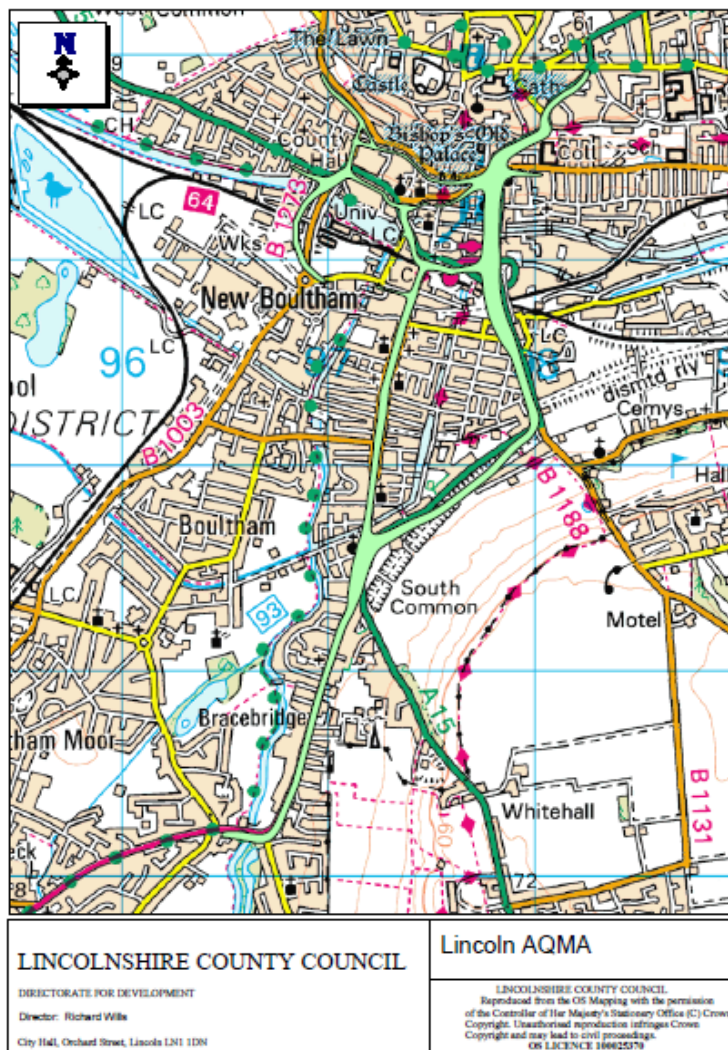


Figure 5-1 Lincoln AQMA (shown in light green)

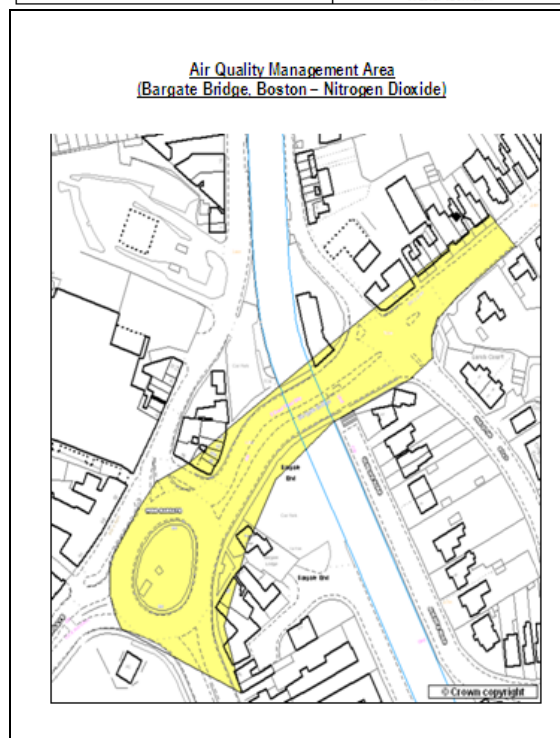
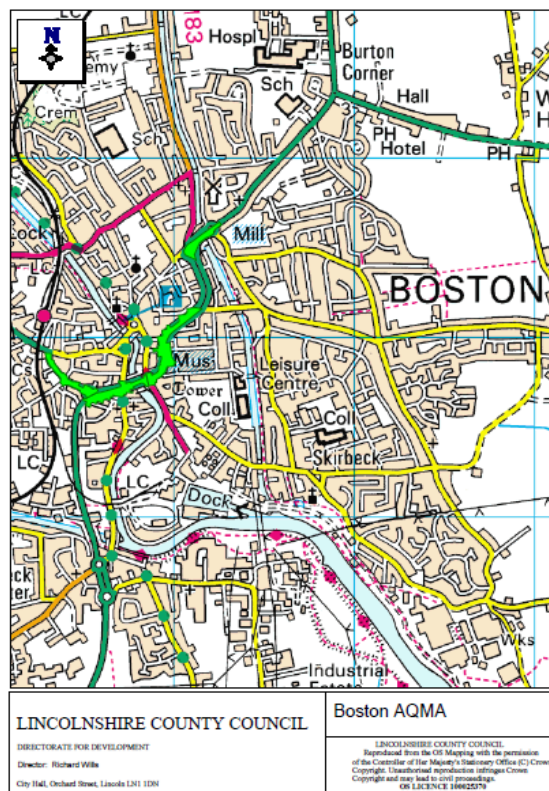
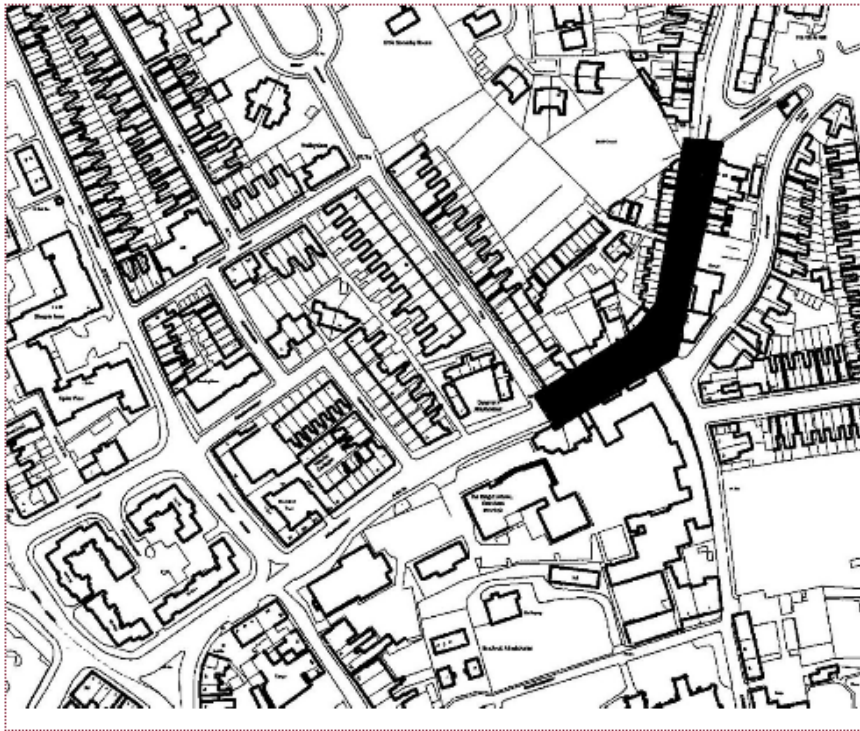


Figure 5-2 Boston AQMA



Figure 5-3 Grantham AQMA



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Figure 5-4 Grantham AQMA – Brook Street

5.4 Biodiversity, flora and fauna

5.4.1 Natural Areas

Natural England (NE) has defined England into 'Natural Areas' based on characteristic wildlife and natural features. They are used to describe England's wildlife and include all habitats, not just those that are designated. There are eight Natural Areas within Lincolnshire County, which are listed below:

- Lincolnshire Coast and Marshes – A generally flat coastal plain that is largely under arable cultivation. Habitats include meadow and pasture grasslands that are rich in wildlife. Wetlands near the coast support wildfowl and coastal birds.
- Lincolnshire Wolds – Has a rolling landscape that is mostly under arable cultivation. Habitats that are present include meadow and pasture grasslands, calcareous, acidic and neutral grasslands. Many of these habitats are rich in wildlife.
- North Lincolnshire Edge with Coversands – Two broad lowland plains separated by a watershed. Apart from the Lincolnshire Limestone Edge, most of the Natural Area comprises a fertile clay soil that is extensively farmed. Area includes nationally important heathlands, inland sand dunes and ancient woods including a cluster of small-leaved limewoods near Bardney.

- Lincolnshire and Rutland Limestone – Contains a lot of woodland. Broadleaved woodland, scrub and wood pasture can all be found. Small pockets of calcareous grassland are scattered around the Natural Area. Gravel pits support important populations of breeding birds.
- Trent Valley and Belvoir Vales – Most of the area comprises a geology that produces a fertile soil ideal for agriculture. There are a number of important habitats including neutral grassland, and a number of acidic and calcareous grassland sites associated with local differences of geology.
- The Fens – Low lying, level terrain with little natural or semi-natural habitat remaining. The land is predominantly cultivated. All the fens have artificial water courses essential to drainage.

5.4.2 *Internationally Designated sites*

There are six sites of international importance covering three designation types within Lincolnshire; Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and RAMSAR sites (internationally important wetlands). Under the Conservation of Habitats and Species Regulations 2010 (the 'Habitats Regulations') (SI No. 2010/490) there is a legal requirement to assess whether there are likely significant effects of plans and/ or programmes on Natura 2000 (SACs and SPAs) and Ramsar Sites through a Habitats Regulations Assessment (HRA). HRA runs parallel to the planning approval process.

There are two designated RAMSAR sites; The Wash embayment covers an area of 62044.19ha and is designated as an important wetland area and habitat for winter feeding for waders and wildfowl. Gibraltar Point consists of an actively accreting sand-dune system, saltmarsh and intertidal flats. The site covers an area of 414.09ha and accommodates large numbers of overwintering birds and significant colonies of breeding terns.

SACs include the Wash and Norfolk Coast, Gibraltar Point, Saltfleetby – Theddlethorpe Dunes, Baston Fen, and Grimsthorpe.

The Wash and Gibraltar Point are also designated as SPAs.

5.4.3 *Nationally Designated Sites*

In addition there are a number of nationally designated sites within Lincolnshire. They are Sites of Special Scientific Interest (SSSI), the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features; and National Nature Reserves (NNRs) which are a selection of the very best parts of England's SSSIs. Both are designated under the Wildlife and Countryside Act (1981), as amended.

There are 92 SSSIs within Lincolnshire. They are mainly concentrated in the area around the Lincolnshire Wolds Area of Natural Beauty (AONB), The Wash, the area to the east of Spalding, and around Tattersall and Wragby. Within the county 65.67% of the SSSI area is considered to be in a favourable condition, 33.81% of the SSSI

area is considered unfavourable but recovering, with only 0.21% of the SSSI area unfavourable condition and declining^x.

There are four NNRs within Lincolnshire;

- Donna Nook covers more than 10km of coastline between Grainthorpe Haven in the north and Saltfleet in the south. The reserve is rich in birdlife, with over 250 species recorded in total, 47 species of bird breed regularly. It also has one of the most accessible colonies of breeding grey seals in the UK.
- Saltfleetby – Theddlethorpe Dunes occupies 8.2km of coast between Mablethorpe North End in the south and Saltfleet Haven in the north. The Reserve contains tidal sand and mudflats, salt and freshwater marshes and sand dunes.
- Bardney Limewoods cover an area of 384ha of woodland and are an important example of small leaved limewood in Britain.
- Gibraltar Point NNR covers an area of 429ha, mostly consisting of intertidal flats and saltmarsh. Large numbers of migrant and overwintering birds visit the NNR.

5.4.4 *Locally Designated Sites*

Local nature Reserves (LNRs) are places with wildlife or geological features that are of special interest locally. An LNR is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. Parish and Town Councils can also declare LNRs but they must have the powers to do so delegated to them by a principal local authority.

County Wildlife Sites (CWS) are non-statutory designations for sites of county significance for wildlife. There are a number of CWSs within Lincolnshire.

Designated sites in Lincolnshire are shown in Figure 5-5 below.

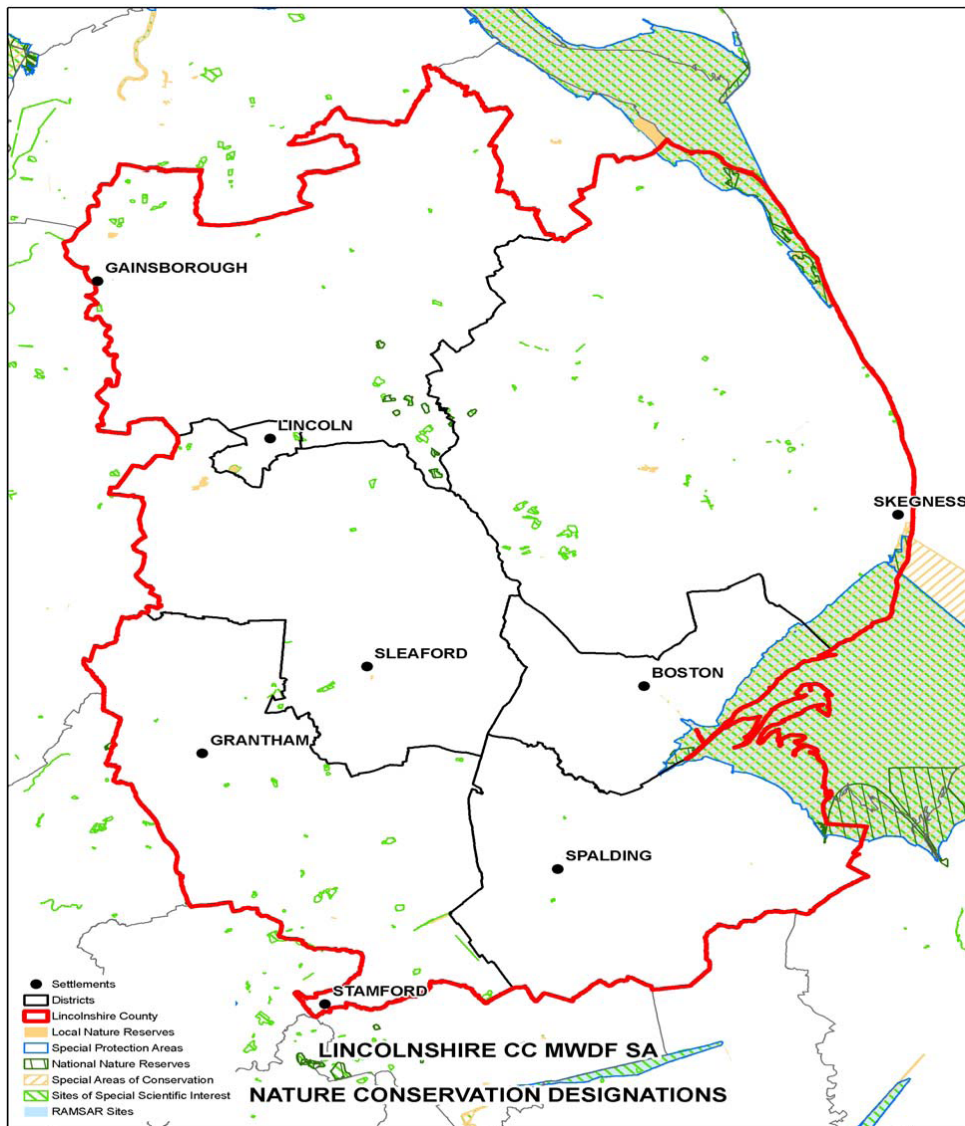


Figure 5-5 Lincolnshire Designated Sites

5.4.5 BAP Priority Habitats

The United Kingdom Biodiversity Action Plan (UK BAP) addresses threatened species and habitats and is designed to protect and restore biological systems. It covers not only terrestrial species associated with lands within the UK, but also marine species and migratory birds, which spend a limited time in the UK or its offshore waters.

A number of habitats and species identified by the UK BAP, have been subsequently transposed into the Lincolnshire BAP. Many of these habitats within the study area are protected by law. These habitats can be divided up into 3 groups: broad habitat

types, local habitats and priority habitats which are under threat and have specific action targets associated with them.

The broad habitat types found within the study area include broadleaved, mixed and yew woodland, rivers and streams, and standing open water and canals.

The local habitat types include churchyards and cemeteries, parks and open spaces and road verges.

There are 41 action plans in total within Lincolnshire, indicating the importance of the habitat variety within this area. These habitats are shown in Table 5.2.

Table 5.2 BAP action plans in Lincolnshire

Common themes	Biodiversity information and monitoring
	Policy, planning and resource management
	Awareness and involvement
Coastal and marine	Coastal sand dunes
	Peat and clay exposures
	<i>Sabellaria spinulosa</i> reefs
	Saline lagoons
	Saltmarsh
Farmland and grassland	Arable field margins
	Grazing marsh
	Hedgerows and hedgerow trees
	Lowland calcareous grassland
	Lowland meadows
Urban	Brownfield
	Churchyards and cemeteries
	Gardens and allotments
	Parks and open spaces
Species	Bats
	Commercial fish (marine)
	Farmland birds
	Freshwater fish
	Greater water-parsnip
	Natterjack toad
	Newts
	Seals
	Urban birds
	Water vole
	White-clawed crayfish
	Invasive non-native species
Rivers and wetlands	Chalk streams and blow wells
	Fens
	Ponds, lakes and reservoirs
	Reedbeds and bittern
	Rivers, canals and drains
	Springs and flushes

Trees and woodland	Lowland mixed deciduous woodland
	Traditional orchards
	Wet woodland
	Wood-pasture and parkland
Heathland and peatland	Heathland and peatland
	Lowland dry acid grassland

Due to the fertility of its soils Lincolnshire is a principally agricultural county, dominated by intensive arable cultivation in large fields, frequently without connecting hedgerows, and subsequently the historic loss of biodiversity in Lincolnshire has been more significant than in the rest of the UK^{xi}.

5.5 Soil, Geology and Geomorphology

5.5.1 Soils

Lincolnshire contains a wide variety of soils including alluvium (clay, silt and sand) along coastal regions, Till (Diamicton), River Terrace deposits (Sand and Gravel), blown sand, peat, glacial sand and gravel. The type of soil and underlying geology influence the likelihood of surface and groundwater flooding in an area.

Lincolnshire soils vary in thickness from a few centimetres to over a metre in response to the underlying geology, location in the landscape and agricultural practices. The thinnest soils tend to occur over chalk and limestone escarpments and on valley side, with the deepest soils in the Fenlands.

5.5.2 Geology and Geomorphology

Lincolnshire's bedrocks form a simple pattern of north-south stripes at the surface. There are older Triassic rocks in the west, overlain progressively by marine Jurassic rocks and the younger Cretaceous rocks in the east. At the surface they have been subjected to weathering and erosion under a range of climates including glacial and periglacial during the last 2 million years.

The superficial geology of the county is blanketed with a covering of Quaternary superficial deposits that formed within the last two million years. The Quaternary deposits includes glacial and fluvioglacial deposits along with younger Flandrian silts, peat, sands and alluvium that cover the Fenlands, the coastal plains east of the Wolds, much of the Humber coast and the Isle of Axholme.

The coastline of the county includes a wide variety of physical features. A progressive rise in sea-level of over 100 metres during the last 19,000 years means that the North Sea has changed its position and boundary with the land considerably.

The current coastal balance includes a net gain of land as sediments eroded from the coast north of the Humber, combined with sediments re-worked from the floor of the North Sea, have built out a massive spit at Gibraltar Point. In the more sheltered waters of The Wash, embayment salt marsh vegetation also traps fine sand and silt during the hours around fine tide

5.5.2.1 Nationally Designated Sites

There are 16 nationally important geological SSSIs within the county. They have been selected through a Geological Conservation Review and represent the best geology and geomorphology reflecting the UK's geodiversity. Sites are chosen for their past, current and future contributions to the science of geology and include coastal and upland areas, quarries, pits, mines, cuttings, and active landforms.

5.6 Water

5.6.1 Bathing Water Quality

The coastline in Lincolnshire stretches from Haile Sand Fort near North Cotes in East Lindsey to Gedney Drove End in South Holland District. There are a number of popular tourist resorts including Skegness and Mablethorpe where wide sandy beaches provide opportunities for bathers.

The EA is responsible for monitoring bathing water quality across England and Wales to assess whether it complies with the standards of the current Bathing Water Directive (76/160/EEC, revised by Directive 2006/7/EC). The Directive (2006) will be implemented in stages between now and 2015 and uses two parameters to assess water quality, *Escherichia coli* and intestinal enterococci, over a four year data cycle that sets much tighter standards than the original directive.

Water samples are collected and graded as being 'Excellent' (approximately twice as stringent as the current guideline standard); 'Good' (similar to the current guideline; 'Sufficient' (approximately twice as stringent as the current mandatory standard) and 'Poor', for waters which do not comply with the Directive's standards. The EA is to begin monitoring to the parameters of the revised Directive in 2012; currently they produce annual results under the original directive parameters and a four year data set (2008-2011) to project the expected compliance rate under the new Directive.

There are eight EA bathing water monitoring locations along the Lincolnshire coast, all are in the East Lindsey District. Table 5.3 below, shows the monitored bathing water quality against the current directive and projected against the new directive from results for the 4 year cycle period, 2008-2011.

Table 5.3 Bathing water quality at monitored locations in Lincolnshire

Monitoring Location	Bathing Water Quality - Current monitoring parameters	Projected revised Bathing Water Directive classifications using 2008-2011 monitoring data
Mablethorpe Town	Higher (Since 2001)	Excellent
Sutton on Sea	Higher (Since 1996)	Excellent
Moggs Eye	Higher (Since 1997)	Excellent
Anderby	Higher (Since 1998)	Excellent
Chapel St Leonards	Higher (Since 2001)	Excellent
Ingoldmells South	Higher (Since 2008)	Excellent
Skegness	Higher (Since 2006)	Good

Source: Environment Agency, 2012.

5.6.2 Surface Water Quality

The Water Framework Directive (WFD) sets an objective of aiming to achieve at least 'good status' in all water bodies by 2015. For surface waters, good status is a statement of 'overall status', and has an ecological and chemical component. It is measured on the scale 'high', 'good', 'moderate', 'poor' and 'bad'. The factors contributing to quality are shown in Figure 5-6 below.

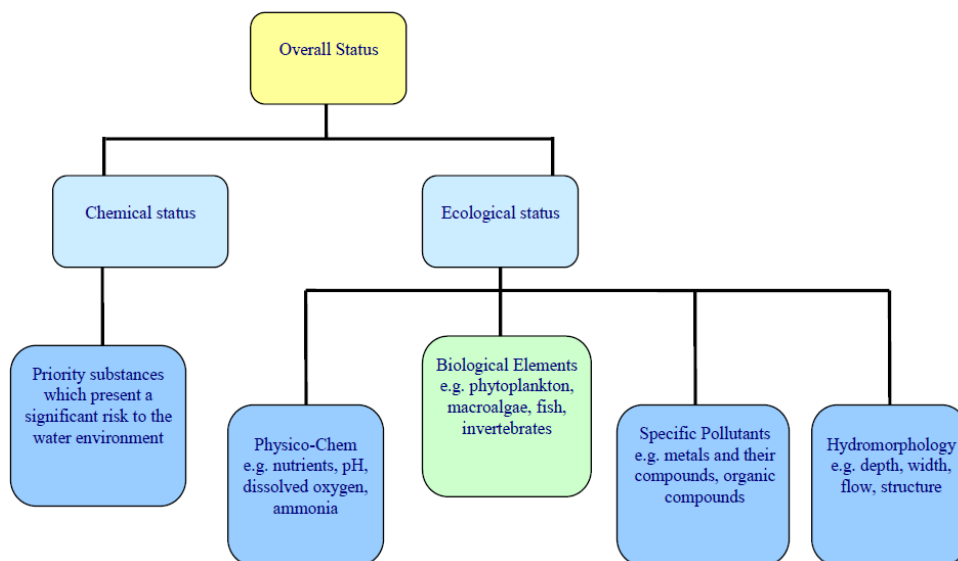


Figure 5-6 The components of overall status of surface water bodies

Source: Environment Agency, 2009; *Humber River Basin Management Plan*.

Under the WFD the EA has divided England into River Basin Districts (RBD). Lincolnshire extends into the Anglian RBD (82.4%) and the Humber RBD (17.6%).

Classification Status	Anglian RBD		Humber RBD	
	Ecological status/ potential	Biological status	Ecological status/ potential	Biological status
High	0%	6%	0%	5%
Good	18%	27%	18%	22%
Moderate	72%	34%	66%	36%
Poor	9%	29%	13%	29%
Bad	1%	5%	3%	8%

Table 5.4 Ecological status/ potential and biological status of surface water bodies in the Anglian and Humber RBDs.

Source: Environment Agency, 2009; *River Basin Management Plan - Anglian River Basin District*.

Transport has the potential to impact upon the water quality and drainage of an area through direct and indirect impacts. Road pollutants entering watercourses via surface runoff can have adverse effects on water quality, and surface runoff can also lead to the changes in local hydrology. The LTP4 needs to consider how transport may impact on river quality.

5.6.3 Flooding

Due to the topography of Lincolnshire from the rolling hills and steep valleys of the Lincolnshire Wolds to the low lying coastal fringes and fenland areas around the Wash many communities are at a potential risk of flooding from heavy rainfall and surface water. Significant historic flooding has occurred in Lincoln, Louth, Horncastle, Grantham and Sleaford.

The Flood Risk Regulations (2009) implement the requirements of the European Floods Directive (2007) which aims to provide a consistent approach to managing flood risk across Europe. The EA is responsible for managing flood risk from main rivers, the sea and reservoirs. Lead Local Flood Authorities are responsible for local sources of flood risk and Lincolnshire County Council is presently preparing a Joint Flood Risk and Drainage Management Strategy (JFRDMS) that will be published in December 2012.

To assess flood risk for England the EA has produced flood maps. These identify areas on floodplains that would naturally be affected by flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas. The classification of flood zones is listed below:

- Flood zone one – These are areas outside the floodplain where there is a less than 1 in 1000 years (0.1%) chance of flooding from either river sources or from the sea in any one year.
- Flood zone two – Covers all land where there is between a 1 in 100 (1%) and 1 in 1000 (0.1%) chance of flooding from rivers in any one year and between a 1 in 200 (0.5%) and 1 in 1000 (0.1%) chance of flooding from the sea in any one year.
- Flood zone three – Covers all land where there is a 1 in 100 (1%) or greater of flooding from rivers in any one year or a 1 in 200 (0.5%) or greater chance of flooding from tidal/ coastal sources in any one year.

Due to the low lying nature of Lincolnshire's coastline, it has always been vulnerable to flooding from the sea, although the coastal zone is currently protected by an extensive network of raised engineered sea defences. The coastal area covers three districts; East Lindsey, Boston and South Holland. There is a large area of floodplain along the coast, typically 9 kilometres wide, but extending up to 20 kilometres in land in places. The area is rich in natural environmental assets and features including many which are significant at international, national and regional context.

The extreme flood risk outline from the sea, tidal and river sources (Flood Zone 3) in Lincolnshire is shown on the EA's map in Figure 5-7 below.

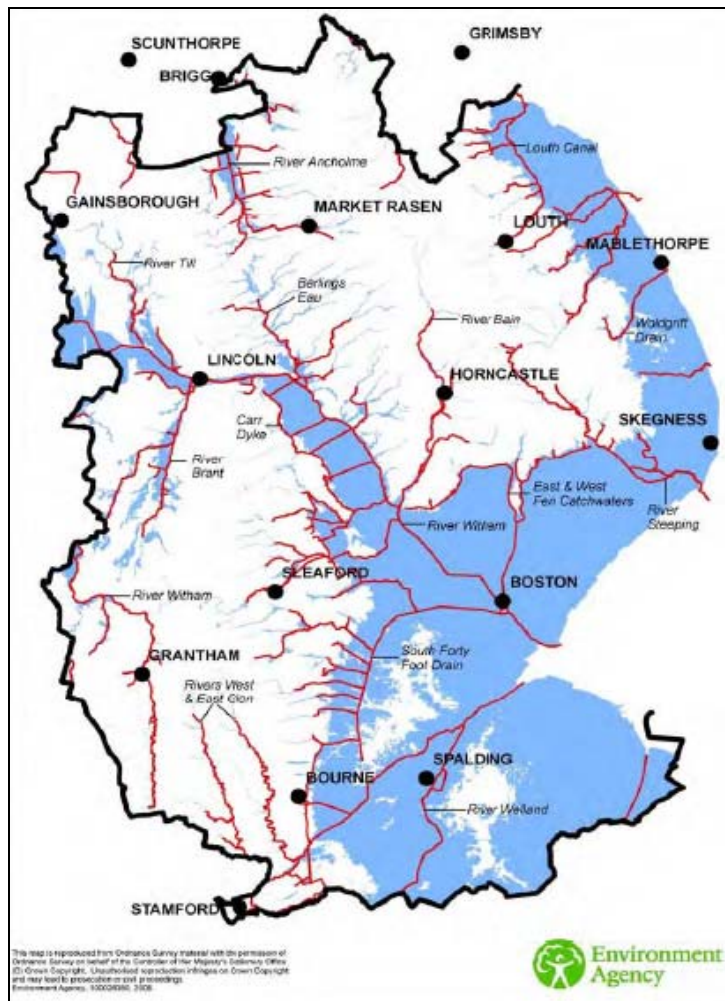


Figure 5-7 Flood zone 3 areas within Lincolnshire

Source: Lincolnshire County Council, 2011; *Preliminary Flood Risk Assessment Report*.

There are many A-roads located within Flood Zone 3 including the A1031, A46, A153, A16, A15, A1104, A1103, A52, A158, A155, A157, A156, A111, A631, A1500, A1104, A57, A17, A1, A607, A1121, A152, A151. Although many of these locations are currently protected by defences, maintenance issues will be a consideration for LTP4. Whilst existing sea defences have so far proved to be robust, impacts of sea level rise and more severe weather patterns means that current assumptions about the integrity of defences are less certain over the long term.^{xii}

5.6.3.1 Pressures on flooding

Scientific evidence suggests that global climate change is occurring. Potentially wetter winters and more rain falling in increased spells could lead to increased river flooding. More intense rainfall causes more surface runoff, increasing localised flooding and erosion. In turn, this may increase pressure on drains sewers and water quality. Even small rises in sea level could add to very high tides affecting places a long way inland.

5.6.4 Groundwater

Groundwater comes from rainfall that has filtered down through the ground and is stored in permeable rocks, known as aquifers. This can be abstracted for public supply, industry, farming and small private supplies from springs, wells and boreholes. All public water supply in Lincolnshire comes from groundwater sources and it is also an important resource for direct abstraction for local use by farmers.

The Groundwater Directive (80/68/EEC) aims to protect groundwater, the directive is implemented through the Environmental Permitting Regulations (2010). The EA monitors the quality of nearly 3500 groundwater sites across England and Wales and subsequently classifies ground water bodies as of either 'good' or 'poor' status, there is a quantitative and a chemical component.

On a national scale Groundwater has deteriorated in quality over the last 50 years. Pollution from diffuse sources is the main cause of pollution to groundwater with around 81% of groundwater bodies at risk of failing WFD objectives. Nitrate is one of the most common groundwater pollutants with more than two thirds of the nitrate in groundwater coming from past and present agricultural, mostly chemical fertilisers and organic materials^{xiii}.

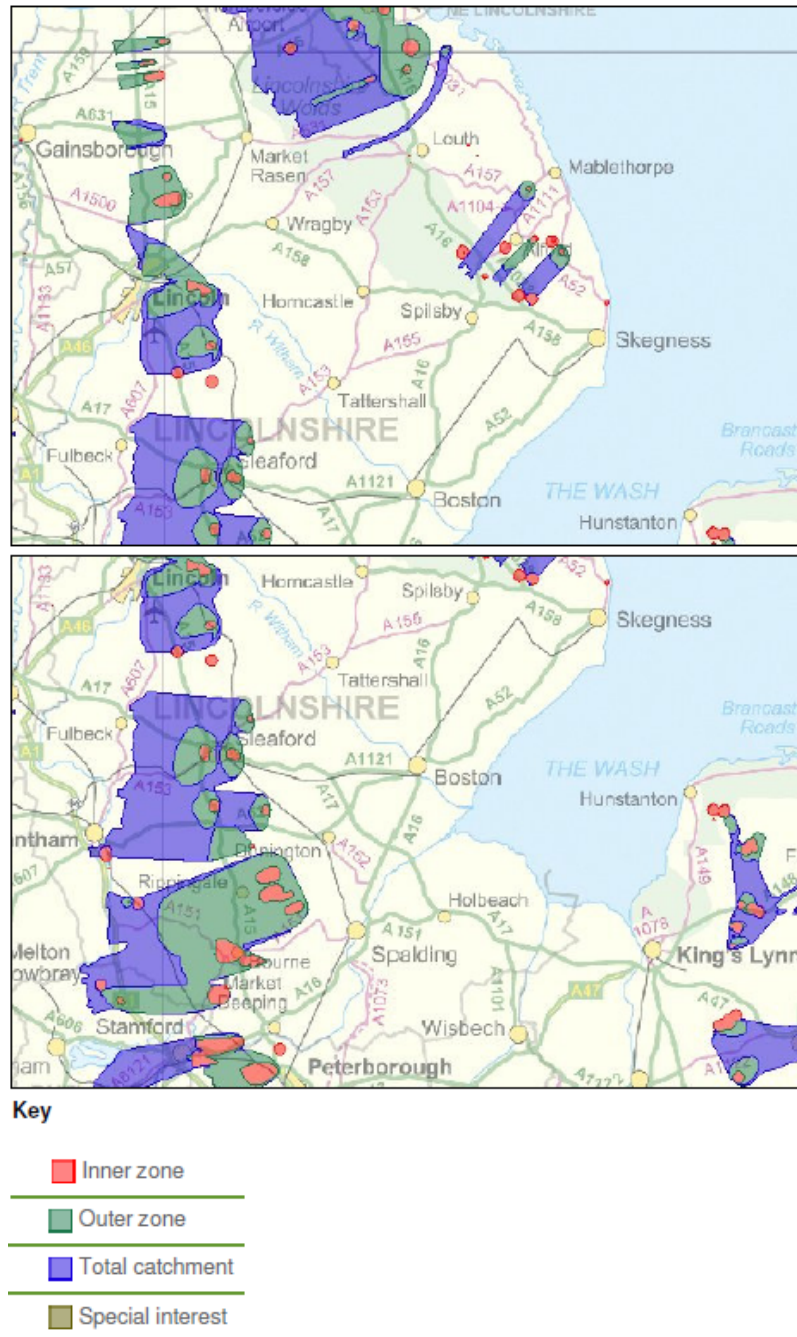
The EA has defined Source Protection Zones (SPZs) for 2000 groundwater sources such as wells, boreholes and springs. These zones show the risk of contamination from any activities that might cause pollution in the area. The shape and size of a zone depends on the condition of the ground, how the ground water is removed and other environmental factors. (www.environment-agency.gov.uk , 26.06.12).

The EA divides groundwater SPZs into three zones, listed below:

- SPZ1 (Inner protection zone) – Any pollution that can travel to the borehole within 50 days from any point within the zone is classified as being in SPZ1.
- SPZ2 (Outer protection zone) – Defined by a 400 day travel time from a point below the water table. This zone has a minimum radius of 250 or 500 metres around the source, depending on the size of the abstraction.
- SPZ3 (Source catchment protection zone) – Defined as the area around a source within which all groundwater recharge is presumed to be discharged at the source.

Figure 5-8 below outlines the groundwater SPZs in Lincolnshire.

Figure 5-8 Lincolnshire Ground Water Protection Zones



Source: Environment Agency

On a regional level there are 31 groundwater bodies in the river basin district. 65% are currently at a good quantitative status and 65% at good for chemical status. The EA does not expect these to change by 2015.

Within the study area the most significant groundwater resource is the Lincolnshire Limestone, which runs broadly north-south through the county. Other major aquifers include the Lincolnshire Chalk which forms the Wolds and stretches from the Humber Estuary in the north to Skegness in the south, the Spilsby Sandstone which outcrops to the west of the Wolds from Grasby to the Wash, and the Bain Gravels a locally important source of water around the lower River Bain^{xiv}

Diffuse pollution has been identified as a potential issue for the Lincolnshire Limestone aquifer as the aquifer is exposed at the surface and rising nitrate levels are evident. There has also been evidence of nitrate concentrations in some public supply boreholes in the Lincolnshire Chalk aquifer exceeding drinking water guideline levels, whether it is difficult to manage contamination from pollutants due to the highly transmissive nature of the chalk^{xv}.

The LTP4 will need to consider the impact of run-off from transport infrastructure into groundwater resources.

5.7 Population and Human Health

5.7.1 Population Statistics and Structure

Population density and structure varies across Lincolnshire. The area consists of both rural and urban areas. At the time of the 1991 census assessed as 584,538, figures indicate that Lincolnshire's population has increased by 83,400 (16%) since 1971. The population of Lincolnshire continues to increase. The rate of increase has fallen slightly from 8.9% between 1971 and 1981 to 6.9% between 1981 and 1991. The County Council records show that population density stands at around one person per ha, making Lincolnshire a sparsely populated County compared to the UK average of 2.4 or the East Midlands Region with 2.5 persons per ha.

The District of East Lindsey has increased their rate of population growth in the two periods, while the other five districts have experienced a decline in the rate of growth or are experiencing actual population decline. The growth in the number of residents of pensionable age is likely to continue in line with national trends, and has implications with regard to healthcare facilities, housing provision and transport issues. The growth in car ownership levels in the County reflects a national trend which is forecast to continue.

The Office of National Statistics (ONS) mid-year 2010 population estimates, released in June 2011, show that Lincolnshire's population increased by 5,100 people, from 697,000 in 2009 to 703,000 in 2010.^{xvi} This represents a 0.7% increase compared to 2009, slightly lower than the national changes of 0.8% but in line with the regional changes of 0.7%. This rate of population growth is more than double the rate of increase in the county population between 2008 and 2009 partly reflecting recent changes in the numbers of people migrating to and from the county.

During the period 2009 to 2010, Lincoln had the largest percentage growth in population at 1.4%. This figure is more than double the rate in the period between 2008 and 2009. Boston's population remains unchanged according to the estimates. Over the 10 years from 2000 to 2010, the population of Lincolnshire has had an average annual percentage increase above that of the East Midlands' and the national average. Over this period, the districts of North Kesteven, South Holland and West Lindsey have all had an average annual population growth rate at least double that of the national rate. Table 5.5 summarises the estimated population change from mid 2009 – mid 2010.

The 2010 population estimates show that 21% of Lincolnshire's population is of retirement age. This figure is much higher than the national and regional averages currently estimated at 16% and 17% respectively. The number of people within the retirement age group is also projected to increase to 31% of the county's population by 2033, compared to only 23% nationally. This demonstrates the ageing profile of the county's population.

Over the last 10 years, the greatest fall in the number of persons has been those aged between 25 and 39. However one of the larger increases in population has been in the 20-24 age group. Between 2000 and 2010, this group increased by 41% or 12,300 people.

Table 5.5 Summary of Population Change Mid 2009 - Mid 2010

Area	Mid 2009 Population Estimate	Mid 2010 Population Estimate	Change (persons)	Change (%)	Average Annual Change 2000 - 2010 (%)
Boston	59,000	59,000	0	0.0	0.7
East Lindsey	140,800	141,600	800	0.6	1.0
Lincoln	88,500	89,700	1,200	1.4	0.6
North Kesteven	105,700	106,400	700	0.7	1.5
South Holland	84,100	84,600	500	0.6	1.2
South Kesteven	131,200	132,300	1,100	0.8	0.7
West Lindsey	88,600	89,400	800	0.9	1.4
Lincolnshire	697,900	703,000	5,100	0.7	1.0
East Midlands	4,451,200	4,481,400	30,200	0.7	0.8
England	51,809,700	52,234,000	424,300	0.8	0.6

The population increase within Lincolnshire County along with the age structure has implications for the LTP4, with a growing ageing population in the rural areas; the LTP4 will need to consider how sustainable transport initiatives can be promoted to ensure that they are effectively used through-out the County, with specific focus on rural areas in order to reduce car dependency and improve accessibility to key services. The impact of the LTP4 on children and young people must also be considered.

5.8 Health

5.8.1 Health Impact Assessment

In order to strengthen the development and utilisation of HIA, special consideration should be given to:

- Ensuring greater awareness and acceptance of the WHO's definition of health, the wider social, economic and environmental determinants of health, and the interrelationships between them;
- Increasing capacity in carrying out HIA as part of SEA, by training, and by disseminating and exchanging information and experience;
- Encountering issues – barriers and opportunities – in the development of health impact assessment within government policymaking.

Health Determinants include:

- The social and economic environment;
- The physical environment; and
- The person's individual characteristics and behaviours.

Many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact. See Figure 5-9. ^{xvii}

The Main Determinants of Health



Source: Dahlgren and Whitehead, 1993

Figure 5-9 The Main Determinants of Health

Barton and Grant (2006) have developed the Dahlgren and Whitehead model to produce the health map for the local human habitat Figure 5-10. The map continues to place people at the centre, but sets them within the global ecosystem which includes:

- natural environment
- built environment
- activities – such as working, shopping, playing and learning
- local economy – includes wealth creation and markets
- community – social capital and networks
- lifestyle.

The health map illustrates why the social determinants are of such relevance to local government. The majority of local government services impact upon or can influence the conditions in which people live and work and, to a certain extent, the life chances of individuals.^{xviii}

Looking at the social determinants of health challenges the notion that health is the domain of the NHS and brings it squarely into the arena of local government.

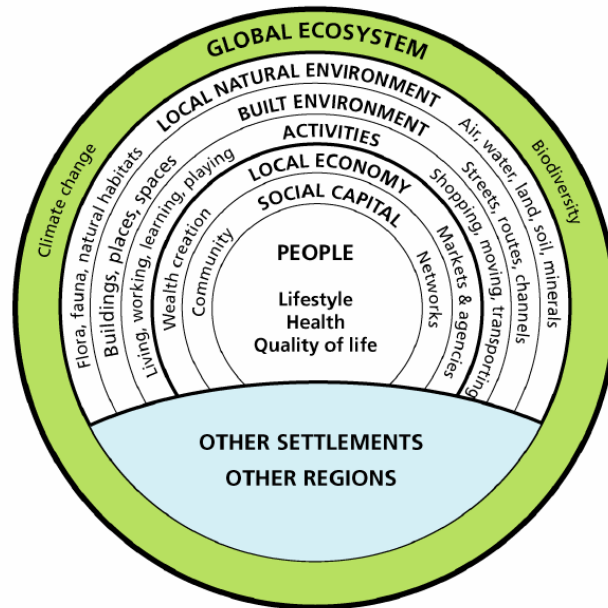


Figure 5-10 Health map for the local human habitat

Transport affects the health of the whole population both directly and through pollution of the environment. Transport emissions are also one of the major contributors to climate change. Health effects include injuries from road traffic accidents, respiratory problems due to air pollution, overweight/obesity associated with reduced physical activity from dependency on the car, and noise annoyances. Vulnerable groups include children and the elderly, as well as cyclist and pedestrians.

5.9 Lincolnshire Health Profile

The Association of Public Health Observatories (APHO) and Department of Health have produced a 2011 Health Profile for Lincolnshire, which identifies some key health related facts:

- The health of people in Lincolnshire is mixed compared to the England average. . Deprivation is lower than average, however 22,730 children live in poverty.
- Life expectancy is 7 years lower for men and 4.6 years lower for women in the most deprived areas of Lincolnshire than in the least deprived areas. Generally, life expectancy for women is lower than the England average.

- Over the last 10 years early death rates from cancer, heart disease and stroke have improved and remain similar to the England average.
- About 19.5% of Year 6 children are classified as obese. A high percentage than average of pupils spend at least 3 hours each week on school sport. However, the health of Children in Lincolnshire is significantly better than the England average.
- It is estimated that 22.2% of adults smoke and 25.0% are obese. The rate of road injuries and deaths is higher than average.
- The Lincolnshire Local Area Agreement has prioritised tackling issues relating to alcohol, tobacco and obesity.
- Table 5.6^{xix} shows how people's health in Lincolnshire compares to the rest of England. The local result for each indicator is shown as a circle, against the range of results for England which is shown as a bar. A green circle may still indicate an important public health problem.^{xx}

5.10 Lincoln Health Profile

The APHO and Department of Health 2011 Health Profile for Lincoln have identified some key health related facts:

- The health of people living in Lincoln is mixed compared to the England average. Deprivation is higher than average and 4,385 children live in poverty. Life expectancy for both men and women is lower than the England average.
- Life expectancy is 11.9 years lower for men and 6.9 years lower for women in the most deprived areas of Lincoln than in the least deprived areas.
- Over the last 10 years, rates of deaths from all causes and early deaths from heart disease and stroke have improved but remain higher than the average for England.
- Approximately 20.3% of Year 6 children are classified as obese. A higher percentage than average of pupils spend at least three hours each week on school sport. Levels of teenage pregnancy are also worse than the England average.
- It is estimated that 23.5% of adults smoke and 23.6% are obese. The rate of road injuries and deaths is higher than average.
- The Lincolnshire Local Area Agreement has prioritised tackling issues relating to alcohol, tobacco and obesity.

Table 5.6^{xxi} shows how people's health in Lincoln compares to the rest of England. The local result for each indicator is shown as a circle, against the range of results

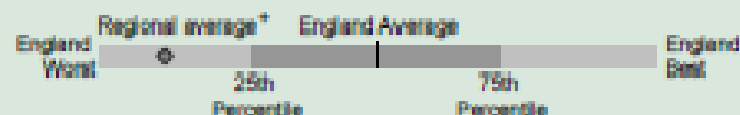
for England which is shown as a bar. A green circle may still indicate an important public health problem.

Health summary for Lincoln

32UD

The chart below shows how the health of people in this area compares with the rest of England. This area's result for each Indicator is shown as a circle. The average rate for England is shown by the black line, which is always at the centre of the chart. The range of results for all local areas in England is shown as a grey bar. A red circle means that this area is significantly worse than England for that indicator, however, a green circle may still indicate an important public health problem.

- Significantly worse than England average
- Not significantly different from England average
- Significantly better than England average



* In the South East Region this represents the Strategic Health Authority average

Indicator	Local No. Per Year	Local Value	Eng Avg	Eng Worst	England Range	Eng Best
Our community						
1 Deprivation	22578	26.0	19.9	26.2		0.0
2 Proportion of children in poverty	4088	24.0	20.9	27.0		0.7
3 Statutory homelessness	73	1.87	1.88	0.28		0.06
4 GCSE achieved (SAT+C Inc. Eng & Maths)	888	85.4	85.3	38.0		79.8
5 Violent crime	1988	22.8	15.8	32.9		4.6
6 Long term unemployment	602	10.0	6.2	19.8		1.0
Children and young people's health						
7 Smoking in pregnancy			14.0	21.4		4.5
8 Breast feeding initiation	601	72.5	73.8	26.9		95.2
9 Physically active children	6882	57.8	55.1	26.7		60.3
10 Obese children (Year 6)	188	20.3	18.7	28.8		10.7
11 Children's tooth decay (all age 12)	n/a		0.7	1.8		0.3
12 Teenage pregnancy (under 18)	98	83.8	49.2	89.4		14.8
Adults' health and lifestyle						
13 Adults smoking	n/a	23.5	21.2	34.7		11.1
14 Increasing and higher risk drinking	n/a	20.8	23.8	26.4		11.5
15 Healthy eating adults	n/a	28.7	28.7	18.3		47.8
16 Physically active adults	n/a	11.8	11.5	5.8		19.5
17 Obese adults	n/a	23.8	24.2	30.7		13.9
Older people's health						
18 Incidence of malignant melanoma	11	13.8	12.1	27.2		2.1
19 Hospital stays for self-harm	419	485.1	198.2	497.5		48.0
20 Hospital stays for alcohol related harm	1856	1856	1742	2114		849
21 Drug misuse	999	16.4	9.4	23.8		1.8
22 People diagnosed with diabetes	4173	8.10	8.46	7.87		3.26
23 New cases of tuberculosis	3	4	15	120		0
24 Hip fracture in 65s and over	99	488.4	487.8	621.3		210.9
Life expectancy and premature deaths						
25 Excess winter deaths	48	17.5	18.1	30.1		5.4
26 Life expectancy - male	n/a	77.0	78.3	73.7		84.4
27 Life expectancy - female	n/a	81.1	82.3	79.1		88.0
28 Infant deaths	4	3.28	4.71	10.63		0.66
29 Smoking related deaths	182	370.3	316.0	361.5		131.9
30 Early deaths: heart disease & stroke	68	82.5	75.5	122.1		37.9
31 Early deaths: cancer	106	129.0	112.1	159.1		76.1
32 Road injuries and deaths	36	41.3	48.1	155.2		12.7

Indicator Notes

1 % of people in this area living in 20% most deprived areas in England 2007 2 % children in families receiving means-tested benefits & low income 2008 3 Crude rate per 1,000 households 2009/10 4 % at Key Stage 4 2009/10 5 Recorded violence against the person crimes crude rate per 1,000 population 2009/10 6 Crude rate per 1,000 population aged 15-64, 2010 7 % of mothers smoking in pregnancy where status is known 2009/10 8 % of mothers initiating breastfeeding where status is known 2009/10 9 % of year 1-13 pupils who spend at least 3 hours per week on high quality PE and school sport 2009/10 10 % of school children in Year 6, 2009/10 11 Weighted mean number of decayed, missing or filled teeth in 12-year-olds, 2008/09 12 Under-18 conception rate per 1,000 females aged 15-17 (crude rate) 2007-2009 (provisional) 13 % adults aged 16+, 2009/10 14 % aged 16+ in the resident population, 2008 15 % adults, modelled estimate using Health Survey for England 2008-2008 (revised) 16 % aged 16+ 2009/10 17 % adults, modelled estimate using Health Survey for England 2008-2008 (revised) 18 Directly age standardised rate per 100,000 population under 75, 2005-2007 19 Directly age and sex standardised rate per 100,000 population 2009/10 20 Directly age and sex standardised rate per 100,000 population, 2009/10 21 Estimated problem drug users using crack and/or opiates aged 15-64 per 1,000 resident population, 2008/09 22 % of people on GP registers with a recorded diagnosis of diabetes 2009/10 23 Crude rate per 100,000 population 2007-2009 24 Directly age and sex standardised rate for emergency admission 85+, 2009/10 25 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths 1.08.08-91.07.09 26 At birth, 2007-2009 27 At birth, 2007-2009 28 Rate per 1,000 live births 2007-2009 29 Per 100,000 population aged 35 +, directly age standardised rate 2007-2009 30 Directly age standardised rate per 100,000 population under 75, 2007-2009 31 Directly age standardised rate per 100,000 population under 75, 2007-2009 32 Directly age standardised rate per 100,000 population under 75, 2007-2009

Table 5.6 Lincoln's Health Profile

5.11 Obesity and Physical Activeness

Obesity levels in the UK are increasing due to lifestyle choices; people are less active and do not eat as healthily as they used to, meaning that rates of obesity in adults and children are higher than ever before. Transport is a significant factor in physical activity as increasing dependence on the motor vehicle has resulted in lower levels of physical activity through travel. Being overweight or obese can have a severe impact on an individual's physical health – both are associated with an increased risk of type 2 diabetes, cancer, and heart and liver disease, among other illnesses.^{xxii} There is a significant opportunity to increase levels of physical activity through the promotion of walking and cycling in the LTP.

The 2010-2011 statistics obtained from the Lincolnshire Research Observatory show that Lincoln is the only local authority with children's obesity levels at 9.40% comparable to the national average and Lincolnshire average at 9.40% respectively.^{xxiii} Regional average is much better and stands at 8.90%. The percentage of physically active adults within 2011 was recorded at 11.26%.^{xxiv}

The percentage of children found to be obese in North Kesteven and South Kesteven and East Lindsey were 7.10%, 8.20 and 8.90% respectively. These results are significantly less or on par with all other averages for national, regional and local authority levels. Similarly, the percentage of physically active adults in 2011 was recorded as 15.14%, 13.48% and 13.02% respectively.. The North Kesteven result is significantly higher than all other averages and this shows more people in this LA appear to be leading a healthier lifestyle than people in other local authorities of Lincolnshire and nationally.

For the rest of the local authorities, Boston has the highest level of obesity in children at an average of 12.60%, followed closely by West Lindsey at 11.80% and then South Holland at 10.30%. These figures are much higher than the national average at 9.40%. In addition, the survey found that the percentage of physically active adults in Boston, West Lindsey and South Holland to be 12.17%, 15.09% and 10.65% respectively. These vary significantly in comparison with the national, regional and Lincolnshire averages at 11.45%, 11.86% and 13.23% respectively.

Throughout the Districts and Boroughs the proportion of obese children was highest in Boston and lowest in North Kesteven.

The LTP4 presents opportunities to promote physical activity by providing and improving sustainable transport and active travel initiatives such as walking and cycling. It is important that the LTP contributes positively to, and supports, objectives to reduce levels of obesity and improvements in overall physical fitness, particularly in target areas.

5.12 Ethnic Diversity

Lincolnshire is less ethnically diverse than England and the East Midlands with 93% of its total population being White British. Using the Mid-2001 – mid 2009 Population Estimates by Ethnic Group, the resulting statistics show that in England, 82.8% of the total population are of “White British” ethnicity and 87.0% are of the same background in the East Midlands with the remaining population comprised of black and minority ethnic (BME) group.^{xxv} Figures for the Districts and Boroughs ranged from 90.4% to 94.6%. Lincoln is at the bottom range being more ethnically diverse than West Lindsey which is top of the range and least ethnically diverse.^{xxvi}

5.13 Indices of deprivation

In the 2010 Indices of Multiple Deprivation (IMD) published by the Department for Communities and Local Government (DCLG), Lincolnshire’s district councils all ranked as being slightly more deprived than in the 2007 published IMD data. The 2010 IMD results also indicate that 12% of Lincolnshire’s population currently live in areas categorised within England’s 20% most deprived areas, an increase of 1% on the 2007 published data.^{xxvii}

The area around Moorland Avenue in Lincoln is ranked as the most deprived Lower Super Output Area (LSOA) in the county. This area has consistently featured as the most deprived area in the county since 2004. It has risen to the 132nd rank out of the 32,482 LSOAs in England. In Lincolnshire County, the least deprived area is currently around RAF Cranwell..

An additional 5 LSOAs in Lincolnshire are now ranked in England’s top 20% most deprived areas. Two each in both Lincoln and East Lindsey and one in West Lindsey. The area to the south of Louth is the LSOA in East Lindsey which has deteriorated the most in ranking; dropping 5000 places in England and 77 places in Lincolnshire. On the other hand, the LSOA comprising South Hykeham, Thurlby and Witham St Hughs improved by 4500 places in the England ranking and 81 places in Lincolnshire. .

Urban areas contain pockets of social problems that are on a par with larger conurbations, such as Earsfield in South Kesteven. There are envelopes of less visible deprivation in rural areas, where travel time and cost of accessing employment and services can make the plight of the rurally excluded different, but as severe, as their urban counterparts.

Figure 5-11 illustrates the level of deprivation in the East Midlands region as measured using the Government’s Index of Multiple Deprivation.^{xxviii}

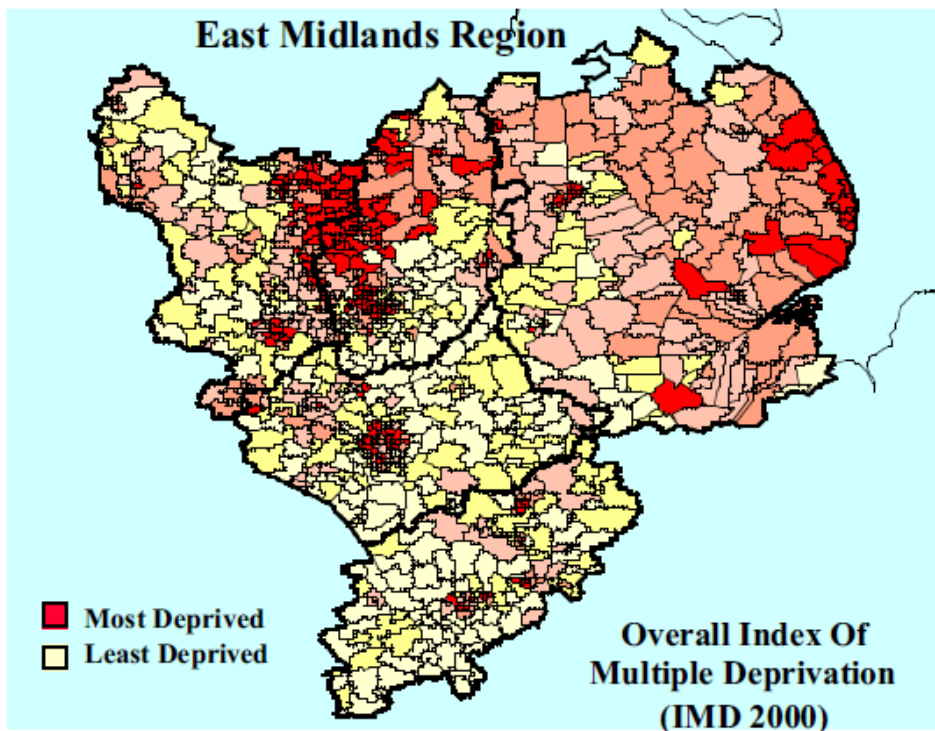


Figure 5-11 Index of Multiple Deprivation East Midlands Region

The indices of deprivation are based on income; employment; health and disability; education, skills and training; barriers to housing and services; living environment and crime. Deprivation therefore is a result of environmental factors, socio-economic factors and health factors.

The SEA process provides an opportunity to guide the LTP4 towards policies preventing the transportation-related elements of deprivation levels rising, but more importantly to contribute to reducing deprivation levels.

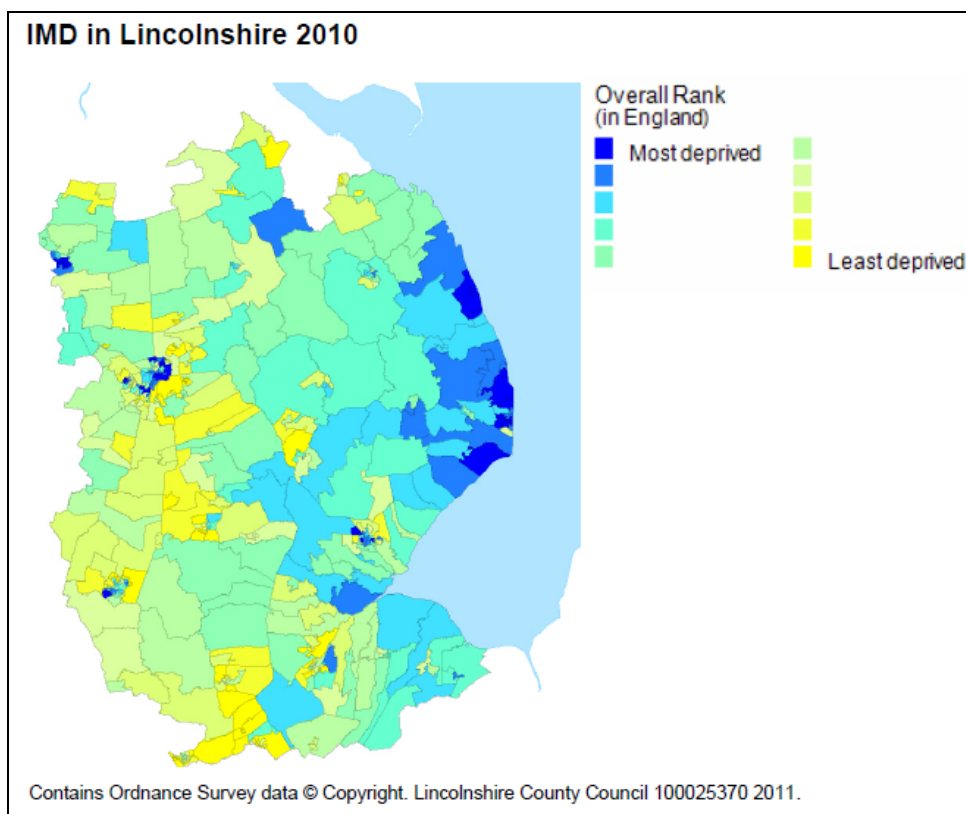


Figure 5-12 Index of Multiple Deprivation Lincolnshire

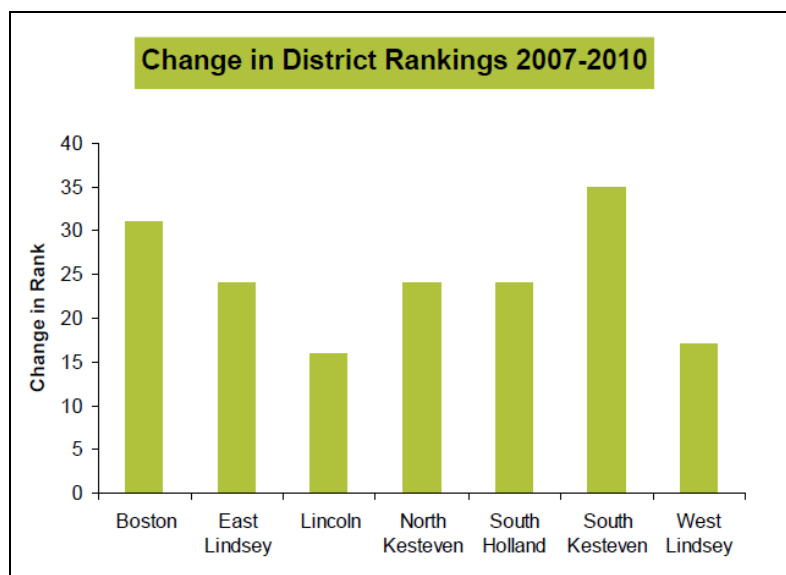


Figure 5-13 Districts Rankings 2007-2010

Figure 5-13 shows changes in the average district rankings since 2007.^{xxix} A rise indicates that a district has become more deprived against other districts in England. Consequently, South Kesteven has seen the biggest rise in ranking, while other districts have become more deprived. Lincoln has seen the smallest change and traded places with East Lindsey which has become the most deprived district in Lincolnshire. It is the 58th most deprived district council area in the country out of a total of 326.

5.14 Crime Statistics

Crime in the Lincolnshire area remains low compared too many parts of the country, and significantly lower than national and regional average figures.

In the 12 months to September 2011. There were 64 crimes per 100,000 people, compared to a rate of 74 for England & Wales. Those crimes include:

- Homicides (in 2010/11): 7, or 10.0 per million pop
- Firearms offences (in 2010/11): 17, or 2 per 100,000 pop
- Violent crimes: 7,840, or 11 per 100,000 pop; -3% change
- Sexual offences: 691, or 1 per 100,000 pop; a 3% change
- Burglary: 6,317, or 9 per 100,000 pop; a 8% change
- Drug offences: 1,578, or 2 per 100,000 pop

In general, the East Midlands had police recorded crime rates similar to the English average. For example, 14 offences of violence against the person per 1,000 population in 2010/11 were recorded for the East Midlands and 15 for England. The regional average masks considerable sub-regional variation. For example, the rates of violence against the person in the counties and UAs ranged from 6.4 per 1,000 population in Rutland to 25.8 per 1,000 population in Leicester UA.^{xxx}

Across the local authority areas within Lincolnshire there are significant variations in violent crime levels, with North Kesteven having the lowest figure of 4.8 and Lincoln significantly higher than all including the national average at 22.6 per 1,000 head population. Generally, crime rate in Lincolnshire is low compared to some other areas in England. However, even though crime rate is considerably lower than many areas within the UK, residents in many areas have a serious concern about crime.

Lincoln has a higher crime rate when compared to the other districts/boroughs in Lincolnshire as shown in Figure 5-14.

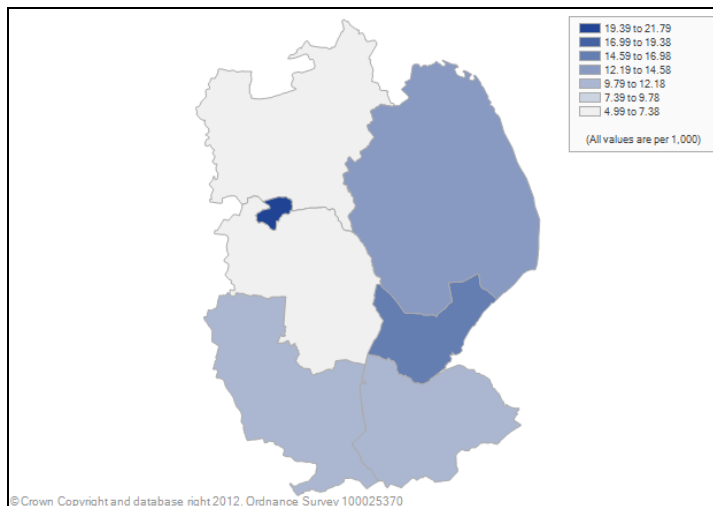


Figure 5-14 Violent Crime per 1000 Population in Lincolnshire

5.15 Noise

Routine noise monitoring is not currently undertaken on a county-wide basis.

The Campaign to Protect Rural England (CPRE) identify tranquil areas of the countryside that are free from urban intrusion. Whilst there is a high level of uncertainty due to the arbitrary definitions that are used, this approach provides a high level broad brush picture of tranquillity in the countryside. Within Lincolnshire the tranquil areas map Figure 5-16 shows that rural areas are quiet with 'hot spots' centred on towns and strategic transport routes. Sensitive noise receptors such as residential properties, schools and hospitals tend to be located within those 'hot spots'.^{xxxi}

There are no interactive noise maps for the East Midlands and Lincolnshire as these were not within one of the agglomerations mapped during this round of the Noise Map UK surveys.

Defra noise survey maps are available for parts of Lincolnshire. Important Areas and Priority Locations for noise assessment have been developed to identify what measures, if any, can be undertaken to improve the management of noise. Figure 5-15 shows these locations in Lincoln, Grantham and Boston.

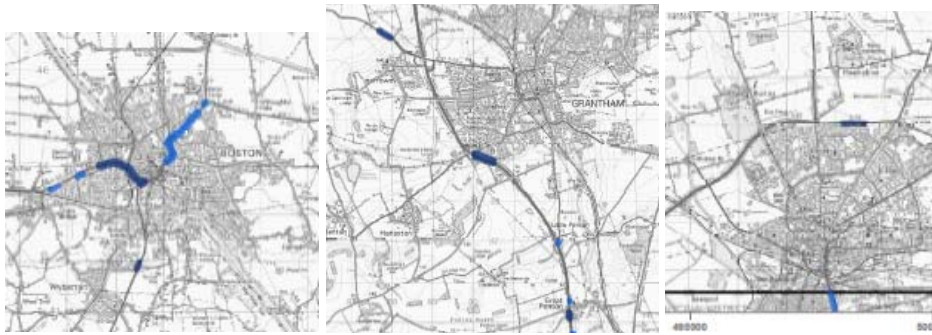


Figure 5-15 – DEFRA noise Action Plan areas

It is likely that residents are impacted by noise from the major roads as these pass by several small towns and villages, HGV movement is high due to the transportation of agricultural produce.

The impact of transport proposals in the LTP4 on noise must be considered. By introducing sustainable transport initiatives and reducing car dependency it may be possible to reduce overall traffic levels, and hence traffic noise, on major roads throughout the sub region. There may also be opportunities to build in noise mitigation measures to certain transport schemes.

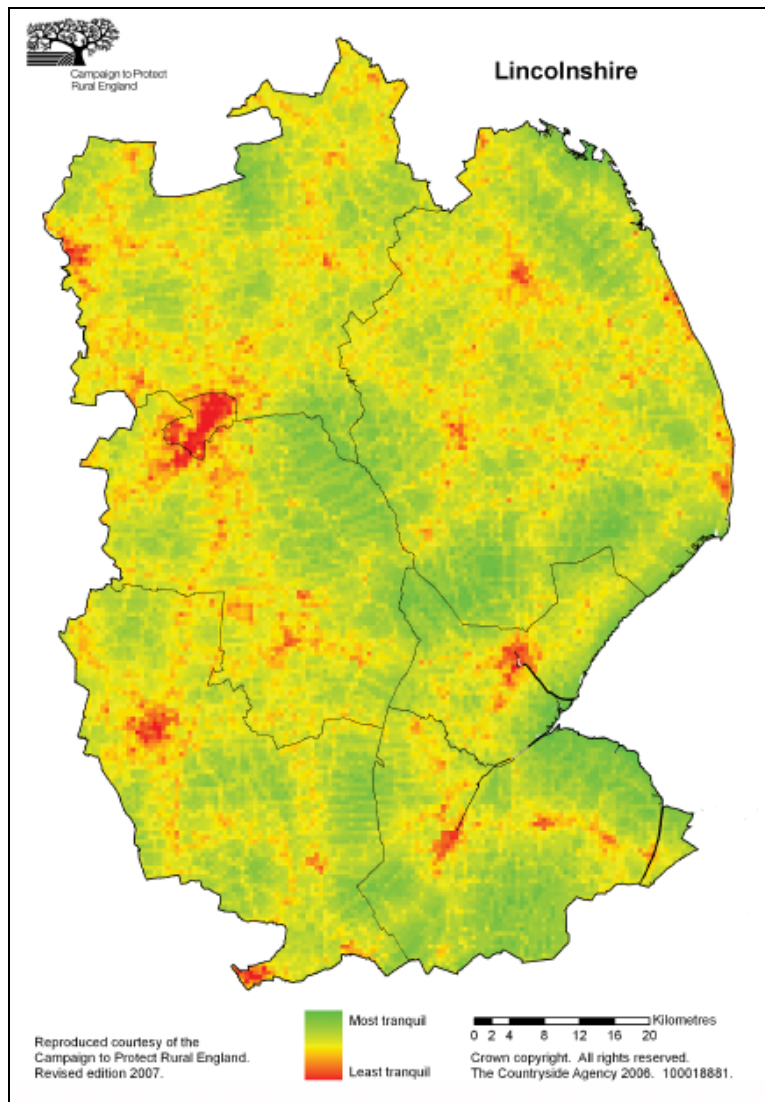


Figure 5-16 - CPRE Tranquil Areas Map for Lincolnshire

5.16 Transport

Lincolnshire is a predominantly rural shire county covering some 5921 square kilometres (2286 square miles) or 5% of England. As a consequence of the size of the county, the highway network is extensive totalling some 9018 kilometres (5605 miles) – the 5th longest of any English highway authority. The County Council is responsible for over 8,718km of roads and 3,263km of footways across the network. The County Council is the Highway Authority for all public roads except trunk roads. Within this network there is no motorway and just 66km of dual carriageway of which the A1 and the recently upgraded A46 between Newark and Lincoln form the vast majority (48km) (see Table 5.7).

In recent years, the length of trunk road in the county has been dramatically reduced from some 311 km to just 58 km following the ‘detrunking’ of the A15, A16, A17, A43, A46 (in part) and A57. Much of the network for which the County Council is responsible comprises narrow, tortuous roads and country lanes, with 80% being C class or unclassified roads. The majority of the Strategic Road Network (see Figure 5-17) falls well below current design standards with consequential low speeds and safety problems.

Table 5.7 Network Length by Category of Road

Classification	Length (kilometres)	Length (miles)
<i>Trunk Roads</i>	58	36
<i>Principal (A) Roads</i>	1042	648
<i>B Roads</i>	786	489
<i>C Roads</i>	2916	1812
<i>Unclassified Roads</i>	4216	2620
Total	9018	5605

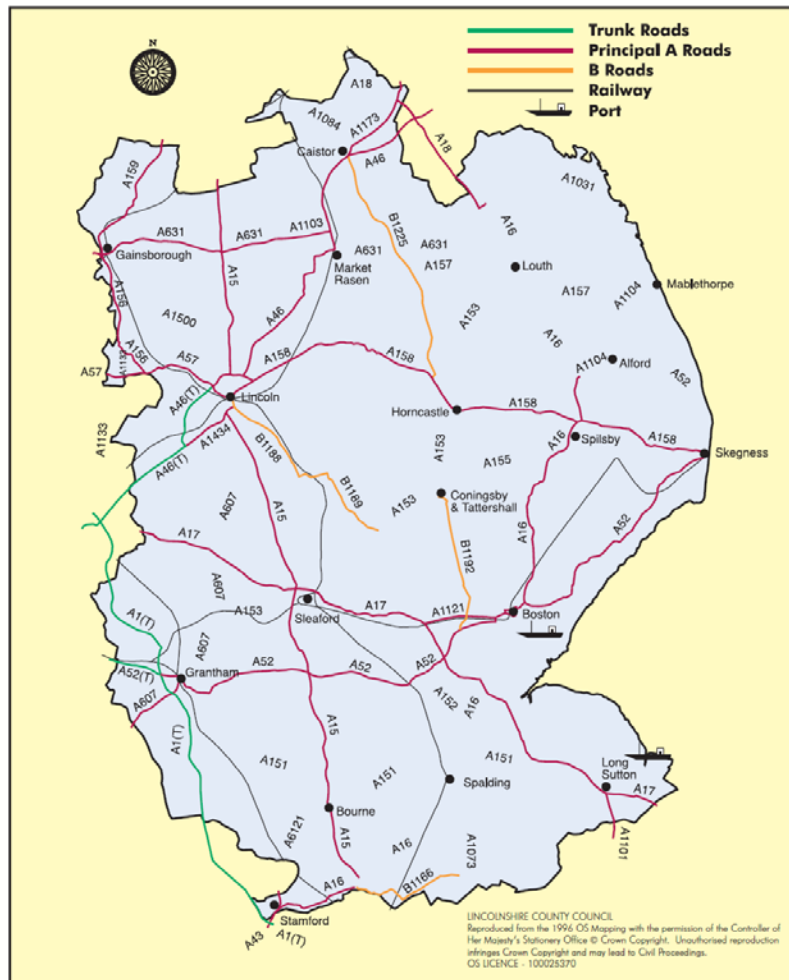


Figure 5-17 Trunk Roads, Principle A Roads, B Roads, Railway, Ports

5.17 Access to Services

Accessibility is central to the safeguarding of sustainable communities, in particular people's ability to reach services by available, affordable and accessible public and community transport. In rural areas of Lincolnshire, access to facilities and services is limited and has been compounded by the gradual loss or centralisation of services. Improvement to the transport system has a key role in improving access to services across the County.

Many parts of Lincolnshire suffer some degree of deprivation. In the deeply rural parts of the county, social exclusion remains a problem, particularly access to important services such as health facilities, shopping and employment opportunities. This has been compounded in the recent past by the gradual loss or centralisation of many of these facilities (e.g. village shops, post offices, health facilities). The problem is most acute within East Lindsey. However, as Figure 5-18 shows, this is

not just a rural problem. In the urban areas, particularly Lincoln, Grantham, Boston and Gainsborough, there are also pockets of deprivation. Both Lincoln and East Lindsey rank among the top 100 most deprived district authorities in England, with Lincoln receiving support through the government's Neighbourhood Renewal Fund.

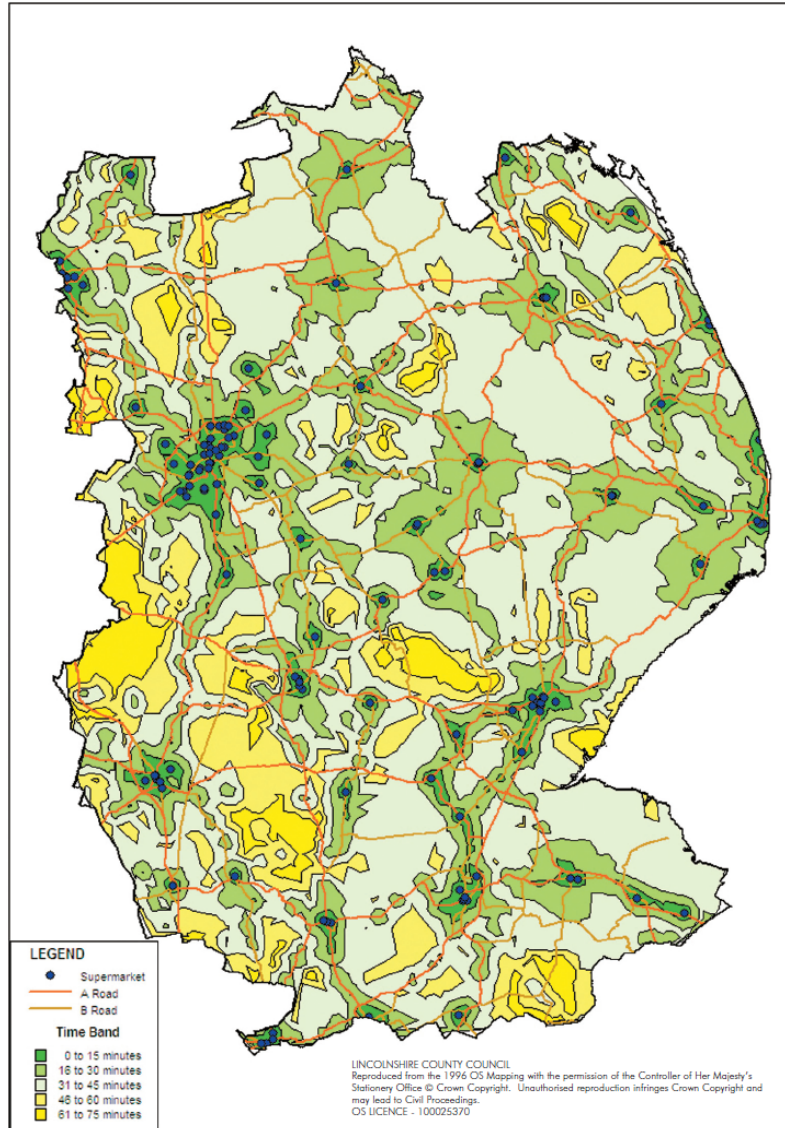


Figure 5-18 Access to Supermarkets and Service Centres

5.18 Traffic Accidents

The following table shows the Killed and Seriously Injured Casualties by District Council (KSI) from 2006 to 2011, there has been a large increase for most districts from 2006 to 2011 in particular East Lindsey that has risen from 88 KSI to 140 KSI.

Table 5.8 Killed and Seriously Injured (Casualties by District Council (KSI))

Killed and Seriously Injured (Casualties by District Council (KSI))							
	Year						
District Council	2006	2007	2008	2009	2010	2011	Grand Total
Boston Borough	24	28	22	39	32	33	178
East Lindsey	88	92	55	107	115	140	597
Lincoln City	37	36	30	44	25	28	200
North Kesteven	58	65	72	78	92	69	434
South Holland	47	52	40	52	49	54	294
South Kesteven	88	63	60	68	78	86	443
West Lindsey	61	88	58	71	71	74	423
Grand Total	403	424	337	459	462	484	2,569

The following table shows the personal injury casualties by District Council, these have continued to rise for each District with the exception of Lincoln City, South Holland and West Lindsey. East Lindsey has had the largest increase from 587 to 775.

Table 5.9 Personal Injury Casualties by District Council

Personal Injury Casualties by District Council						
	Year					
District Council	2005	2006	2007	2008	2009	Grand Total
Boston Borough	335	315	349	295	306	1600
East Lindsey	860	843	747	587	775	3812
Lincoln City	411	357	364	366	431	1929
North Kesteven	584	548	500	497	501	2630
South Holland	498	389	442	381	330	2040
South Kesteven	575	517	592	510	516	2710
West Lindsey	606	493	515	484	458	2556
Grand Total	3869	3462	3509	3120	3317	17277

The following table shows the pedal cyclist casualties by District Council, these have risen since 2008 to 2009 with the exception of West Lindsey that has decreased.

Table 5.10 Pedal Cyclist Casualties by District Council

Pedal Cyclist Casualties by District Council						
	Year					
District Council	2005	2006	2007	2008	2009	Grand Total
Boston Borough	39	41	37	28	31	176
East Lindsey	32	15	30	29	40	146
Lincoln City	52	41	26	42	52	213
North Kesteven	19	20	26	17	20	102
South Holland	12	22	23	15	20	92
South Kesteven	21	31	44	26	27	149
West Lindsey	10	17	15	18	16	76
Grand Total	185	187	201	175	206	954

The following table shows the Pedestrian Casualties by District Council these have continued to rise for each District with the exception of North Kesteven, South Kesteven and West Lindsey.

Table 5.11 Pedestrian Casualties by District Council

Pedestrian Casualties by District Council						
	Year					
District Council	2005	2006	2007	2008	2009	Grand Total
Boston Borough	24	20	31	26	33	134
East Lindsey	82	71	47	43	61	304
Lincoln City	69	60	62	58	62	311
North Kesteven	27	23	22	31	28	131
South Holland	21	20	30	18	26	115
South Kesteven	46	37	50	50	39	222
West Lindsey	23	17	20	27	14	101
Grand Total	292	248	262	253	263	1318

5.18.1 Travel to Work Areas

Due to the rural nature of the county and the limited public transport system, the car is still the dominant mode of travelling to work in the county, the results for 2001 are summarised in Figure 5-19, along with those for Lincolnshire, the East Midlands and England/Wales. ^{xxxii}

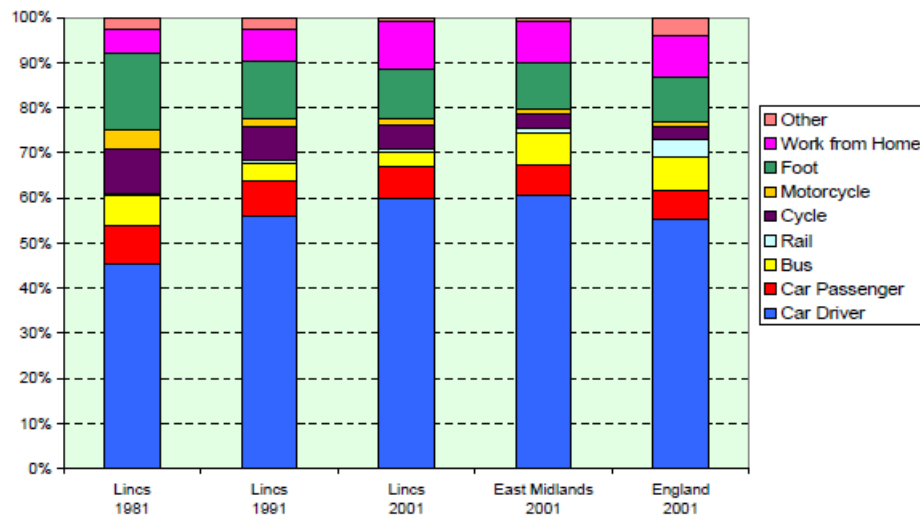


Figure 5-19 Mode of Travel to Work in Lincolnshire

The proportion using the car (66.8%) is similar to that for the East Midlands (67.3%) but substantially higher than the national proportion of 61.5%.

In Lincolnshire 63% of people drive to work with a further 7.6% being passengers in cars. This is high compared with the rest of England and Wales where 55.2% of people drive to work and 6.2% are passengers, and is largely related to the rural nature of the county. With regard to public transport in Lincolnshire, 5.5% of people use a bicycle and 9.2% walk to work compared to England and Wales where 2.7% use a bicycle and 10% walk. The use of public transport in Lincolnshire is low compared to England and Wales with only 3.45% of people using buses and trains compared with 14.5% in England and Wales. There are a number of reasons for these figures, these are discussed below.

Data for the district level 2001 are summarised in Figure 5-20.

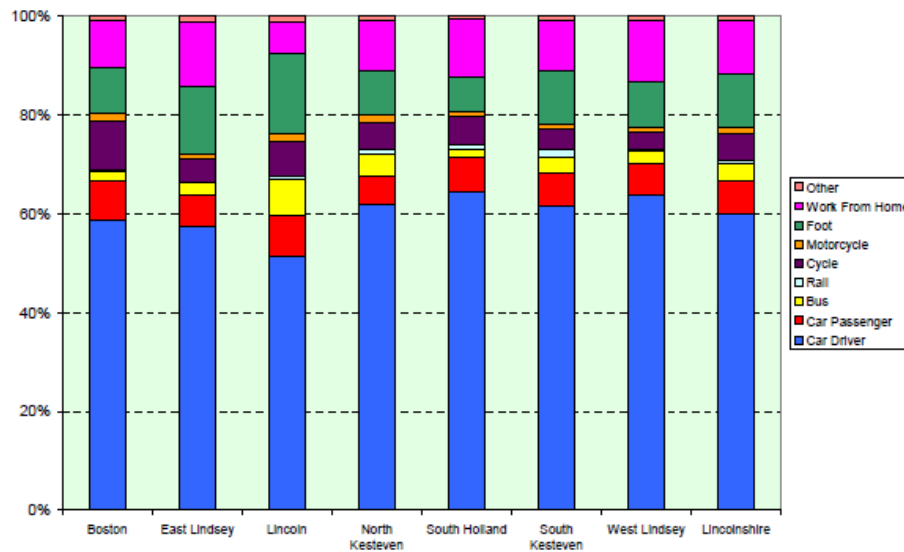


Figure 5-20 Mode of Travel to Work by District

The low percentage of people who walk to work in Lincolnshire could be reflective of a lack of suitable footpaths and pavements in rural areas. The local transport plan states that much of the road network comprises narrow roads and country lanes. 80% of the roads are C class or unclassified and therefore would not have pavements.

The high number of bicycle users could reflect the extensive road network in the county enabling non-car users to use the road network to travel to work.

The local transport plan states that the rail network comprises of 207 miles with Grantham being the only town in the county on the inter city network. Of the 22 towns in Lincolnshire, only 9 have any rail link at all and 57% of people live in communities not served by rail. Recent years have seen improvements to the rail services in the county, with some now running to an hourly service. Further improvements to local rail services are now limited due to poor infrastructure, particularly signalling and low line speeds. This is reflected in the low figures for rail use.

In the rural parts of the county, bus services have historically been in decline following deregulation and increasing car ownership. However, in recent years this has started to be addressed through the award-winning InterConnect initiative which includes regular (at least hourly) services between the key urban areas and demand responsive CallConnect services feeding into interchange hubs at smaller settlements.

Other than in Lincoln, town bus services in urban areas in the county are limited, particularly during peak hours when most buses are being used for school transport. Again, some progress is being made to reverse this trend, with the new "IntoTown"

services introduced in Spalding proving extremely popular and similar schemes being implemented in Sleaford and Boston.

On average traffic on all roads has increased by 18% in England between 1993 and 2002. There are wide regional variations from 6% in London to 20% in the east midlands, north and south west and 21% in the south east. These figures show that road traffic in the region has increased markedly and this in turn will have a negative impact on the physical fitness of the regions population with increased air pollution and less physical activity.

5.18.2 *Cycling and Walking*

As part of the Local Transport Plan monitoring process, some 29 automatic cycle counters have gradually been installed across the county. These are primarily within the larger urban areas, although there are some sites on more rural, tourist routes operated in partnership with Sustrans.

Year on year growth is estimated by comparing those sites where there is at least 8 months comparable data with the previous year. This is then converted to an index where the base year of 2001 = 100. Figure 5-21 below shows the recorded growth.

Key Points:

- Cycle flows across the county have grown by some 14% since 2001, although there appears to have been a decline since 2005 with a dramatic increase in 2011
- However, some of the large decrease in 2009 and 2010 is likely to be due to poor weather during the year, in particular the two periods of heavy snow and frosts. ^{xxxii}

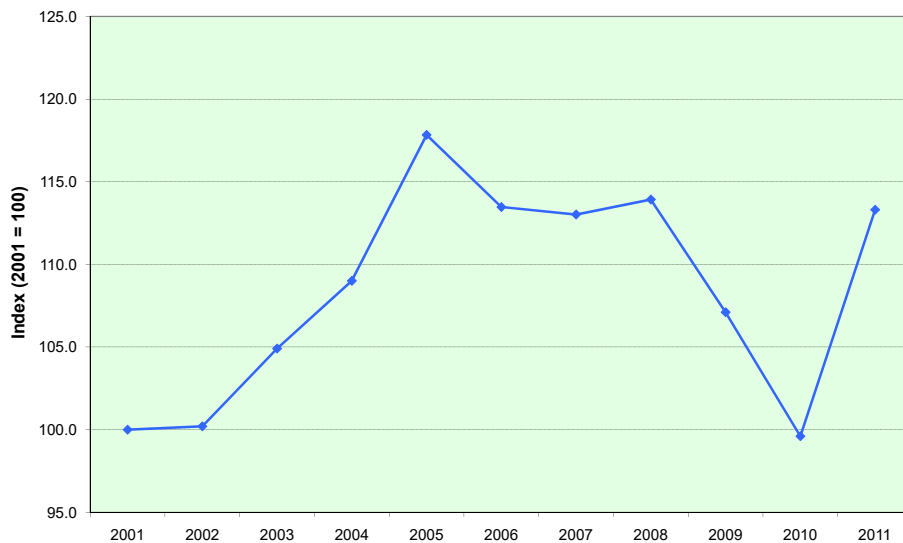


Figure 5-21 Cycle Growth in Lincolnshire xxxii

5.19 Travel to School

Travel to school data has been collected since 2007 through the annual School Census returns which each school must submit to DCFS early each year. Figure 5-22 below summarises the results from the first three years of the school Census returns.

Car (including car sharing) and walking are the predominant modes at primary schools making up 91.5% of all journeys (47.6% by car and 43.9% on foot in 2009).

At secondary schools, there is much greater use of public transport (41.4% compared with 5.1% at primary schools), with the amount of cycling doubling (albeit only to 6.1% compared with 2.8% at primary schools). The percentage arriving on foot is reduced reflecting the wider catchment areas.

With only three years of data, it is too early to draw any firm conclusions about possible moves away from car use to other modes, particularly bearing in mind the low sample rate in the first year. However, it would appear that the growth in car use seen over the recent past has been halted.

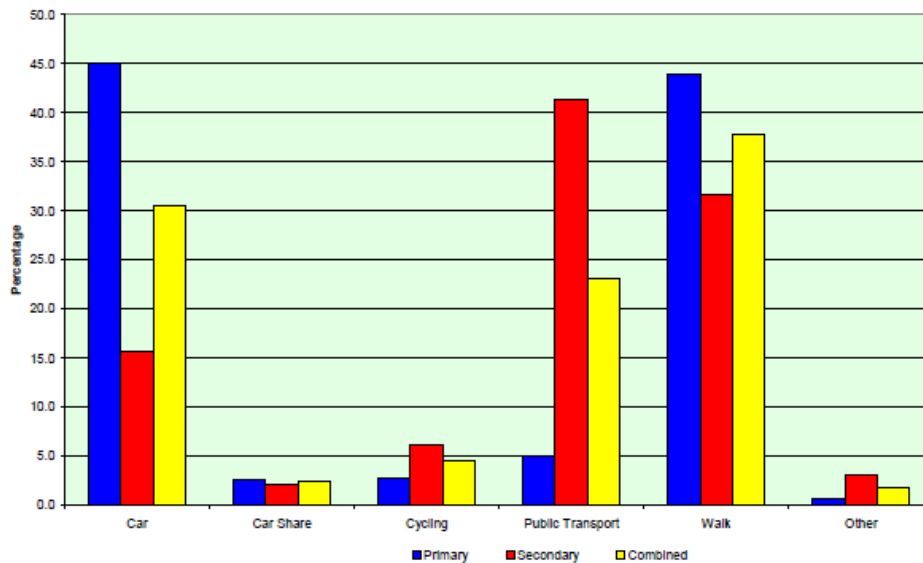


Figure 5-22 Mode of Travel to School in Lincolnshire

5.20 Public Rights of Way

There are no national trails within Lincolnshire. The Viking Way is a long distance footpath which runs for 235km from the Humber Bridge at Barton-upon-Humber to Oakham in Rutland. There are a number of national cycle routes within the county including national route 1 which runs through Boston, Lincolnshire, and Market Rasen. There are other schemes including a cycleway from Newark to Lincoln and a town centre scheme in Grantham. There is a network of over 4000km of public rights of way in Lincolnshire, including public footpaths, bridleways and byways.

5.21 Tourism

Tourism is an important industry in Lincolnshire, particularly along the coast, in and around the Lincolnshire Wolds and in the historic settlements. There is a range of tourist attractions in the county; including heritage assets, museums and modern entertainment centres. An indicative list of the popular tourist locations is provided below.

- Magic World of Fantasy Island (East Lindsey);
- Skegness Water Leisure Paradise (East Lindsey);
- Hartsholme Country Park (Lincoln);
- Gibraltar Point National Nature Reserve (East Lindsey);
- Lincoln Castle (Lincoln);

- Belton House Park and Garden (South Kesteven);
- All Saints Steam Brewery Museum (South Kesteven); and
- Lincoln Cathedral (Lincoln).

In addition, Lincolnshire hosts the Lincolnshire Show, Burghley horse trials, RAF Waddington air show, Lincoln Christmas Market and Market Rasen Racecourse. ^{xxxiii}.

In 2003, Lincolnshire hosted 3,058,800 staying tourism trips, of which 5% were from overseas visitors. In total, 11 million tourist nights were spent in the county and the average trip length was 3.61 days. Holidays accounted for approximately 68% of trips, social visits for 21% and business trips for 10%. In addition to staying trips, there were almost 19 million day trips. ^v

Tourism is a very significant source of employment and revenue in Lincolnshire, particularly in East Lindsey (EMRA, 2009). The total visitor spend was estimated at over £961 million, of which tourists staying overnight spent £412 million and day trippers spent £550 million (Geoff Broom Associates, 2005). The number of Full Time Equivalent jobs is estimated at 15,576, although jobs tend to be seasonal, with just under a third of tourist trips during the summer months. ^{xxxiii}

The LTP has direct links with tourism through the need to ensure visitors can travel, to, from and within an area to support the economy. It can also influence travel choice of these visitors to manage seasonal peaks in traffic congestion and encourage sustainable tourism initiatives.

5.22 Economy

From April 2010, all unitary authorities and county councils have a statutory duty to carry out an assessment of the economic conditions of their area through a Local Economic Assessment (LEA). This will provide local authorities and other stakeholders with a robust analysis of the local economy which will inform their economic policies and interventions.

Lincolnshire is one of the largest and most sparsely populated areas of England and presents a distinctive range of challenges for organisations concerned with the socio-economic well-being of a low wage area experiencing sustained population growth. This section outlines the characteristics, which frame regeneration activities in Lincolnshire.

Distinct economic and geographical areas: Lincolnshire contains five distinct economic and geographical areas each with their own characteristics. These areas are:

- the expanding Greater Lincoln area - including Gainsborough - which is increasingly prosperous and is consolidating as a regional centre;

- the coastal strip - has significant levels of deprivation due to peripherality and seasonal employment;
- the Fenland area of the south east - has a strong and successful food and horticultural identity;
- the A1 corridor - is experiencing private sector led economic growth and still has significant untapped potential; and
- the large central and traditional rural area - has a network of market towns in a historic agricultural setting.

Each area presents a different set of issues, and with the exception of greater Lincoln, the most distinctive characteristic is a commonality of rural issues.

Slow and low economic growth: Gross Value Added (GVA) is a very broad barometer of economic vitality and is used locally, regionally and internationally to make comparisons between areas. The consequences of a low-wage economy are a low GVA. Lincolnshire has one of the lowest GVAs in the country despite the local economy growing by 1% pa in recent years.^{xxxiv}

5.22.1 *Employment*

The population structure of Lincolnshire shows that it has a higher than the national average of persons of retirement age, therefore the percentage of persons of working age in Lincolnshire is only 61.8% of the total population. The economic activity rate of those of working age is 77.7 % which is higher than the national average of 76.1%. The employment rate of those of working age is 77%; also higher than the national average of 74.2%.^{xxxv}

5.22.2 *Benefit Claimants*

The total number of claimants in Lincolnshire as at November 2011 stood at 61460. The total claimant figures for the districts and boroughs are derived from the DWP statistics of November 2011. The districts and boroughs total figures for claimants ranged from 5,650 in Boston to 15,270 in East Lindsey; making East Lindsey the district with the highest population of claimants and Boston the district with the lowest population of claimants.

Unemployment claimant rates as at February 2010 shows that Lincoln has the highest percentage of working age claimants at 5.3%. This figure is higher than the national, regional and Lincolnshire figures at 3.9%, 3.8% and 3.4% respectively.

Conversely, North Kesteven has the lowest percentage of working age claimants at 2.2%; which is nearly half of the national and regional statistics.

The LTP4 needs to consider how transport initiatives can help to address these issues, such as ensuring that access to employment and education opportunities is improved and affordable.

5.22.3 *Earnings*

In Lincolnshire, residence average annual earnings (earnings of people who live in the area but don't work in the area) for full time workers are higher than work place earnings (people who live and work in the area). This is due to people living in Lincolnshire and commuting for work outside the area.

The difference in residence average annual earnings for part time workers in Lincolnshire is also higher than the work place earnings. The part time data is only applicable to Lincoln and South Kesteven as the rest of the districts and boroughs show no statistics for part time working. This maybe a reflection of the rural nature and the predominant agricultural work prominent in these areas.

The LTP should seek to support a more prosperous economy through helping to make employment accessible to all.

5.23 **Material Assets**

5.23.1 *Waste*

Lincolnshire disposes of a range of waste streams: municipal waste; waste generated by industry, commerce and business; waste from construction and demolition activities; and other more specific waste types such as hazardous waste, agricultural waste, waste water and sewage sludge. Over 3 million tonnes of waste is produced each year and a large percentage of this ends up in landfill. ^{xxxvi}

In 2003, Lincolnshire accounted for 16% of the East Midlands waste arisings, with a total of 4,184,539 tonnes of waste produced. This comprised 35.5% construction and demolition waste, 35% agricultural waste, 21% commercial and industrial waste, 8% municipal solid waste (MSW) and 0.5% hazardous waste. ^{xxxvii}

The amount of waste produced has been increasing over the last 10 years in line with regional trends. By 2006-2007, 365,537 tonnes of MSW was generated and was disposed of in the following ways: 219,361t (60%) was sent to landfill; 87,587 tonnes (24%) was recycled; and 58,589t (16%) was composted.

More recent data shows that in 2008/2009, Lincolnshire: sent 175,139t to landfill; sent 4,763t to incineration with energy from waste; recycled or composted 179,590t; and dealt with 306t elsewhere. Local authority municipal and household waste statistics showed that the individual local authorities sent the following amounts of waste for recycling, composting or reuse: South Kesteven 26,054 t; South Holland 10,362 t; North Kesteven 27,386 t; Lincoln 17,114 t; East Lindsey 36,463; Boston 6,912; West Lindsey 26,054; and in total in Lincolnshire County Council 179,590 tonnes. It is predicted that in the current year, the amount of household waste will reach 348,000 tonnes. ^{xxxviii}

Lincolnshire is in the process of producing their Minerals and Waste Development Framework, which is a new set of documents to replace the existing Mineral and Waste plans which will address future waste activities in the County. ^{xxxix} A Joint Municipal Waste Management Strategy has also been developed by the Lincolnshire

Waste Partnership (Lincolnshire County Council, the seven local authorities and the Environment Agency) to provide a structure that will enable the municipal waste produced in the County to be effectively managed. The purpose of the partnership is to continuously improve the quality of service provided to the Community, establish best value waste management for the public across Lincolnshire and meet landfill diversion targets. As Lincolnshire moves away from reliance on landfill, the strategy will help to determine the need for new types of facilities. The partnership has set itself a target of 55% overall recycling by 2015.

As well as increasing the percentage of recycling in Lincolnshire, the county council plans to have an energy from waste plant which is expected to deal with 150,000 tonnes of MSW and sized to accommodate 37% of the MSW operational by 2013. ^{xi}

Waste collection and disposal results in a substantial number of lorry movements into and out of the County to transport waste to recycling facilities, energy from waste facilities or landfill sites. Regular collections are required from households and with the number of households increasing, the amount of waste increasing and smaller household sizes; there will inevitably be an impact on transport. Transport infrastructure therefore needs to be adequate and efficient to ensure that a good service is provided.

5.23.2 Minerals

The most significant minerals produced in Lincolnshire are sand and gravel, limestone (crushed rock) and chalk. Oil and gas are also produced. Additionally, there are reserves of ironstone, silica sand, coal and clay, but these reserves are not currently exploited.

Sand and gravel production in Lincolnshire represents a significant portion of the total output from the East Midlands, and in 2008, accounted for 80% of the output. The county is the second highest producer of sand and gravel after Nottinghamshire.

Lincolnshire only produced 4% of the region's limestone (crushed rock) in 2008, reflecting its poor quality and the limitations upon its use.

The East Midlands Regional Plan set out the level of annual regional apportionment targets for sand and gravel and crushed rock which Lincolnshire needs to obtain between 2001-2016. These are shown in Table 5.12. Since then, the Revised Draft East Midlands Regional Plan (Partial Review) has modified this apportionment for the period between 2005-2020 as shown in Table 5.12. ^{xii}

Table 5.12 - Regional Apportionment for Sand and Gravel and Crushed Rock

Mineral	Apportionment 2001-2016 *	Apportionment 2005-2020**	Existing Reserves (2008) ***
Sand and Gravel	49 mt	52.48 mt	21.115 mt
Crushed rock	27.2 mt	18.0 mt	56.77 mt

Mineral	Apportionment 2001-2016 *	Apportionment 2005-2020**	Existing Reserves (2008) ***
<p>* - Obtained from the East Midlands Regional Plan (EMRA, 2009)</p> <p>** - Obtained from the Revised Draft East Midlands Regional Plan (Partial Review (EMRA, 2010)</p> <p>*** - Obtained from the draft Minerals and Waste Development Framework Consultation Document (LCC, 2010b).</p>			

Future mineral extraction within the county will be based on the principles of sustainable development. The core strategy of the emerging Minerals and Waste Development Framework will strive to ensure that minerals are available at the right time and in the right locations to support levels of growth. Mineral extraction operations within the county will result in substantial lorry movements to transport materials. Transport infrastructure therefore needs to be adequate and efficient.

5.23.3 *Housing and Homes*

The issues of affordable housing will be addressed by the Local Planning Authorities, Local Development Framework Core Strategies and Site Allocations Development Plan Documents (DPD). Within these DPD's new housing locations will be identified as will new employment sites, it is essential that the LTP4 is integrated with the LDFs to ensure that development is located in areas accessible by sustainable modes of travel.

The LTP4 must ensure access to services is a high priority for new housing development within Lincolnshire, the SEA process provides an opportunity to ensure that these issues are fully addressed at the strategy options/alternatives appraisal stage.

5.24 **Agriculture**

The East Midlands is a very productive area for agriculture and contains a significant percentage of the total national resource of the best and most versatile agricultural land. The proportion of Grade 1, 2 and 3a agricultural land, i.e. the best and most versatile land, in the East Midlands is 47% compared to 39% across England. The East Midlands also contains a significant percentage (34%) of the total national resource of Grade 1 agricultural land. Within the region, over 1.2 million hectares of land is in agricultural use and the industry employs over 39,000 people across some 18,500 farms.

Farming is a major industry in Lincolnshire, with a farmed area of 500,994ha, a total of 7,191 holdings and a labour force of 15,286 in 2009.^{xliii} Some of the highest grade agricultural land in the country is found in the south and east of the county, with 44% of the agricultural land in Lincolnshire being Grade 1 or Grade 2. Figure 5-24^{xliii} below shows the agricultural land quality across Lincolnshire.

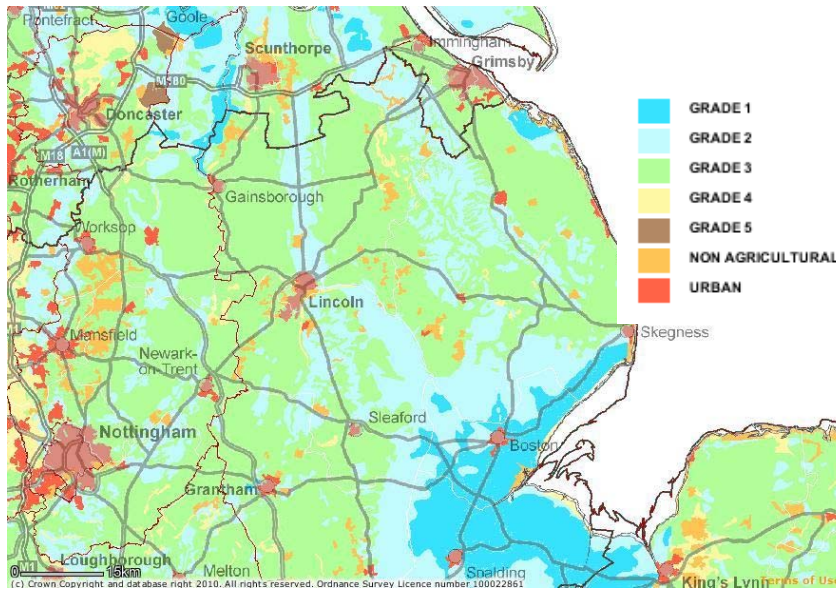


Figure 5-23 Agricultural land in Lincolnshire being Grade 1 or Grade 2

Lincolnshire is the largest producer of wheat in the UK; contributes over 10% of total national wheat production and over 50% to regional production. The split in produce on Lincolnshire's farms is shown in Table 5.13. ^{xliv}

The LTP4 needs to consider protection of agriculture and the infrastructure required for transportation.

Table 5.13 - Farming Produce

Type	Area / Number	Includes
Arable	383,729 ha	Cereals 2328ha; potatoes 13650ha; sugar beet 19,971ha; field beans 19,826ha, peas 5,290ha, oilseed rape 62,412ha, linseed 3,695ha, root crops 1,375ha
Horticulture	32,480ha	Peas and beans 11,329ha; other veg and salad 19,067ha; fruit 152ha; bulbs and flowers 1,620ha
Livestock	3,227,858 No.	Cattle 87,814; pigs 174,722; sheep 144,789; goats 1,024; horses 4,760; poultry 12,945,060

5.25 Cultural Heritage

Lincolnshire's historic landscape and built environment reflects local topography, land use and the availability of building materials, and more recently changes in social conditions and technological advances. One of the county's assets is the combination of styles and materials which represent the economic and aesthetic influences of different periods of history. This is reflected in the high historic and cultural value of the cores of Lincoln City and surrounding towns.

Some of the earliest archaeological remains include evidence of Palaeolithic inhabitation, other features include the prehistoric burial mounds of the Wolds, the

waterlogged landscape of the Witham Valley, medieval castles and monasteries and the industrial and agri-industrial buildings of the towns and World War II sites and defences.

The Heritage at Risk (HAR) programme was launched in 2008 by English Heritage, it identifies nationally designated sites including grade I and II* listed buildings, listed places of worship, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields and protected wreck sites. Locally designated Conservation Areas are also featured on the register.

Within Lincolnshire there are currently 162 heritage sites on the HAR; 19 of these sites are classified as priority category A 'Immediate risk of further rapid deterioration or loss of fabric; no solution agreed', these are the highest prioritised HARs. The East Midlands Heritage at Risk Register (2012) identifies the Boston Conservation Area, former maltings of Bass Industrial (Sleaford) grade II* listed building, and Harlaxton Manor Registered Park and Garden as priority HARs in the East Midlands Region. HARs by district are listed below:

- Boston – there are 10 sites at risk; two grade I listed buildings, two grade II* listed buildings, three listed places of worship, two scheduled monument and four conservation areas (not mutually exclusive).
- East Lindsey – there are 44 sites at risk; three grade I listed buildings, five grade II* listed buildings, four listed places of worship, 28 scheduled monuments, one Registered Park and Gardens and nine conservation areas (not mutually exclusive).
- Lincoln – there are nine sites at risk; two grade I listed buildings, two listed places of worship, one scheduled monument and eight conservation areas (not mutually exclusive).
- North Kesteven – there are 18 sites at risk; one grade I listed building, two grade II* listed buildings, seven listed places of worship, nine scheduled monuments and six conservation areas (not mutually exclusive).
- South Kesteven – there are 26 sites at risk; six grade I listed buildings, two grade II* listed buildings, 12 scheduled monuments, listed places of worship, seven Registered Park and Gardens and seven conservation areas (not mutually exclusive).
- South Holland – there are 16 sites at risk; one grade I listed buildings, two grade II* listed buildings, five listed places of worship, four scheduled monuments and six conservation areas (not mutually exclusive).
- West Lindsey – there are 36 sites at risk; six grade I listed buildings, five grade II* listed buildings, seven listed places of worship, 14 scheduled monuments, six Registered Park and Gardens and six conservation areas (not mutually exclusive).

5.25.1 *Nationally Designated Sites*

Heritage Assets are statutorily protected through national designations. Lincolnshire's designated heritage assets are listed below:

- There are 478 scheduled monuments in Lincolnshire^{xlv}. There is a wide variety in the types of scheduled monuments, from those visible above ground to those that are not. Scheduled transport features include seven bridges and one milestone.
- There 6954 listed buildings; includes 388 Grade I, 535 Grade II* and 6031 Grade II Listed Buildings. Listed transport features include 74 bridges and 2973 milestones.
- 29 Registered Parks and Gardens; of which three are Grade I, three Grade II* and 23 Grade II.
- One Registered Historic Battlefield; the battle of Winceby.

5.25.2 *Locally Designated Sites*

Conservation areas are designated for their special architectural and historic interest. For Lincolnshire as a whole there are 162 Conservation Areas^{xlvi}. The designation of Stamford Conservation Area in 1967 was England's first Conservation Area. The Conservation Areas vary greatly in nature and character. For instance, the historic centres of villages and towns, former industrial areas such as Gainsborough Riverside, and small estate villages such as Aswarby near Sleaford.

As well as locally designated sites, there are significant areas of undesigned but nationally important archaeology in Lincolnshire. For example, Witham Valley is significant given good preservation of archaeological and environmental remains and the concentration of prestigious artefacts and monuments of death, burial and religion, dating from the Neolithic period through to the Middle Ages. A Witham Valley Archaeological Research Committee has been established to guide further research and projects in the area.

A Historic Landscape Characterisation project has been undertaken in Lincolnshire; this helps people to interpret the modern environment with reference to how it has developed and what is historically important about particular landscapes. The project identified 42 Historic Character Zones within 10 broad Historic Landscape Types; these comprised:

- The Confluence
- The Northern Cliff
- The Northern Marshes
- The Wolds
- The Clay Vale
- The Trent Valley

- The Southern Cliff
- The Grazing Marshes
- The Fens
- The Wash

A complete list of the Historic Character Zones is available from English Heritage document 'The Historic Character of The County of Lincolnshire'.^{xlvii}

There are a number of grant schemes supported by Lincolnshire County Council which aim to repair historic buildings; these schemes include Townscape Heritage Initiative in Boston, Heritage Economic Regeneration Scheme in Burgh le Marsh, Tattershall, Woodhall Spa and Wragby, and Historic Buildings Grant Schemes throughout the county.

The district councils within the Lincolnshire boundary have recognised the importance of the man-made heritage; this is reflected in development plans which contain a number of policies which afford protection to the character and appearance of the historic built environment.

Proposals for transport developments impinging on the historic environment are expected to respect and enhance their surroundings in terms of appearance.

5.26 Landscape and Visual Amenity

5.26.1 Nationally Designated Sites

An Area of Outstanding Natural Beauty (AONB) is an area of countryside considered to have significant landscape value in England, Wales or Northern Ireland. AONBs are designated under the National Parks and Countryside Act, 1949 and given added protection through the Countryside Rights of Way Act, 2000. Their primary purpose is to conserve and enhance natural beauty while taking into account the economic and social needs of the area.

Within Lincolnshire there is one AONB, Lincolnshire Wolds, please see Figure 5-24 below. This area contains remnant chalk grasslands which are very fragmented, and the hedgerows and rivers form an important feature of the landscape providing connections between adjacent habitats. The coastal plains which rise to meet the Wolds have historically been threatened by conversion to arable land uses and associated drainage with a consequent decline in wildlife interest. Current management practises focus on regenerating and maintaining grassland, inter-tidal and riverside habitats.

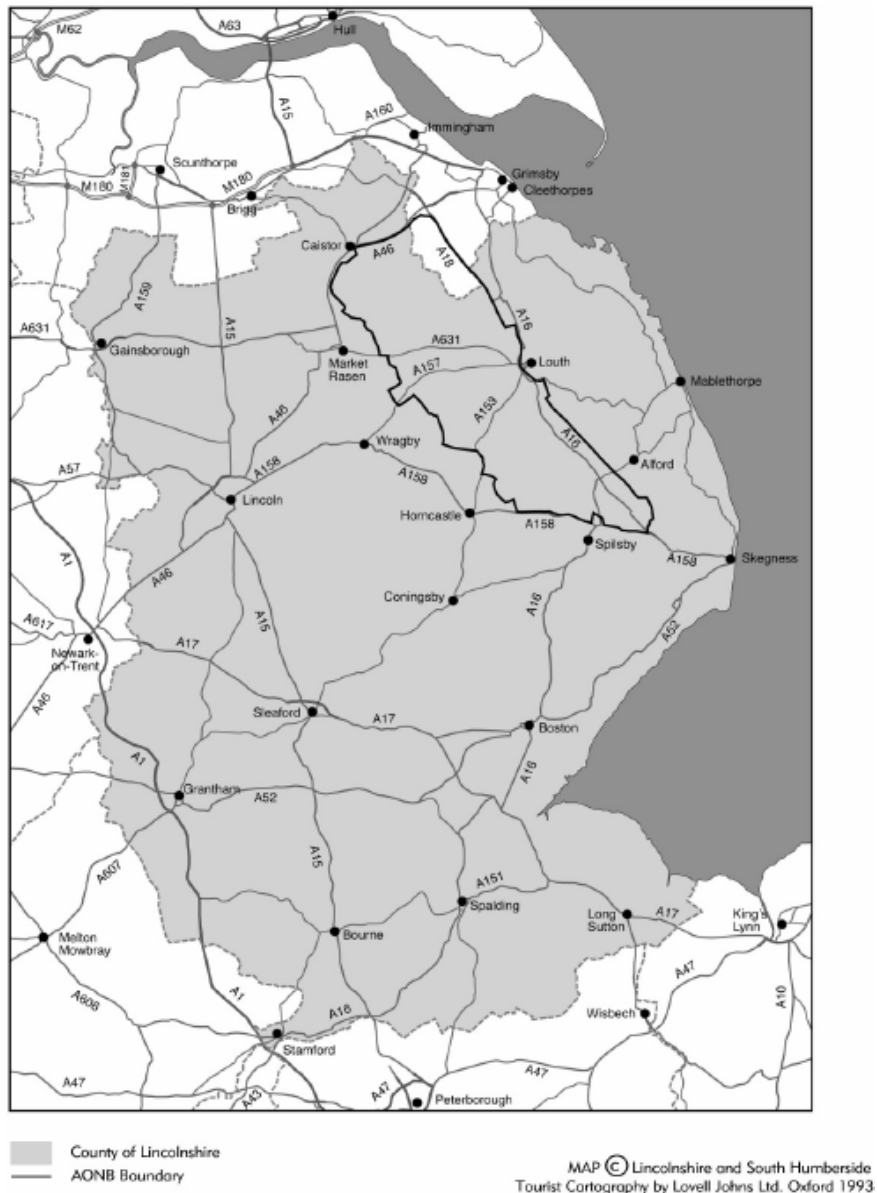


Figure 5-24 Lincolnshire AONB Boundary

5.26.2 National Character Areas

Natural England has identified 159 National Character Areas (NCAs) that recognise areas of similar landscape character at the highest tier in the assessment hierarchy in England. They provide a picture of landscape character at the national scale. Lincolnshire is covered wholly or partially by eight NCAs. The key characteristics of the eight character areas are described below:

- Character Area 42: Lincolnshire Coast and Marshes – Flat coastal plain and undulating foothills, with dispersed settlement pattern concentrated near to the coast, the landscape is influenced by land drainage and navigation system.
- Character Area 43: Lincolnshire Wolds – Rolling upland arable landscape (only 4% wooded), sparse settlements (only 1.5% urban) and archaeologically rich.
- Character Area 44: Central Lincolnshire Vale – Broad low lying arable vale divided into two parts by a central watershed. Rural landscape (only 2.5% urban).
- Character Area 45: North Lincolnshire Edge with Coversands – The area comprises a large scale upland arable farmland with sparse settlement, active and redundant airfields, roman roads and ancient track ways.
- Character Area 46: The Fens – Reclaimed from the sea, the Fens is a large scale, open and flat landscape. It is a very rural Character Area and, agriculturally very productive. Almost 97% is open countryside with 91% of that land cultivated. Only 3% of the landscape is urban.
- Character Area 47: Southern Lincolnshire Edge – The area comprises a large scale upland arable farmland with sparse settlement (11% urban), active and redundant airfields, roman roads and ancient track ways.
- Character Area 48: Trent and Belvoir Vales – This area has a gently undulating landform with pastoral and wooded farmland and open arable land. There are large market towns and historic centres with dwellings built of redbrick (7% urban).
- Character Area 75: Kesteven Uplands – This area is dominated by mixed farmland; it is archaeologically rich with historic houses and parkland. Rural landscape with dispersed settlements (2.6% urban).

5.26.3 *Regional Landscape Character*

Lincolnshire falls within the East Midlands Government Office Region. An East Midlands Regional Landscape Character Assessment (EMRLCA) was undertaken in 2010 to provide a detailed and comprehensive examination of the region's landscape and seascape landscape. The EMRLCA was produced in consultation with a wide number of stakeholders including Lincolnshire County Council and Natural England.

The East Midlands Region is noted for its agricultural productivity, recreational value, cultural associations and heritage, geodiversity and biodiversity assets, and contains a diverse landscape resource. The Assessment defines 31 Regional Landscape Character Types ranging from open sea, coastal sea marshes and low lying drained fenland farmlands in Lincolnshire to upland moorland landscape of the Peak District.

The EMRLCA identifies likely/ potential '*forces for change*' acting on the various landscape character types in the region. Common forces identified include agricultural intensification and diversification, minerals extraction and development on settlement margins.

5.26.4 *Local Character Areas*

At a local level several detailed district and protected landscape and townscape assessments have been undertaken. They present landscape and townscape character at a more refined scale, providing information which is more suitable for local planning decisions.

There are a number of high value urban landscapes that are included in designated Conservation Areas. Conservation Areas are areas of special architectural and historic interest. They are designated, under the Planning (Listed Buildings and Conservation Areas) Act 1990, by the local District Council. To more effectively manage Conservation Areas, and to help develop Conservation Area management plans, Conservation Area Appraisals have been undertaken for some of the Conservation Areas in the county.

Townscape Assessments have been undertaken for a number of townscapes in the county; for urban characterisation and to assess townscape character. Examples include the Lincoln and Grantham Townscape Assessments. It is important the LTP4 considers the impact of the LTP4 on all urban landscapes in the county.

As detailed in the Cultural Heritage chapter a Historic Landscape Characterisation project has been undertaken within Lincolnshire, dividing the county into 10 broad historic landscapes. It is important to have an understanding of past landscapes that have shaped the character of a zone, their surviving elements and impact on subsequent landscape features.

5.26.5 *Landscape Trends*

The Countryside Quality Counts (CQC) project sponsored by Natural England in partnership with Defra and English Heritage measured landscape change between 1999 and 2003. The assessment showed that existing landscape character is being maintained in 51% of England's landscapes (NCAs), 20% of our landscapes are showing signs of neglect and a further 10% of existing character is being enhanced^{xlviii}.

Table 5.14 below outlines the overall changes in character of Lincolnshire's landscape character areas over the period 1999 to 2003.

Assessment is one of four categories: If the Character Area is assessed as being 'Consistent with the Vision' it can either be scored as maintained (stable) or enhancing (changing). If the character is assessed as being 'inconsistent with the vision' it is either scored as neglected (stable) or diverging (changing).

Table 5.14 Countryside Quality Counts Assessment 1999 - 2003

Landscape Character Area	Description	Settlement and development score	Historic features	Overall Assessment
Character Area 42: Lincolnshire Coast and Marshes	Overall rates of development are moderate. It is significant along the coastal strip, continuing to transform the area. An overall assessment of diverging is mainly based on changes in agriculture and settlement which continue to transform the character of the area.	Diverging	Neglected	Diverging
Character Area 43: Lincolnshire Wolds	Development Pressure is low, in terms of overall rate of change to urban and development outside urban and fringe areas. Changes in agriculture have lessened, and the uptake of management agreements for boundary and woodland elements has probably maintained or strengthened their character. Although development has impacted locally, overall character has probably been maintained.	Maintained	Maintained	Maintained
Character Area 44: Central Lincolnshire Vale	Moderately high rate of build outside urban and fringe areas. Development pressures continue to transform this area. Woodland character has been strengthened, the changes in agriculture and development, coupled with the weakened character of boundaries, suggest that the overall character of the area remains weakened.	Diverging	Maintained	Neglected
Character Area 45: Northern Lincolnshire Edge with Coversands	Although average rate of urbanisation and development outside urban and fringe is low, development is concentrated and significant locally. Thus development continues to transform the area locally. Although woodland character has been strengthened, changes in agriculture and development continue to transform the character of the area overall.	Diverging	Not Classified	Diverging
Character Area 46: The Fens	Shows the highest rate of build outside urban and fringe areas. Character of settlement and development continues to transform. Although development continues to transform the character of the area locally, enhancements in woodland, agriculture, coastal and other aspects of character suggest that overall character of the area has been strengthened.	Diverging	Not Classified	Enhancing

Landscape Character Area	Description	Settlement and development score	Historic features	Overall Assessment
Character Area 47: Southern Lincolnshire Edge	Moderately high rates of change to urban and development outside urban and fringe areas. Development pressures continue to transform character of the area. Despite the development pressure that is significant locally, the character of the agricultural landscape appears to be stable.	Diverging	Enhancing	Maintained
Character Area 48: Trent and Belvoir Vales	High rate of expansion outside urban and fringe areas. Development pressure continues to transform the character of the area. Changes in agriculture and suggest that, overall the area is diverging from the vision suggested for the area. Development is also transforming the character of the area locally.	Diverging	Neglected	Diverging
Character Area 75: Kesteven Uplands	Moderately high rate of development outside urban and fringe, but development is scattered and has little overall impact. The overall character of the area has been maintained.	Maintained	Neglected	Maintained

6 A4: Developing the Strategic Environmental Assessment Framework

This Scoping Report has taken into account the wide range of plans and programmes in Appendix A and information collected in Task 2 and Task 3 to produce a robust list of SEA objectives.

The SEA framework provides a method for describing, analysing and comparing the environmental and sustainability effects of plans and policies. A series of SEA objectives has been developed, taking into account the relationship between the LTP4 and the objectives of other plans and programmes, along with the findings of the baseline information review. These objectives will form the basis for the SEA framework within which the evaluation of different LTP4 strategy options/alternatives will be carried out.

These SEA objectives will be sent out for consultation with the statutory bodies and relevant stakeholders to ensure that all relevant plans and programmes have been considered and incorporated into the SEA objectives.

Following consultation, the SEA objectives will be updated and will undergo compatibility testing. Compatibility testing of the proposed SEA Objectives will indicate if the objectives are compatible with each other; the outcome of the compatibility testing does not invalidate the objectives, but identifies areas which may require particular attention when developing policy options/alternatives in the future.

Potential indicators for each SEA objective are set out in Table 6.1. These indicators relate to SEA Objectives and it is anticipated that these will be reviewed and revised during the SEA process taking into account comments received during consultation on this scoping report and will reflect the consultation and issues arising from the LTP4 options/alternatives assessment.

Table 6.1 SEA Objectives and Potential Indicators

SEA Objectives	Potential Indicators
SEA Topic Biodiversity, Flora and Fauna	
Environment	
1. To ensure protection of biodiversity at designated sites and European protected species	Total area of sites of Special Scientific Interest (SSSI) land
	% area of land designated as SSSI within the local authority area in favourable condition; 2008
	Change in areas designated for their intrinsic environmental value, including sites of international, national, regional, sub-regional or local significance: a) Loss, b) Addition
	Area of land designated as a Local Nature Reserve (LNC)
	Area of land designated as Special Area of Conservation (SAC)
	Area of land designated as Special Protected Area (SPA)
	Area of land designated as Ramsar
	Area of land designated as Site of Nature Conservation Interest (SNCI)
2. Enhance general biodiversity across Lincolnshire	% area of land designated as SNCI within the local authority area in favourable condition
	Number of biodiversity enhancement schemes implemented through transport related activities for example wild-flower planting on roadside verges and street trees
	Number of biodiversity enhancement schemes implemented through transport related activities to promotes priority species/habitats in Biodiversity Action Plans
SEA Topic Soil	
3. Promote the conservation and wise use of land reduce contamination, and safeguard soil quality and quantity	Permitted loss of Grade 1 and 2 land (ha) Agricultural Land
	% of transport related development on brownfield sites
	% of Part 2A sites cleared up/ discharged
	Number of transport related pollution incidents
SEA Topic Water	
4. Prevent pollution to the water environment and protect resources	The percentage of river length assessed as a) good biological quality b) good chemical quality
	Bathing Water Quality

SEA Objectives	Potential Indicators
5. Reduce vulnerability to flooding	Number of planning permissions granted contrary to Environment Agency advice on flooding and water quality grounds
	Km of roads at risk from flooding: river, tidal and Fluvial
SEA Topic Air	
6. Maintain and where possibly Improve air quality	Number of Local Air Quality Management Areas (LAQMA)
	NO ₂ PM ₁₀ levels
SEA Topic Climate	
7. Mitigate climate change	Carbon dioxide emissions by sector and per capita emissions. a) transport b) industrial and commercial sources c) domestic sources
8. Adapt to the impact of climate change	Number of transport applications granted with sustainable urban drainage system (SUDS)
	Km of roads at risk from flooding: river, tidal and fluvial
	Number of flood prevention schemes carried out on major roads
	Length of green infrastructure network , including greenways
	Number of trees planted on existing road network
SEA Topic Cultural Heritage & Landscape	
9. Protect and enhance heritage sites (including architectural and archaeological heritage)	Grade 1 and 2* Listed Buildings at risk
	Environmentally Sensitive Areas
	Number of archaeological sites at risk
	Number of transport related applications refused in conservation areas because of their adverse effects
10. To protect and enhance attractive landscapes in terms of both their visual quality and their character	% of landscape areas designated Areas of Outstanding Natural Beauty
	Number of transport related applications refused because of adverse effects on the designated landscape areas
	Number of planning applications in buffer zones of Scheduled Ancient Monuments, Heritage Sites, World Heritage Sites, etc
	Number of visual impact assessments undertaken as part of any transport related planning applications
	Number of transport related planning applications incorporating good urban design principles

SEA Objectives	Potential Indicators
SEA Topic Material Assets	
Economic	
11. Improve access to education facilities and employment opportunities	% of new residential development within 30 minutes public transport time of a: GP, Hospital, Primary School Secondary School, Employment Centre and retail centres
	% of the resident population travelling 20 km < 30Km work
	Areas suffering from severance
12. Encourage sustainable tourism	Visitor numbers
	Visitor spend
13. Protect agricultural land	Permitted loss of Grade 1 and 2 land (ha) Agricultural Land
	% of Part 2A sites cleared up/ discharged
	Number of transport related pollution incidents
14. Ensure accessibility is maintained for major infrastructure	Number of travel plans & Transport Assessments (TA) received for all major infrastructure projects i.e. waste, housing, employment, schools, hospitals, mineral extraction, crude oil extraction
	Traffic flow of HGV vehicles through residential areas
General	
15. To ensure that transport related activities use natural resources more efficiently and sustainably, in particular land, mineral aggregates, water and fuel.	Number of new development promoting clean transport technology for example: car parks for electric vehicles, bike sharing scheme, car clubs, cycle parking
	Number of SWMPs conditioned on transport related planning permissions
16. To promote sustainable design and construction techniques for both new and existing transport schemes	Number of transport developments accredited to CEEQUAL
	Number of SWMPs conditioned on transport related planning permissions

SEA Objectives	Potential Indicators
SEA Topic Population & Human Health (includes transport)	
Social	
17. Help support communities to maintain facilities for social cohesion and enabling equal access to basic services, amenities, & open space; easily, safely and affordably	% of residents who think that the following aspects of their area are most in need of improving: a) activities for teenagers; b) levels of traffic congestion c) road and pavement repairs d) public transport e) Levels of crime f) sport and leisure facilities; g) level of pollution h) access to nature i) parks and open spaces. J) cultural facilities (for example, cinemas, museums)
	Area of open space permitted to be converted to other uses specifically transport related
	Major additional open space land provided in association with other development
	% of new residential development within 30 minutes public transport time of a: GP, Hospital, Primary School Secondary School
	% of the resident population travelling 20 km < 30Km work
	Total road accidents – KS1 Total road accidents – Children Total road accidents – slight injury % of total pedestrian road accident casualties % of total cyclist road accident casualties
18. Increase accessibility to sustainable transport for both local residents, tourists and employers	The percentage of the resident population who travel to work: a) by private motor vehicle b) by public transport c) on foot or cycle
	Total km of new cycle routes during monitoring period
	Total km of public Rights of Way (RoW) network
	% of households within walking distance of hourly daytime bus service
	Estimated traffic flows for all vehicle types (million vehicle km)
	Percentage of new holiday accommodation and attractions within 800m of a public transport route

SEA Objectives	Potential Indicators
	Number of additional bus services for all rural areas
	Number of visitor numbers to tourist attractions
	Number of real time bus stops
	Number of workplace, school and visitor travel plans submitted as part of planning applications
	% of freight being transported by sustainable transport modes such as train rail and water
	Number of park and rides
	Number of park and rides leading to adverse impacts i.e. congestion in areas previously unaffected
19. Create conditions to improve health, promoting healthy lifestyles, especially routine daily exercise and reduce health inequalities	% of overweight/obese children
	a) age 4-5yrs
	b) age 10- 11 yrs
	Asthma rates in children
	The percentage of the resident population who travel to work:
	a) by private motor vehicle
	b) by public transport
	c) On foot or cycle
	Total km of new cycle routes during monitoring period
	Total km of new footpaths created
	% of people satisfied with local sports provision (all adults)
	% of respondents who claim to undertake 30 minutes of moderate physical activity at least 3 days per week
20. Ensure that transport developments/schemes do not have a disproportionate effect on local residents	Age standardised mortality rates for
	a) all cancers 2006 (yrs)
	b) circulatory diseases 2006 (yrs)
	c) respiratory diseases 2006 (yrs)
	Self-reported measure of <i>people's</i> overall <i>health & wellbeing</i>
21. Ensure active voluntary and community engagement in decision making in transport planning	Number of complaints related to noise from
	a) Roads
	b) Construction
	c) Maintenance
	Number of roads schemes/developments registered with considerate constructors scheme
	Attendees at stakeholder workshops
	Number of consultation responses

7 Next Steps

7.1 Consultation

The SEA Regulations require that the following three environmental statutory consultation bodies must be consulted with, in regards to the scope and level of detail of the environmental information contained within the SEA scoping report. The consultation bodies are;

- The Environment Agency
- Natural England
- English Heritage

It is also considered appropriate for other “bodies” to be consulted upon. These bodies should reflect a balance of social, economic and environmental interests.

The Scoping Report will also be sent to all the Statutory Consultees to include: the Environmental Agency, Natural England, English Heritage for a 5 week consultation period; all consultation responses received will be used to inform the SEA Report. The Scoping Report will be made available on the local authority web pages.

7.1.1 Next Steps

The aims, objectives and options/alternative for the LTP4 are currently being prepared and during Stage B (See Table 2.1) of the SEA process these will be appraised by the SEA Framework and all the results, recommendations and mitigation will be incorporated into the LTP4 where viable.

Footnotes

ⁱ Strategic Environmental Assessment for Transport Plans and Programmes and WebTAG Guidance Department for Transport “draft 2009

ⁱⁱ World Health Organisation 2009

ⁱⁱⁱ Department for Transport, draft Guidance, 2009, Strategic Environmental Assessment for Transport Plans and Programmes

^{iv} <http://www.decc.gov.uk/assets/decc/11/stats/climate-change/4817-2011-uk-greenhouse-gas-emissions-provisional-figur.pdf>

^v <http://www.lincolnshire.gov.uk/searchResults.aspx?qsearch=1&keywords=wind+farms&x=26&y=30>

^{vi} http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/2009_laco2/2009_laco2.aspx

^{vii} http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/2009_laco2/2009_laco2.aspx

^{viii} East Midlands Regional Climate Change Partnership 2000

^{ix} http://aqma.defra.gov.uk/aqma-details.php?aqma_id=275

^x Natural England, 2012; Available at <http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?Report=sdrt18&Category=C&Reference=1026>. Accessed – 19.06.12

^{xi} Lincolnshire Biodiversity Partnership, 2011; Lincolnshire Biodiversity Action Plan 2011 – 2020 (3rd edition).

^{xii} Atkins 09

^{xiii} Environment Agency, 2006. underground, under threat – The state of groundwater in England and Wales.

^{xiv} Environment Agency, 2004. The Witham Catchment Abstraction Management Strategy. Environment Agency, Peterborough

^{xv} British Geological Society, 2003; The Chalk aquifer system of Lincolnshire.

^{xvi} - <http://www.research-lincs.org.uk/UI/Documents/Population%20Trends%20-%20Lincolnshire%202010.pdf>

^{xvii} Whitehead 1993

^{xviii} Improvement and Development Agency

^{xix} http://www.apho.org.uk/default.aspx?QN=HP_METADATA&AtlasID=2&GeographyTypeID=3&GeographyID=_32&InteractiveMapID=2

^{xx} http://www.apho.org.uk/default.aspx?QN=HP_METADATA&AreaID=50249

^{xxi} http://www.apho.org.uk/default.aspx?QN=HP_METADATA&AtlasID=4&GeographyTypeID=6&GeographyID=_32UD&InteractiveMapID=2

^{xxii} HEALTHY WEIGHT, HEALTHY LIVES: national child measurement programme Guidance for Primary care trusts 2009/10

^{xxiii} <http://www.research-lincs.org.uk/LROPresentationTools/UI/Pages/MappingTool.aspx?dataInstanceID=2225>

^{xxiv} - <http://www.research-lincs.org.uk/LROPresentationTools/UI/Pages/MappingTool.aspx?dataInstanceID=2225>

^{xxv} - <http://www.research-lincs.org.uk/UI/Documents/Population%20Trends%20-%20Lincolnshire%202010.pdf>

^{xxvi} <http://www.neighbourhood.statistics.gov.uk/dissemination/LeadHome.do>

^{xxvii} - <http://www.research-lincs.org.uk/UI/Documents/IMD%202010.PDF>

^{xxviii} <http://www.lincolnshire.gov.uk/upload/public/attachments/518/section%5F1.pdf>

^{xxix} - <http://www.research-lincs.org.uk/UI/Documents/IMD%202010.PDF>

^{xxx} Office of National Statistics

^{xxxi} <http://www.cpre.org.uk/resources/countryside/tranquil-places/item/1809->

^{xxxii} Lincolnshire County Council Transport Monitoring Report 2009

^{xxxiii} Geoff Broom Associates, 2005

^{xxxiv} <http://www.lincolnshire.gov.uk/local-democracy/how-the-council-works/key-plans-and-strategies/economic-development-strategy-2008-2010/51414.article?tab=downloads>

^{xxxv} <https://www.nomisweb.co.uk/reports/lmp/la/1967128597/report.aspx#tabrespop>

^{xxxvi} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/recycling-and-waste/waste-local-plan/>

^{xxxvii} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/recycling-and-waste/waste-local-plan?tab=downloads>

^{xxxviii} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/recycling-and-waste/waste-local-plan/>

^{xxxix} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/planning-and-development/strategic-planning/minerals-and-waste-development-framework/66543.article>

^{xl} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/recycling-and-waste/joint-municipal-waste-management-strategy-for-lincolnshire/>

^{xli}

<http://webarchive.nationalarchives.gov.uk/20110110153011/http://emregionalstrategy.co.uk/News-and-Events/Revised-Draft-Regional-Plan-submitted-to-Secretary-of-State>

^{xlii} <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/junesurvey/junesurveyresults/>

^{xliii} MAGIC, 2010

^{xliv} Defra 2009

^{xlvi} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/conservation/scheduled-monuments/>

^{xlvi} <http://www.lincolnshire.gov.uk/residents/environment-and-planning/conservation/conservation-areas/conservation-areas-in-lincolnshire/100514.article>

^{xlvi} Lincolnshire County Council, 2011: The Historic Character of The County of Lincolnshire.

^{xlvi} Countryside Quality Counts; Available at <http://webarchive.nationalarchives.gov.uk/20101219012433/http://countryside-quality-counts.org.uk/> last accessed – 20.06.12

Appendix 4: Full Option Appraisal Matrices

Table 1: LTP4 Policies

LTP4		SEA Topics																					Comments					
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health									
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21					SEA 22	SEA 23
5. Supporting Growth and Tackling Congestion																												
Public Transport																												
1	Look for opportunities to work with Network Rail and train operators to strenghten rail's role for commuting into and out of larger urban areas.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	P ↑↑	S ↑↑	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 15 - Will improve access to major industry in larger urban areas 16, 19 - Increases the use and availability of sustainable transport			
Walking and Cycling																												
2	Pursue opportunities to encourage cycling and walking in the larger urban areas (particularly through working with other partners to secure funding for schemes).	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	S ↑	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	S ↑	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 17 - Will improve access to basic services and employment and educational opportunities 12, 21 - May lead to the development of green infrastructure to promote cycling and walking 13 - Interconnect will help to encourage local tourism 16, 19 - Increases the use and availability of sustainable transport 20 - Promotes a healthy lifestyle			
Travel Planning																												

LTP4		SEA Topics																					Comments				
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health								
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21			SEA 22	SEA 23	
3	Delivery of hard and soft measures and embed the ethos of sustainable travel within new developments before and after occupancy.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	N/A	N/A	P ↑	N/A	N/A	P ↑	N/A	6 - May lead to an increase in sustainable travel within new developments and thus improved local air quality 7 - Increase in sustainable travel will reduce CO2 emissions 15 - Use of travel planning to tackle congestion may have a secondary positive effect of improving accessibility for major industry 16 - Should increase the use of sustainable transport in new developments, having a secondary positive effect of using natural resources (such as fuel) more efficiently 19 - Should increase the availability and use of sustainable transport 22 - Should ensure that new developments do not disproportionately effect local communities through increased congestion		
4	Continuing to engage and develop travel plans for businesses, and offering incentives for those who prefer a lighter touch.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	S ↑	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel by businesses and thus improved local air quality 7 - Increase in sustainable travel will reduce CO2 emissions 15 - Use of travel planning for businesses should have a primary positive effect on reducing congestion and ensuring accessibility is maintained for major industry 16 - Should increase the use of sustainable transport by businesses, having a secondary positive effect of using natural resources (such as fuel) more efficiently 19 - Should increase the availability and use of sustainable transport for businesses		
5	My PTP (personalised travel plan) will be rolled out to businesses at a subsidised rate by the County Council, and the promotion of public transport for the journey to work will be emphasised.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	S ↑	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel by businesses and thus improved local air quality 7 - Increase in sustainable travel will reduce CO2 emissions 15 - Use of travel planning for businesses should have a primary positive effect on reducing congestion and ensuring accessibility is maintained for major industry 16 - Should increase the use of sustainable transport by businesses, having a secondary positive effect of using natural resources (such as fuel) more efficiently 19 - Should increase the availability and use of		

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									sustainable transport for businesses	
6	Lincolnshire County Council to develop its own travel plan, including the following measures: car sharing, personal travel planning, discounts for public transport users, walk and cycle challenges, pool bikes and Bikeability Level 2 and 3 cycle training.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	P ↑	S ↑	N/A	N/A	N/A	6 - Should lead to an increase in sustainable travel by the County Council and thus improved local air quality 7 - Increase in sustainable travel will reduce CO2 emissions 16 - Should increase the use of sustainable transport by the County Council, having a secondary positive effect of using natural resources (such as fuel) more efficiently 19 - Should increase the availability and use of sustainable transport for County Council employees 20 - The measures outlined in the travel plan (such as walk and cycle challenges, pool bikes) should created conditions and promote healthier lifestyles for Council staff.	
Sustainable Travel to School - School Travel Plans																										
7	Interactive resources available to all schools , such as virtual bike races, the Golden Boot Challenge, WoW (Walk once a Week), and Steposaurus, will continue to be available for schools, and their success monitored through surveys.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P↑	N/A	N/A	N/A	N/A	S↑	N/A	P↑	P↑	P↑	N/A	N/A	N/A	6 - Uptake of interactive resources should result in increase in sustainable travel to and from schools having a secondary positive effect of reducing air pollution of less sustainable transport methods (such as car trips) 7 - Increase in sustainable travel will reduce CO2 emissions 16 - Should increase the use of sustainable travel methods (such as bikes and walking) to and from schools, having a secondary positive effect of reducing the use of natural resources (such as fuel) to travel to schools 18 - Will improve access to educational facilities 19 - Will increase access to sustainable transport for school children and staff 20 - Directly supports healthy lifestyles for school children and staff by promoting sustainable travel measures (such as biking and walking)	

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
8	Rollout Local Transport Fund programme initiatives for Lincoln throughout LN6 and develop new initiatives such as Scootability, Personalised Travel Planning and Bike Hire.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	S ↑	N/A	P ↑	P ↑	P ↑	N/A	N/A	N/A	6 - Uptake of interactive resources should result in increase in sustainable travel to and from schools having a secondary positive effect of reducing air pollution of less sustainable transport methods (such as car trips) 7 - Increase in sustainable travel will reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities through measures such as Scootability and Wheels to Work. 16 - Should increase the use of sustainable travel methods (such as bikes and walking) to and from schools, having a secondary positive effect of reducing the use of natural resources (such as fuel) to travel to schools 19 - Will increase access to sustainable transport 20 - Directly supports healthy lifestyles by promoting sustainable travel measures (such as bike hire)	
Intelligent Transport Systems																										
9	Opportunities to expand the use of intelligent transport systems will continue. This will include the development of better traffic control strategies and, in the longer term, considering the need to convert to digital communications.	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	S ↑↑	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	6 - Improving traffic flows by reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Reducing congestion will improve access to facilities and amenities 17 - Provides the opportunity to promote sustainable design and construction techniques	
6. Lincoln																										
Eastern Bypass																										

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
10	Construction of the Eastern Bypass	N/A	C ↓	P ↓	P ↓	P ↑	P ↑	P ↑	N/A	P ↑	P ↓	P ↑	P ↑	P ↑	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↓	N/A	2, 3, 4, 5, 14 - Creation of new road infrastructure will have negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - Has the potential to have negative impacts on heritage assets and the urban and rural landscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 13 - Improving access to Spalding will encourage tourist travel into the area 16 - Has the potential to use natural resources more efficiently, e.g. using recycled aggregate. 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents	
East - West Link																										
11	East – West Link	N/A	C ↓	P ↓	P ↓	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↓	P ↑	P ↑	N/A	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↓	N/A	2, 3, 4, 9, 10 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, water, landscape if not appropriately designed and the impacts mitigated 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 11, 15, 18 - Will improve access to basic infrastructure, major infrastructure, employment and educational opportunities 16 - Potential to use recycled materials during construction 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location may	

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									disproportionately impact on local residents	
12	Pedestrianisation of High Street between Wigford Way and Tentercroft Street	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	P ↑	P ↑	N/A	P↑	P ↑	N/A	N/A	N/A	P↑	P ↑	N/A	P ↑	P↑	N/A	N/A	6 - Reducing the number of cars will improve local air quality 7 - Pedestrianising may also help to reduce carbon emissions 9 - Pedestrianising the town centre may be beneficial for the protection of the numerous heritage assets in the vicinity, 30 SMs and 2 Registered PAGs 10 - Pedesrianising may also help to improve the streetscape 13 - May make the tone more attractive for tourists 17 - Opportunity to use recycled materials 18 - Will improve access to basic services 20 - Will help to promote healthy lifestyles	
Whisby Road Improvement Scheme																										
13	Construction of the Whisby Road Improvement Scheme	N/A	P ↑	P ↓	P ↑	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↓	N/A	P ↓	P ↑	P ↑	P ↑	P ↑	P ↑	P ↑	N/A	N/A	N/A	2 - There is the potential for both positive and negative effects on biodiversity as a result of the scheme 3 - There is the potential for the loss of agricultural land along either side of the A46 4 - The site is not within a flood plain or a groundwater protection zone. There is the potential for reductions to the quality of surface water from pollutants in routine runoff. 6 - The road improvement scheme may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and improve sustainable travel on the road, thus improving local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - There is the potential for negative effects on landscape and heritage assets including important views, however it is unclear at this stage. 11, 15, 18 - Will improve access to basic infrastructure, major infrastructure, employment and educational opportunities 12 - There is the potential for the loss of open pace along either side of the A46 13 - There is the potential for the loss of agricultural land along either side of the A46	

LTP4		SEA Topics																					Comments		
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23
																									19 - Increases the road safety awareness of nursery and primary school aged children which should reduce the number of accidents and injuries sustained on the transport network
Park and Ride																									
14	Development of a Park and Ride at the A46/A57 Junction	N/A	C ↓	P ↓	P ↓	P ↑	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↓	S ↑	P ↓	N/A	P ↑	P ↑	N/A	P ↑	N/A	P ↑	P ↓	N/A	2, 3, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, landscape and agricultural land if not appropriately designed and the impacts mitigated 4 - The junction is 320m away from a river and 700m away from a canal 5 - The junction is in an area with a 1% chance of flooding each year 6 - Will reduce the number of cars driving into the centre of Lincoln and improve local air quality. However, it will reduce air quality for local residents. 7 - Reduced car trips will reduce CO2 emissions 9 - There is a scheduled monument, Skellingthorpe duck decoy, within 2km of the junction 10 - Depending on the design there could be an impact on local landscape 11 - Park and ride will help make the town centre more accessible for education and employment opportunities 13 - Improving access into the town centre may encourage tourism 16, 19 - A park and ride facility is more resource efficient and sustainable than multiple individual car journeys 17 - Has the opportunity from promoting sustainable design and construction 22 - The park and ride facility has the potential to disproportionately affect residents
Public Transport Interchange																									

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21			SEA 22	SEA 23
15	At the proposed Lindongate retail development within the city centre, it is proposed to replace the existing bus station with a new facility adjacent to the railway station, thereby creating an integrated public transport interchange.	N/A	N/A	N/A	P ↑	N/A	P ↑	S ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↑	N/A	N/A	4 - The site is approximately 150m away from a river 6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 9 - There are 31 SM and 1 Registered PAG within 2,000m of the proposed location of the new bus station, though there is already an existing bus station in the area. There may be negative impacts on cultural heritage and landscape 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Presents the opportunity to use natural resources more efficiently 17 - Provides the opportunity to promote sustainable design and construction techniques 19 - Increase in the availability of sustainable transport	
Access LN6 - Local Sustainable Transport Fund																										
16	Enhancements at Hykeham rail station	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	S ↑	N/A	S ↑	N/A	N/A	N/A	P ↑	S ↑	P ↑	S ↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality (for example through increased train services) 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - Increased sustainable transport measures may have a positive effect on tourism 17 - It is unclear at this stage the design and construction techniques for the enhancements 18 - Encourages the use of sustainable transport and has the potential to improve access to basic services, amenities and open space 19 - Should increase the accessibility of sustainable transport (e.g. increased train services) 20 - Enhancements have the potential to encouragement healthy lifestyles (such as bike hubs)	

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
17	The provision of local bus services, which are currently extremely limited	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	S ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use local bus services opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Potential reduction in car trips should have a positive effect on the efficient use of fuel. 19 - Will improve access to sustainable transport for residents, tourists and employers
18	Facilities to encourage walking and cycling	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	S ↑	P ↑	P ↑	N/A	N/A	N/A	6 - Improvements should encourage people to walk or bike opposed to the using car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 16 - Provides an opportunity to reduce the use of natural resources (such as fuel) 18 - Should improve access to basic services 19 - Will improve access to sustainable transport for residents, tourists and employers 20 - Should directly positive effect on creating conditions to improve health and promote healthy lifestyles by providing facilities to promote daily exercise through walking and cycling
19	Travel planning initiatives, both residential and businesses	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	S ↑	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel by businesses and residents, and thus improved local air quality 7 - Increase in sustainable travel will reduce CO2 emissions 15 - Use of travel planning for businesses and residents should have a primary positive effect on reducing congestion and ensuring accessibility is maintained for major industry 16 - Should increase the use of sustainable transport by businesses and residents, having a secondary positive effect of using natural resources (such as fuel) more efficiently 19 - Should increase the availability and use of sustainable transport for businesses

LTP4		SEA Topics																					Comments				
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health								
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21				SEA 22	SEA 23
20	A contribution to the Whisby Road improvement Scheme to provide improved facilities for pedestrians and cyclists	N/A	P ↑	N/A	N/A	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↓	N/A	P ↓	P ↑	P ↑	P ↑	P ↑	P ↑	P ↑	N/A	N/A	N/A	2 - There is the potential for both positive and negative effects on biodiversity as a result of the scheme 3 - There is the potential for the loss of agricultural land along either side of the A46 4 - The site is not within a flood plain or a groundwater protection zone. There is the potential for reductions to the quality of surface water from pollutants in routine runoff. 6 - The road improvement scheme may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and improve sustainable travel on the road, thus improving local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - There is the potential for negative effects on landscape and heritage assets including important views, however it is unclear at this stage. 11, 15, 18 - Will improve access to basic infrastructure, major infrastructure, employment and educational opportunities 12 - There is the potential for the loss of open space along either side of the A46 13 - There is the potential for the loss of agricultural land along either side of the A46 19 - Increases the road safety awareness of nursery and primary school aged children which should reduce the number of accidents and injuries sustained on the transport network		
Congestion Hotspots																											
21	Number of junctions have been identified as 'congestion hotspots'. A programme to deliver improvement schemes over the next 3-4 years is currently in development.	P ↑	P ↑	P ↑	P ↑	P ↑	S ↑	N/A	N/A	P ↑	P ↑	N/A	P ↑	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	N/A	P ↑	P ↑	N/A	1, 2, 3, 4, 5, 9, 10, 12, 14, 21 - Potential for negative impacts depending on the location and scale of the improvements 6 - Improvements should reduce congestion and thus improve local air quality 11, 15 - Improvements should improve access to education and employment opportunities and for major infrastructure 17 - Provides the opportunity to promote sustainable design and construction techniques 22 - Depending on the location and scale may disproportionately impact on local residents		

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
Buses																										
22	During LTP4, the successful 'Access LN6' will see new bus services introduced in the south-west of the city and further ways of encouraging greater bus use across the area will continue to be explored.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	S ↑	N/A	S ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use local bus services opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Potential reduction in car trips should have a positive effect on the efficient use of fuel. 19 - Will improve access to sustainable transport for residents, tourists and employers	
Rail																										
23	The County Council and other partners are lobbying for additional direct services between Lincoln and London.	N/A	N/A	N/A	N/A	N/A	S ↑↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑↑	N/A	P ↑↑↑	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - An improved passenger capacity and direct link to the London may make Lincolnshire more attractive for tourists 16, 19 - Increases the use and availability of sustainable transport	
24	Proposal to construct two new footbridges across the railway on the High Street and Brayford Wharf East in Lincoln.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	19 - Should lead to reduction in the number of accidents and injuries sustained on the transport network		
25	Improved services on the Nottingham – Newark – Lincoln Line.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Improved access for both freight and people to educational and employment facilities 13 - Improved services may encourage tourism 16 - Encourage people to use the train 19 - Encourages the use of sustainable transport	

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
26	Improvements to the Lincoln-Doncaster Line	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Improved access for both freight and people to educational and employment facilities 13 - Improved services may encourage tourism 16 - Encourage people to use the train 19 - Encourages the use of sustainable transport	
Southern Bypass																										
27	Completion of the full orbital relief road	N/A	C ↓↓	P ↓	P ↓	N/A	P †	P †††	N/A	P †	P †	P †	P †	N/A	P ↓	P †	N/A	P †	N/A	N/A	N/A	P †	P ↓	N/A	2, 3, 4, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil and water quality if not appropriately designed and the impacts mitigated 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9 - Hall Close, a SM, is situated within 2,000m of the proposed route 10 - New development could impact on the local landscape 11, 15 - Will improve access to major infrastructure, employment and educational opportunities 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents	
7. Boston																										
Public Transport																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
28	Ongoing enhancements to public transport with a continuation of the Boston IntoTown bus service, real time information and improvements to the bus station in terms of accessibility, facilities and pedestrian linkages.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	P ↑	P ↑	P ↑	P ↑	P ↑	N/A	P ↑	N/A	6 - Improvements should encourage people to use the bus as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Journeys by bus are more resource efficient than by car 17 - Provides the opportunity to promote sustainable design and construction techniques 19 - Will help to promote bus use 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different services	
Walking and Cycling																										
29	Continued walking and cycling improvements	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16, 19 - Increases the use and availability of sustainable transport 20 - Promotes healthy lifestyles	
Car Parking																										
30	Car parking and signing strategy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10 - May help to reduce street clutter	
Traffic Management																										
31	Continued traffic management improvements including updating existing facilities, banning some turning movements and introducing one way systems	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	6 - Will improve local air quality 11, 18 - Will improve access to basic services, employment and educational opportunities	
Proposals for LTP4 Period																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
32	Areas of land will be identified for future development which may help facilitate the possibility of a distributor road to the west of Boston.	P↑↑↑	C↓	P↓	P↓	P↓	P↓	P↑↑↑	N/A	P↑	P↑	P↑	P↑	N/A	P↓	N/A	P↑	P↑	P↑	N/A	N/A	N/A	P↓	N/A	1, 2, 3, 4, 9, 10, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land if not appropriately designed and the impacts mitigated 5 - The land immediately to the west of Boston has a 1% chance of flooding each year 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 18 - Will improve access to basic services, employment and educational opportunities 16 - Provides the opportunity to use natural resources more efficiently for instance, recycled material for the road surface 17 - Provides the opportunity to promote sustainable design and construction techniques 22 - The scheme may disproportionately affect local residents	
33	Other identified elements of the Transport Strategy continued to be delivered as funding permits, including the Waterways Project which includes improvements to cycling facilities alongside the South Forty Foot Drain.	N/A	N/A	N/A	N/A	N/A	S↑	S↑↑↑	N/A	N/A	N/A	P↑↑	S↑	N/A	N/A	N/A	P↑↑	N/A	P↑↑	N/A	N/A	S↑	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 17 - Will improve access to basic services and employment and educational opportunities 12 - May lead to an increase in green infrastructure 15 - Should help to promote the sustainable use of natural resources	
8. Grantham																										
Public Transport																										
34	Continued upgrades to the bus service with new low floor buses and the raising of kerbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑	N/A	N/A	N/A	N/A	N/A	N/A	P↑	P↑	N/A	N/A	P↑	N/A	11, 18 - Will improve access to basic services and employment and educational opportunities 19 - Improvements will make the bus service and thus sustainable transport more accessible 22 - Will make the bus more accessible for people with disabilities	

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
35	Improve pedestrian access to the Train Station by regenerating the area adjacent to the railway	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	P ↑	P ↓	P ↑	P ↑	N/A	N/A	N/A	N/A	4 - The station is approximately 560m away from a river 6 - May encourage people to walk to the station rather than drive 7 - Reduced car trips will reduce carbon emissions 10 - Regeneration will improve the streetscape 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Will encourage people to walk rather than use their cars 17 - Promotes sustainable transport design 19 - Improvements will make the train service and thus sustainable transport more accessible	
36	Improve integration of bus and rail	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	P ↑	P ↑	N/A	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 12 - Improving the integration of services may make Grantham more attractive for tourists 15, 18 - Increases the use and availability of sustainable transport 16 - Provides the opportunity to promote sustainable design and construction techniques	
Improvements for Non-motorised users																										
37	A priority list of improvements was prepared and work has continued to provide these important additional links.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	S ↑↑	P ↑↑	N/A	N/A	S ↑↑	N/A	11, 17 - Improving access to timetable information improves an individuals opportunity to use public transport 16 - Has the opportunity to promote sustainable design 18 - Improved access to sustainable transport 20 - Provides residents without a car access to transport	
Bridge Strikes																										
38	Implement an area wide HGV ban	N/A	N/A	N/A	N/A	N/A	S ↓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Will improve local air quality 14 - May improve accessibility by preventing bridge strikes	
East West Relief Road																										

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
39	Preferred alignment has now been agreed and work has now started on the preparation of a planning application. The current programme is for construction to start in 2014.	P ↑↑↑	P↓	P↓	P↓	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↓	P ↑	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	1 - Woodnook Valley an SSSI, Harlaxton Wood an Ancient Woodland, Trent Valley and Rises and Lincolnshire and Rutland Limestone both Natural Areas, are all within 2000m of the proposed scheme route 2, 3, 10, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, landscape, heritage assets and agricultural land if not appropriately designed and the impacts mitigated 4 - The scheme is approximately 500m from a river 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions9 - Harlaxton Manor a Registered PAG and Bowl Barrow a SM are within 2000m of the proposed scheme route 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 17 - Provides the opportunity to promote sustainable design and construction techniques 22 - Construction of the road may adversely affect local residents	
10. Supporting the Larger Market Towns																										
Bourne																										
40	Opportunities will be pursued to improve sustainable travel in the town with funding through S106 agreements.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use sustainable methods of transport as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Sustainable forms of transport are more resource efficient than the car 19 - Will help to promote the use of sustainable forms of transport	
Louth																										

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
41	Develop further partnership arrangements between the local authorities, developers and other bodies to deliver transport improvements.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	S ↑	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities by reducing traffic congestion 15 - Transport improvements should lead to reductions in congestion an have a secondary positive effect on access for major industry 19 - Increases the use and availability of sustainable transport	
Skegness																										
42	The County Council will continue to work with East Lindsey District Council and local land owners and developers to seek to improve the movement of traffic in and around Skegness and wider coastal area.	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	P ↑	N/A	S ↑	N/A	P ↑	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements in the movement of traffic will reduce congestion and thus improve local air quality 11, 18 - Will improve access to basic services and employment and educational opportunities by reducing traffic congestion 12 - Skegness and the wider coastal area are popular tourist locations. Better movement of traffic should encourage tourism. 15 - Improved traffic movement should maintain/improve accessibility for major industry 19 - Increases the use and availability of sustainable transport	
Sleaford																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
43	New road network associated with bringing the Bass Maltings back into use (planning permission approved)	N/A	C↓	P↓	P↑	N/A	P↓	P↑↑↑	N/A	P↑↑↑	P↑	P↑	P↑	N/A	N/A	P↑	P↑	P↑	N/A	N/A	N/A	P↓	N/A	2, 3 - Creation of new road infrastructure will have negative impacts on Lincolnshire's biodiversity and local soil quality. 10, 14 - Creation of new road infrastructure has the potential for significant negative impacts on landscape and agricultural land if not appropriately designed and the impacts mitigated 4 - The Bass Maltings are approximately 400m away from New Ballast Pit (Pond) and 480m away from the River Slea Runoff from the new highway has the potential to cause pollution to groundwater. 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. 7 - Could lead to an increase in CO2 emissions 9 - The Bass Maltings is a Grade II Listed Building and thus bringing it back into use will help to protect it 10 - Depending on the design the scheme may have positive or negative effects on the streetscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - May require the loss of green infrastructure and open space for new developments 13 - The incorporation of a museum will increase tourism 16 - Has the potential to use natural resources sustainably 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents		

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
44	The IntoTown town bus service will be extended using S106 funding as the opportunity arises.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	P ↓	P ↑	N/A	N/A	P ↑	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use the bus as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - May require the loss of green infrastructure and open space for new developments 13 - Will help to encourage tourism by providing access to the Bass Maltings 16 - Journeys by bus are more resource efficient than by car 19 - Will help to promote bus use	
Spalding																										
45	Western Relief Road	N/A	C ↓↓	P ↓	P ↓	N/A	P ↑	P ↑	N/A	P ↑	P ↑	P ↑	P ↓	P ↑	P	P ↑	P ↑	P ↑	N/A	N/A	N/A	P ↓	N/A	2, 3, 4, 14 - Creation of new road infrastructure will have negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land 5 - The majority of Spalding and the land directly to the west has a 1% chance of flooding each year 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - Has the potential to have negative impacts on heritage assets and the urban and rural landscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - May require the loss of green infrastructure and open space for new developments 13 - Improving access to Spalding will encourage tourist travel into the area 16 - Has the potential to use natural resources more efficiently, eg. using recycled aggregate. 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents		

LTP4		SEA Topics																					Comments		
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets						Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21			SEA 22
Stamford																									
46	Smaller developments will allow some S106 monies to be available for improving sustainable travel in the town.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16, 19 - Increases the use and availability of sustainable transport 20 - Will help to promote healthy lifestyles
11. Improving Accessibility																									
Public Transport																									
47	Further increase the number of people using the InterConnect/ CallConnect bus services across the county.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S↑↑↑	N/A	N/A	N/A	P↑↑	N/A	P↑↑	N/A	N/A	P↑↑	N/A	P↑↑	P↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Interconnect will help to encourage local tourism 16, 19 - Increases the use and availability of sustainable transport
48	Continue to support local bus services by producing area bus guides for residents and visitors and continuing to develop and improve web based information. The use of social media to inform bus users of timetable changes, ticketing initiatives and travel updates will also be investigated.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	S ↑	N/A	S ↑	N/A	S ↑	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	6 - May encourage people to use bus services rather than car trips and thus improve local air quality 7 - Reduced car trips will reduce carbon emissions 11 - Should increase awareness and engagement with local bus services and may have a secondary positive effect on improving access to education and employment opportunities 12 - Providing increased and more accessible bus information should encourage tourism 15 - Increased use of bus services and a reduction in car trips should lead to reduced congestion and improved / maintained accessibility for mahor industry 18 - By providing more information on bus services it should make them more accessible and improve access to basic services, amenities and open space 19 - Increased and more accessible bus service information should make bus services more

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
																									accessible	
49	The introduction of new 'stop specific' roadside displays at appropriate bus stop locations will be phased in during the LTP4 period.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	S ↑	N/A	S ↑	N/A	S ↑	N/A	N/A	S ↑	P ↑	N/A	N/A	N/A	N/A	6 - May encourage people to use bus services rather than car trips and thus improve local air quality 7 - Reduced car trips will reduce carbon emissions 11 - Should increase awareness and engagement with local bus services and may have a secondary positive effect on improving access to education and employment opportunities 12 - Providing increased and more accessible bus information should encourage tourism 15 - Increased use of bus services and a reduction in car trips should lead to reduced congestion and improved / maintained accessibility for major industry 18 - By providing more information on bus services it should make them more accessible and improve access to basic services, amenities and open space 19 - Increased and more accessible bus service information should make bus services more accessible	
50	Continued improvements to public transport infrastructure e.g. bus stop poles and timetable displays, accessible boarding kerbs and crossing points, real time information systems, improvement of infrastructure in rural locations.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	S ↑	N/A	S ↑	N/A	S ↑	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - Improving public transport infrastructure may make Lincolnshire more accessible and attractive for tourists 15 - Increased use of public transport and a reduction in car trips should lead to reduced congestion and improved / maintained accessibility for major industry 18 - Should improve facilities for social cohesion and improve access to basic services and amenities, particularly in rural areas 19 - Should increase accessibility to public/ sustainable transport	
Community Transport																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
51	Development of a Community Transport Strategy, which will enable Lincolnshire's allocation of the Community Transport Fund to be spent across the County, benefitting those who have been identified as the most isolated from public transport options.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	11 - Will have a direct positive effect on accessibility to employment and education opportunities, particularly in rural areas 18 - Should have a direct positive effect on maintaining facilities for social cohesion and enabling equal access to basic services, amenities 19 - Will have a direct positive effect on increasing accessibility to sustainable transport	
52	Continue to support Lincoln Dial-A-Ride with financial and officer support, including the marketing of the service to potential new passengers.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	11- Will provide access to education and employment opportunities for disabled people and over 60's 18 - Encourages equal access for disable people and over 60's	
53	Wheels to Work will continue to grow during the LTP4 period, with the next step the setting up of 'hubs' in key locations in the county.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	S ↑	N/A	N/A	11 - Will have a direct posive effect on accessibility to employment and education opportunities, particularly in rural areas 18 - Should have a direct positive effect on enabling equal access to basic services and amenities, particularly for those who lack public transport in rural areas 21 - Could potentially provide transport solutions for the most isolated to access green infrastructure	
54	Minibus brokerage scheme	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	N/A	N/A	N/A	N/A	P↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11 - Will improve access to employment and educational opportunities16 - Promotes a more efficient use of natural resources	
Walking and Cycling																										

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
55	The Council looks to work closely with other partners such as Sustrans to secure funding through other pots such as 'Connect2' and 'Links2School'.	S ↑	S ↑	S ↑	N/A	N/A	S ↑	S ↑↑↑	N/A	S ↑	S ↑	S ↑	P ↑	N/A	P ↑	N/A	S ↑	N/A	S ↑	P ↑	S ↑	P ↑	N/A	N/A	1, 2, 3, 9, 10 - Unclear at this stage the effects of that development of new footways and cycleways may have on biodiversity, habitats, species, soils, heritage assets and their setting, and attractive landscapes/ townscapes 6 - Enhancements to cycleways and walkways could lead to reduced car usage having a positive effect on local air quality 7 - Reduced car trips will reduce carbon emissions 11 - Enhancements to cycleways and walkways should improve access to educational and employment opportunities 12 - Potential for both a reduction in open land and creation of new green infrastructure for new walking and cycling networks 14 - Potential loss of agricultural land for new schemes 15 - Should have a positive effect on sustainable transport activities 18 - Should support social cohesion and improve access 19 - Will increase sustainable transport options 20 - Should have direct positive effect on promoting healthy lifestyles 21 - Potential to create new green infrastructure	
56	The programme, Bike-Able, will be delivered to over 1200 individuals over the next 3 years, assisting in the promotion of cycle use and encouraging more individuals to commute to work, thereby reducing traffic congestion and emissions.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	S ↑	N/A	N/A	N/A	6 - Will improve local air quality 7 - Reduced car trips will reduce carbon emissions 11, 19 - Will have a direct positive effect on accessibility to employment and education opportunities through sustainable transport 20 - Should promote healthy lifestyles	
Rail																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
57	Improved Lincoln-London direct services as part of the new East Coast franchise. A business case has been submitted to the DfT.	N/A	N/A	N/A	N/A	N/A	S ↑↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑↑	N/A	P ↑↑↑	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - An improved passenger capacity and direct link to the London may make Lincolnshire more attractive for tourists 16, 19 - Increases the use and availability of sustainable transport	
58	Improving access to, and the facilities at, Lincolnshire's stations as funding opportunities arise.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	P ↑↑	P ↑↓	N/A	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 16, 19 - Encourages the use of sustainable transport 17 - Has the potential to promote sustainable design and construction techniques	
Reducing the Need to Travel																										
59	An investment of £57m is expected to achieve universal broadband at least 'standard' speed (megabytes per second) and access to 'superfast' broadband (24 -30 mbps) by 2015. The investment in infrastructure will be made in the rural areas of the county where commercial providers would not otherwise invest without public support.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	S ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	P ↑↑	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7, 8 - Enabling people to work from home and shop online reduces the need to travel and thus will reduce CO2 emissions but also potentially enable people to adapt to climate change 11 - Improves access to facilities and employment opportunities 18 - Helps to provide equal access to basic services 22 - Will help to prevent social inequalities	

LTP4		SEA Topics																					Comments		
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23
60	Activities are being piloted with EU funding to raise the awareness of businesses to the opportunities from ICT and to encourage use by residents and communities.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Greater use of ICT may reduce the need to travel and have a positive effect on local air quality 7 - Reduced travel should lead to reduced carbon emissions from transport 15 - A reduction in the need to travel should reduce traffic congestion and maintain/ improve accessibility for major industry 16 - A reduction in the need to travel should result in traffic activities using less natural resources
12. Safer Roads																									
Education, Training and Publicity																									
Young Drivers 17 - 24																									
61	Driver information programme directed towards those in 6th form education, college or university	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
62	2 Fast 2 Soon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
63	Safe young driver programme	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
64	Young passenger awareness	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
65	Car crash simulator	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
Young Road Users between aged 8 - 11																									

LTP4		SEA Topics																					Comments		
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23
66	Pedestrian training and traffic trails are offered to all KS2	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	N/A	P ↑	N/A	6 - May lead to an increase in walking as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of walking 18 - Improves safe access to basic services 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Providing training will help enable pedestrians to stay safe on the roads
67	Introduction of Community School Safety Zones outside primary schools	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	P ↑	P ↑	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Improves safe access to schools 16, 19 - Encourages and increases access to sustainable transport 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Will help to keep school children safe 23 - Engagement with the community to promote safety around schools
Mature Drivers over the age of 60																									
68	Courses currently being held in all seven District authority areas, funded from a range of sources	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers in this age group reducing the number of accidents and injuries sustained on the transport network
Those who drive as part of their trade or business																									
69	Employers Charter launched in November 2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers for business purposes, reducing the number of accidents and injuries sustained on the transport network
70	Over 50 small and medium companies have or are developing strategies	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers for business purposes, reducing the number of accidents and injuries sustained on the transport network
71	Driver information programme (DiP) provided for County Council staff and	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improve awareness of safety issues for drivers for business purposes, reducing the number of accidents and injuries sustained on the transport network

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
	members																									
Motorcyclists																										
72	Bikesafe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
73	Performance Plus	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
Pedal Cyclists																										
74	Providing road safety advice and supporting companies with advice on sustainable travel	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S↑	N/A	N/A	S↑	P↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of sustainable transport 20 - Improve awareness of safety issues associated with cycling reducing the number of accidents and injuries sustained on the transport network
75	Bikeability programme	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	P ↑	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of sustainable transport 18 - Improves safe access to basic services 20 - Improve awareness of safety issues associated with cycling reducing the number of accidents and injuries sustained on the transport network
Drugs and Driving																										
76	Raise awareness of the dangers of driving whilst under the influence of drugs or alcohol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
77	Drink Drive Rehabilitation course	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
The Life Skills Academy (LSA)																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
78	12.14 During the life of LTP4 it is proposed to: • expand the portfolio of nationally referred driver offending courses • develop the Driving Standards Agency (DSA) fleet driver training • develop the Taxi retraining scheme • maximise use of the driving simulator • develop post-test training for motorcyclists • become a DSA training provider for the Certificate of Professional Competence (CPC) for drivers of large goods and public service vehicles • develop the mini-bus training programme	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
Engineering																										
79	Low cost Safety Schemes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A		N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
80	Implement an annual programme of surface treatments.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
Enforcement and Engagement																										
81	Two wheeled motor vehicles (TWMV)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Improved training and intelligence led enforcement should lead to a reduction in accidents for TWMVs	
82	Working in schools	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Road safety training in schools should have a positive effect on the number of pedestrian accidents	

LTP4		SEA Topics																					Comments		
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23
83	Young Drivers (17 - 24)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Intelligence led enforcement should have a positive effect on road safety by reducing car speeds
84	Mature road users	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Driver training for mature drivers should have a positive effect on their road safety
Speed Management																									
85	Deploy fixed and mobile camera technology at sites prioritised in terms of collisions and/ or public concern. In addition, a number of sites will be selected for digital upgrade.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on reducing speeds and result in safer roads
Communication and Community Engagement																									
86	Drink-drive seasonal campaigns timed for Christmas and the summer	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
87	Migrant worker drink-drive campaigns at targeted locations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
88	Engaging with bikers at meetings around the County and highlight appropriate training schemes and raising awareness of I-biker apps for smart phone users	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
89	Engaging with regional partners to promote the Fatal 4 (seatbelt, speed, drinkand mobile phones)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
90	Publishing news letter/magazine promoting the work of LRSP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
91	Engaging with military bases in the region to promote road safetv	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21		SEA 22	SEA 23	
92	Highlighting the profile of pedal cyclists by means of awareness for other road users and promoting the use of high visibility clothing and cycle helmets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	N/A	18 - Should have a positive effect on road safety 20 - Promotes healthy lifestyles by creating safer conditions for cycling
93	Raising awareness, through radio advertising, of 'lighting up', 'be seen' and 'braking distances' for all road users	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	N/A	18 - Should have a positive effect on road safety 20 - Promotes healthy lifestyles by creating safer conditions for cycling and walking
94	Improving and updating the road safety web site to make it more user-friendly	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
95	Working with major companies to engage businesses in road safety events	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should have a positive effect on road safety
13. Asset Management																										
Principal Roads																										
96	The increased use of targeted structural patching and surface dressing instead of reconstruction and surfacing works will be promoted to maintain the integrity of the network over the short to medium term.	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	N/A	P ↑	N/A	N/A	N/A	S ↑	N/A	2 - A reduction in reconstruction and surfacing works may have a positive effect on biodiversity and geodiversity by reducing the negative impacts associated with these works 15 - Targeted measures should contribute to improved quality of road surfaces and maintain accessibility for major industry 16 - Should reduce the natural resources required for reconstruction and surfacing works 18 - Improved quality of road surfaces should maintain social cohesion and accessibility. May help to reduce number of road accidents on Principal Roads 20 - Reduction in reconstruction activities may result reduced complaints from construction
Footways																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
97	Footway Network Surveys (FNS) are being introduced across all footway hierachies to monitor and report on condition and target maintenance.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	S ↑	N/A	N/A	N/A	6 - Well maintained pathways may increase pedestrian usage and reduce car trips and thus result in improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 18 - Well maintained pathways should improve access and social cohesion 19 - Well maintained footways will encourage sustainable travel (such as walking) 20 - Well maintained footways will have a positive effect on maintaining conditions for healthy lifestyles	
Bridge Maintenance																										
98	Two dedicated maintenance teams were allocated to preventative and routine maintenance of structures and high priority paraphets. This programme is likely to continue throughout the life of LTP4.	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	N/A	S ↑	N/A	N/A	N/A	S ↑	N/A	2 - Preventative and routine maintenance should reduce the need for large reconstruction/ maintenance projects, reducing the associated negative effects on biodiversity 15 - Should reduce the likelihood of bridge closures, maintaining access for major industry 16 - Should reduce the natural resources required for reconstruction and larger scale maintenance works 18 - Should reduce the likelihood of bridge closures and maintain access 22 - Reduction in reconstruction activities may result reduced complaints from construction	
Culvert/ Footbridge/ Retaining Wall Maintenance																										
99	Only address culvert failures when they occur, unless there is a clear indication that a culvert is on the brink of failure.	P ↓	P ↓	P ↓	P ↓↓	P ↓	N/A	P ↑↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	P ↓	N/A	P ↑↑	N/A	N/A	N/A	1 - Culvert failure may have negative impacts on biodiversity 2 - Culvert failure may have negative impacts on biodiversity 3 - Culvert failure may have negative impacts on soils 4 - Culvert failure may have negative impacts on the water environment 5 - Culvert failure may increase vulnerability to flooding	
Safety at Bridge Sites																										

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
100	Where it is deemed cost effective, funding will be targeted towards upgrading parapets to increase safety and reduce future maintenance costs and if necessary this may include reconstruction or widening of bridges where appropriate.	N/A	P ↓	P ↓	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑	N/A	S ↑	N/A	N/A	S ↑	S ↑	N/A	S ↑	N/A	N/A	N/A	P ↓	N/A	2 - Reconstruction or widening of bridges may have negative impacts on biodiversity 3 - Reconstruction or widening of bridges may have negative impacts obn soil quality and quantity 9, 10 - Potential for both positive or negative impacts on heritage assets and landscape/ townscape 12 - Construction may require loss of open land/ green infrastructure 15 - Should reduce the likelihood of bridge closures, maintaining access for major industry 16 - Should reduce the natural resources required for reconstruction and larger scale maintenance works 18 - Should reduce the likelihood of bridge closures and maintain access 22 - Potential for both positive and negative effects. Increase in construction works in short term may lead to reduced maintenance benefits in the long term.	
Traffic Signal Control Systems																										
101	Further develop the traffic signals systems to assist with faster responses to incidents and to minimise the impact of congestion	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	6 - Minimising congestion will lead to improvements in local air quality 7 - Minimising congestion will reduce carbon emissions 16 - Reduced congestion will mean fuel is used more efficiently 18 - Will improve response to incidents and improve safety	
102	Replace obsolete and time expired traffic signal equipment to prevent unplanned loss of control over the traffic signal installations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Should reduce accidents due to traffic light failure	
103	Investigate possible savings in carbon emissions and operating costs as new technology is developed	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7 - Will directly support mitigating climate change 16 - Will use new technologies to reduce the use of natural resources	

LTP4		SEA Topics																							Comments
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23	
104	Publish CCTV images from traffic control cameras on the internet to help road users to plan their journeys	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Improvements to journey planning should reduce congestion and thus a positive effect on air quality 7 - Reduced congestion will result in reduced carbon emissions
105	Extend the sharing of camera images with additional District Councils	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Improvements to journey planning should reduce congestion and thus a positive effect on air quality 7 - Reduced congestion will result in reduced carbon emissions
106	Upgrade the capacity and quality of telecommunication facilities for traffic control CCTV cameras	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	18 - Upgrading of camera capacity and quality could
Public Rights of Way																									
107	The current target is to ensure that the percentage of rights of way open and available does not fall below an average of 71% over any four year period.	N/A	C ↑↑	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	
Winter Maintenance																									
108	Opportunities will be sought to continue to improve the winter maintenance service.	N/A	C ↑↑	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	
14. Transport and the Environment																									
Encouraging Sustainable Transport																									

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
109	Encouraging Sustainable Transport	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	S ↑	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	P ↑	N/A	6 - May lead to an increase in the use of sustainable forms of transport as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Improved cycling, walking and public transport facilities may encourage tourism 16, 19 - Will help promote cycling, walking and the use of sustainable forms of transport 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different services	
Alternative Fuels																										
110	Continue to look for opportunities to work with others to support the development of alternative fuels for road transport.	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7 - Directly supports mitigation of climate change 16 - Will reduce reliance on natural resources	
Reducing Energy Use																										
111	The continued adoption of more efficient technologies in street lighting, such as HID and LED lamps.	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design	
112	The development of a new street lighting policy on dimming and part-night lighting following trials in the county.	N/A	C ↑↑	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	2 - Reducing lighting during the night time may have a positive influence on ecology 7 - By using street lighting only when necessary electricity can be saved and thus carbon emissions reduced 10 - Dimming may also help to enhance the streetscape 16 - Reducing the amount of time that streets will result in natural resources being used more efficiently 17 - Promotes sustainable design 20 - Personal safety may be a concern should streets not be lit after dark	

LTP4		SEA Topics																					Comments			
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21			SEA 22	SEA 23
113	The use of low energy LED signal heads at new traffic signal installations, along with extra low voltage microprocessor controllers	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design	
114	Use of solar powered LED lights at rural bus stops	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design	
Air Quality																										
City of Lincoln																										
115	Reduction in the size of the PM10 AQMA to the Broadgate/ Monk Road/ Clasketgate/ Lindum Hill traffic signals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A - Air quality will not change as a result of changing the boundaries of the AQMA in areas that are already compliant	
South Kesteven (Grantham)																										
116	Consolidation of the existing AQMAs into a single area.	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Consolidating AQMA should improve air quality	
Noise																										
117	1Further assessments to ascertain the scale of noise issues, and if there are any reasonable actions to reduce noise levels in	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	22- Will directly support ensuring transport developments do not have a disproportionate effect on residents

LTP4		SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
	these areas.																									
Improving the Streetscape																										
118	Enhance Streetscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10 - Enhancing the streetscape will enhance the attractiveness of the urban landscape 13 - Improving the visual quality and character of the Lincolnshire should encourage tourism	
Reducing the Impact of Traffic																										
119	Reducing vehicles speeds through traffic calming and improved signing as appropriate.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Alleviate accidents in high incident areas	
120	The use of temporary and permanent reactive speed signs to encourage drivers to slow down.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	18 - Will increase road safety	
121	Routing HGVs away from communities (where a suitable alternative exists) through appropriate weight restrictions.	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↓	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	6 - Will improve local air quality 15 - May reduce access to major infrastructure 20 - Will help to reduce the number of accidents 22 - Will improve the lives of local residents	

Table 2: LTP3 Policies

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
3. Supporting the Economy																										
Bourne																										
2	Pursue opportunities to improve sustainable travel with funding through S106 agreements	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use sustainable methods of transport as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Sustainable forms of transport are more resource efficient than the car 19 - Will help to promote the use of sustainable forms of transport	
Gainsborough																										
3	Redevelopment of the Lea Road rail station	P ↑↑↑	C ↑↑	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	P ↓	P ↑	P ↓	P ↑	N/A	N/A	P ↑	P ↓	N/A	P ↑	N/A	N/A	P ↓	N/A	1 - Lea Marsh an SSSI is within 1km of the station 2 - May have cumulative impacts on biodiversity regionally 4 - The station is approximately 640m from the River Trent 5 - There is a 0.1% chance of the station being affected by by a major flood each year 6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 10 - Depending on design could have a positive or negative impact on streetscape 11 - Will improve access to the station and thus employment and educational opportunities 12 - Potential for landtake to facilitate	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									development 13 - An improved passenger capacity and station services may make Gainsborough more attractive for tourists 16 - Encourages the use of a more sustainable form of transport 17 -Provides the opportunity to promote sustainable design and construction techniques 19 - Will help to promote train use 22 - Depending on the design the redevelopment may disproportionately impact on local residents	
4	Upgrade/relocation of the bus station	P ↑	C ↑↑	P ↑	P ↑	P ↑	P ↓	S ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	N/A	1, 2, 3, 4, 5, 9, 10 - Potential positive or negative impacts on biodiversity, soil, water, vulnerability to flooding, heritage assets and streetscape depending on the design and location which are not specified 6 - Upgrading the bus station will lead to an increase in buses and possibly congestion in the local area and thus reduced air quality 7 - Encouraging people to travel by bus as opposed to by car will reduce national carbon emissions 11, 18 - Will improve access employment and educational opportunities and basic services 12 - Potential for landtake to facilitate development 13 - Improved transport links may increase tourism 16, 19 - Will help to encourage the use of sustainable transport 17 - Provides the opportunity to promote sustainable design and construction techniques 22 - Depending on the design and relocation may disproportionately impact on local residents	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
5	Improvements for cyclists including improved crossing facilities, new cycleways and parking	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	P ↓	S ↑	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	S ↑	P ↑	N/A	6 - May lead to an increase in cycle trips as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential for landtake to facilitate development 13 - Improved cycling facilities may encourage tourism 16, 19 - Will help promote cycle use 20 - Will help promote healthy lifestyles 21 - Opportunities for new green infrastructure 22 - Will help to provide access to different services	
6	Improvements at key junctions	P↑	C↑↑	P↑	P↑	P↑	S↑	N/A	N/A	P↑	P↑	N/A	P↑	N/A	P↑	P↑	N/A	P↑	N/A	N/A	N/A	N/A	P↑	N/A	1, 2, 3, 4, 5, 9, 10, 14 - Potential for negative impacts depending on the location and scale of the improvements 6 - Improvements should reduce congestion and thus improve local air quality 11, 15 - Improvements should improve access to education and employment opportunities and for major infrastructure 12 - Potential for landtake to facilitate development 17 - Provides the opportunity to promote sustainable design and construction techniques 22 - Depending on the location and scale may disproportionately impact on local residents	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
7	Extension of the IntoTown bus service coupled with bus priority measures and improved bus stop infrastructure and realtime information	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A		N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	N/A	6 - Improvements should encourage people to use the bus as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Journeys by bus are more resource efficient than by car 17 - Provides the opportunity to promote sustainable design and construction techniques 19 - Will help to promote bus use 22 - Will help to provide access to different services	
8	Roll out of travel plans for schools and local businesses, together with personalised travel planning	N/A	N/A	N/A	N/A	N/A	S ↑	C ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	P ↑	P ↑	N/A	P ↑	P ↑	P ↑	N/A	P ↑	P ↑	6 - Travel Plans should encourage people to use forms of transport other than the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 15, 18 - Will improve access to basic services, employment and educational opportunities and major infrastructure 16, 19 - Increases the use and availability of sustainable transport 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different service 23 - Will encourage community engagement in transport planning	
Sleaford																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
9	New road network associated with bringing the Bass Maltings back into use (planning permission approved)	N/A	C ↓	P ↓	P ↑	N/A	P ↓	P ↓↓	N/A	P ↑↑↑	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↑	P ↑	N/A	N/A	N/A	P ↓	N/A	2, 3 - Creation of new road infrastructure will have negative impacts on Lincolnshire's biodiversity and local soil quality. 4 - Runoff from the new highway has the potential to cause pollution to groundwater. 10, 14 - Creation of new road infrastructure has the potential for significant negative impacts on landscape and agricultural land if not appropriately designed and the impacts mitigated 4 - The Bass Maltings are approximately 400m away from New Ballast Pit (Pond) and 480m away from the River Slea 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. 7 - Could lead to an increase in CO2 emissions 9 - The Bass Maltings is a Grade II Listed Building and thus bringing it back into use will help to protect it 10 - Depending on the design the scheme may have positive or negative effects on the streetscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 13 - The incorporation of a museum will increase tourism 16 - Has the potential to use natural resources sustainably 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
10	Extension of the IntoTown bus service funded through S106 agreements associated with bringing the Bass Maltings back into use	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	P ↑	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	6 - Improvements should encourage people to use the bus as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Will help to encourage tourism by providing access to the Bass Maltings 16 - Journeys by bus are more resource efficient than by car 19 - Will help to promote bus use	
Spalding																										
11	Western Relief Road	N/A	C ↓↓	P ↓	P ↓	N/A	P ↑	P ↑	N/A	P ↑	P ↑	P ↑	P ↑	P ↑	P ↓	P ↑	P ↑	P ↑	P ↑	N/A	N/A	N/A	P ↓	N/A	2, 3, 4, 14 - Creation of new road infrastructure will have negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land 5 - The majority of Spalding and the land directly to the west has a 1% chance of flooding each year 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - Has the potential to have negative impacts on heritage assets and the urban and rural landscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 13 - Improving access to Spalding will encourage tourist travel into the area 16 - Has the potential to use natural resources more efficiently, eg. using	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									recycled aggregate. 17 - Has the potential for the promotion of sustainable design and construction 22 - Depending on the location the new road network may have a disproportionate impact on local residents	
Stamford																										
12	Sustainable Travel improvements achieved through S106 Agreements	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	P ↓	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential for landtake to facilitate development 16, 19 - Increases the use and availability of sustainable transport 20 - Will help to promote healthy lifestyles	
13	Completion of Community Travel Zones, including pedestrian crossings, footways and cycleways	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	S ↑	S ↑	P ↑	P ↓	N/A	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	S ↑	N/A	P ↑	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 9, 10 - Reducing traffic in the area will help to enhance and protect heritage assets and landscapes 11, 18 - Improved accessibility to facilities and amenities 12 - Potential for landtake to facilitate development 16, 19 - Increases the use and availability of sustainable transport 20 - Will help to promote healthy lifestyles 21 - Potential for new green infrastructure 23 - Will engage with the community to establish Community Travel Zones	
4. Delivering Accessibility																										
Public Transport: Bus Services																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
14	Continued expansion of Interconnect, CallConnect and IntoTown	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Interconnect will help to encourage local tourism 16, 19 - Increases the use and availability of sustainable transport	
Community Transport																										
15	Pilot of a vehicle brokerage scheme	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Will lead to a reduction in the overall number of vehicles on the road, improving local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 16 - Promotes a more efficient use of natural resources	
Walking and Cycling																										
16	Look at ways to improve facilities for pedestrians and cyclists and encourage use	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	P ↓	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential for landtake to facilitate development 15, 19 - Increases the use and availability of sustainable transport 20 - Promotes healthy lifestyles	
Rail																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
17	Direct link from Lincoln to London	N/A	N/A	N/A	N/A	N/A	S ↑↑↑	S ↑↑↑	N/A	N/A	N/A	P↑↑↑	N/A	P↑↑↑	N/A	N/A	P↑↑↑	N/A	N/A	P↑↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - An improved passenger capacity and direct link to the London may make Lincolnshire more attractive for tourists 16, 19 - Increases the use and availability of sustainable transport	
18	Improving accessibility of, and facilities at railway stations	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	P ↑	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 12 - Potential for landtake to facilitate development 16, 19 - Encourages the use of sustainable transport 17 - Has the potential to promote sustainable design and construction techniques	
19	Engaging local communities with the railway	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	S ↑↑	N/A	P ↑	P ↑↑	N/A	N/A	N/A	P ↑↑	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to employment and educational opportunities and basic services 16, 19 - Encourages the use of sustainable transport 23 - Engagement with the local community	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
20	Maximising the benefits from Network Rails plans to upgrade the Peterborough - Spalding - Lincoln - Doncaster line, to alleviate congestion on the East Coast Main Line.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Improved access for both freight and people to major infrastructure and educational and employment facilities 13 - Improved services may encourage tourism 16 - Encourage people to use the train 19 - Encourages the use of sustainable transport	
Reducing the Need to Travel																										
21	Making better use of existing facilities	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	6 - Will reduce the need to travel and thus local air pollution 7 - Will also help to reduce carbon emissions 18 - Will improve access to local services through the use of existing facilities	
22	Increasing rural internet connectivity	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	S ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	P ↑↑	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7, 8 - Enabling people to work from home and shop online reduces the need to travel and thus will reduce CO2 emissions but also potentially enable people to adapt to climate change 11 - Improves access to facilities and employment opportunities 18 - Helps to provide equal access to basic services 22 - Will help to prevent social inequalities	
5. Safer Roads																										
Engineering																										
23	Local Safety Schemes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A		N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
24	Major Highway Improvements	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑↑	N/A	N/A	N/A	P ↑↑	P ↓	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	6 - Reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Will improve access to major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Will improve access and road safety for local residents
25	Improvement of Skidding Resistance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
26	Minor Highway Improvements and Maintenance Schemes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑	N/A	N/A	N/A	12 - Potential for landtake to facilitate development 19 - Will improve access to sustainable transport 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network and help to improve health by improving facilities for cyclists and pedestrians
Education, Training and Publicity																										
27	Bikewise/Bikeabiity	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	N/A	P↑↑	P↑↑	P↑↑	N/A	P↑↑	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of sustainable transport 18 - Improves safe access to basic services 20 - Improve awareness of safety issues associated with cycling reducing the number of accidents and injuries sustained on the transport network 22 - Providing training will help enable

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									cyclists to stay safe on the roads	
28	Pedestrian Training	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	N/A	P ↑↑	N/A	6 - May lead to an increase in walking as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of walking 18 - Improves safe access to basic services 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Providing training will help enable pedestrians to stay safe on the roads	
29	School Safety Zones	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	P ↓	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	N/A	P ↑↑	P ↑↑	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Improves safe access to schools 12 - Potential for landtake to facilitate development 16, 19 - Encourages and increases access to sustainable transport 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Will help to keep school children safe 23 - Engagement with the community to promote safety around schools	
30	2 Fast 2 Soon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the	

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																								transport network		
31	Bike Safe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
32	Performance Plus	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
33	Driver Improvement Courses	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
34	Safe Young Drivers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
35	Speed Awareness Course	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
36	Drink Drive Rehabilitation Courses	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
37	Employers Charter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
38	Driver Information Programme	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
39	Community Engagement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	P ↑↑	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 23 - Community engagement throughout the year from major shows to parish events	
Enforcement and Speed Management																										
40	Safety Cameras	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	
41	Interactive Signs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
42	Parish Link	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
Rural Demonstration Project																										
43	Implement a Rural Demonstration Project	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	2 - Verge maintenance may have benefits for biodiversity 20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
6. Tackling Congestion - General																										
Traffic Management Act 2004																										
44	Improving the forward planning and co-ordination of street works and works programmes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	22 - Well managed works help to minimise the impact on local residents
45	Identifying congestion hotspots and implement improvements to improve network performance	N/A	N/A	N/A	N/A	N/A	P↑↑	P↑↑↑	N/A	N/A	N/A	P↑↑	P↑	N/A	N/A	P↑↑	N/A	N/A	N/A	N/A	N/A	S ↑↑	P↑	N/A	N/A	6 - Reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Will improve access to major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 20 - Reducing congestion will improve local air quality and thus improve health 21 - Potential for creation and loss of green infrastructure/ open space for development
46	Work with local business and developers to improve local transport and reduce congestion	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	N/A	P ↑↑	6 - Reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Will improve access to major infrastructure, employment and educational opportunities 20 - Reducing congestion will improve local air quality and thus improve health 23 - Engagement with local businesses to reduce congestion

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
47	Working with bus companies to improve the reliability of bus services	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	S ↑↑	S ↑↑	N/A	N/A	N/A	N/A	6 - Will encourage people to travel by bus rather than car thus reducing local air pollution 7 - Will also help to reduces carbon emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Encouraging people to use the bus service would encourage a more sustainable use of natural resources 19 - Increased reliability should improve the accessibility of sustainable transport
48	Complete the speed limit review	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network
49	Keeping traffic models for the larger urban areas up to date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A - Assumption that any specific transport development related scheme would be subject to robust EIA
50	Making better use of Intelligent Transport Systems	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	S ↑↑	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Improving traffic flows by reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Reducing congestion will improve access to facilities and amenities 17 - Provides the opportunity to promote sustainable design and construction techniques
51	Implementing Civil Parking Enforcement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Public Transport																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
52	Continue to rollout fully accessible IntoTown services	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Interconnect will help to encourage local tourism 16, 19 - Increases the use and availability of sustainable transport	
53	New town service in Louth called the 'Louth Nipper' from April 2010	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Interconnect will help to encourage local tourism 16, 19 - Increases the use and availability of sustainable transport	
54	Continue to improve access to timetable information	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	S ↑↑	P ↑↑	N/A	N/A	S ↑↑	N/A	11, 18 - Improving access to timetable information improves an individuals opportunity to use public transport 17 - Has the opportunity to promote sustainable design 19 - Improved access to sustainable transport 22 - Provides residents without a car have access to transport	
Walking and Cycling																										

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
55	Continue to improve facilities for pedestrians and cyclists	N/A	N/A	N/A	N/A	N/A	S↑↑	S↑↑↑	N/A	N/A	N/A	P↑↑	N/A	N/A	N/A	N/A	P↑↑	N/A	P↑↑	P↑↑	P↑↑	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16, 19 - Increases the use and availability of sustainable transport 20 - Promotes healthy lifestyles	
Parking																										
56	Potential for collaboration with district councils to make more cost effective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Intelligent Transport Systems																										
57	Expansion of the use of intelligent transport systems	N/A	N/A	N/A	N/A	N/A	P↑↑	P↑↑↑	N/A	N/A	N/A	S↑↑	N/A	N/A	N/A	S↑↑	N/A	P↑↑	N/A	N/A	N/A	N/A	N/A	N/A	6 - Improving traffic flows by reducing congestion will lead to an improvement in local air quality 7 - Improved traffic flows also reduce CO2 emissions 11, 15 - Reducing congestion will improve access to facilities and amenities 17 - Provides the opportunity to promote sustainable design and construction techniques	
7. Tackling Congestion - Lincoln																										
Quality Bus Corridors																										
58	Continued investigations into quality bus corridors along 4 key routes	N/A	N/A	N/A	N/A	N/A	S↑	S↑	N/A	N/A	N/A	S↑	N/A	N/A	N/A	N/A	N/A	N/A	S↑	P↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 19 – Increases the accessibility of sustainable transport	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
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Park and Ride																										
59	Development of a Park and Ride at the A46/A57 junction	N/A	C ↓	P ↓	P ↓	P ↑	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	S ↑	P ↓	N/A	P ↑	P ↑	N/A	P ↑	N/A	P ↑	P ↓	N/A	2, 3, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, landscape and agricultural land if not appropriately designed and the impacts mitigated 4 - The junction is 320m away from a river and 700m away from a canal 5 - The junction is in an area with a 1% chance of flooding each year 6 - Will reduce the number of cars driving into the centre of Lincoln and improve local air quality. However, it will reduce air quality for local residents. 7 - Reduced car trips will reduce CO2 emissions 9 - There is a scheduled monument, Skellingthorpe duck decoy, within 2km of the junction 10 - Depending on the design there could be an impact on local landscape 11 - Park and ride will help make the town centre more accessible for education and employment opportunities 12 - Potential for landtake to facilitate development 13 - Improving access into the town centre may encourage tourism 16, 19 - A park and ride facility is more resource efficient and sustainable than multiple individual car journeys 17 - Has the opportunity from promoting sustainable design and construction 21 - Potential for creation and loss of green infrastructure/ open space for development 22 - The park and ride facility has the potential to disproportionately affect residents	
Buses																										

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
60	Improvements to bus stops with raised kerbs and timetable information	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	N/A	P ↑	N/A	11 - Will improve information and therefore access to basic services, employment and educational opportunities 18, 19, 20, 22 - Increased access to people with disabilities	
61	Realtime information provided available onstreet, online or via SMS text messaging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	S ↑↑	P ↑↑	N/A	N/A	S ↑↑	N/A	11, 18 - Improving access to timetable information improves an individuals opportunity to use public transport 17 - Has the opportunity to promote sustainable design 19 - Improved access to sustainable transport 22 - Provides residents without a car have access to transport	
62	Bus priority provided at key signalised junctions for those buses running late	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11 - Will provide a more reliable journey time to access employment and educational	
Rail																										
63	Creation of a 2 hour direct service from Lincoln to London	N/A	N/A	N/A	N/A	N/A	S ↑↑↑	S ↑↑↑	N/A	N/A	N/A	P↑↑↑	N/A	P↑↑↑	N/A	N/A	P↑↑↑	N/A	N/A	P↑↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - An improved passenger capacity and direct link to the London may make Lincolnshire more attractive for tourists 16, 19 - Increases the use and availability of sustainable transport	
64	Improved services on the Nottingham-Newark-Lincoln Line	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Improved access for both freight and people to educational and employment facilities 13 - Improved services may encourage tourism	

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		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									16 - Encourage people to use the train 19 - Encourages the use of sustainable transport	
65	Improvements to the Lincoln-Doncaster Line	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	S ↑↑	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	S ↑↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Improved access for both freight and people to educational and employment facilities 13 - Improved services may encourage tourism 16 - Encourage people to use the train 19 - Encourages the use of sustainable transport	
Public Transport Interchange																										
66	New bus station adjacent to the railway station as part of the Lindongate retail development	N/A	N/A	N/A	P ↑	N/A	P ↑	S ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↑	N/A	N/A	4 - The site is approximately 150m away from a river 6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 9 - There are 31 SM and 1 Registered PAG within 2,000m of the proposed location of the new bus station, though there is already an existing bus station in the area 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential for landtake to facilitate development 16 - Presents the opportunity to use natural resources more efficiently 17 - Provides the opportunity to promote sustainable design and construction techniques 19 - Increase in the availability of sustainable transport 21 - Potential for creation and loss of green	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									infrastructure/ open space for development	
East-West Link																										
67	East-West Link	N/A	C ↓	P ↓	P ↓	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↓	P ↑	P ↑	N/A	N/A	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↓	N/A	2, 3, 4, 9, 10 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, water, landscape and heritage assets if not appropriately designed and the impacts mitigated 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 11, 15, 18 - Will improve access to basic infrastructure, major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 16 - Potential to use recycled materials during construction 17 - Has the potential for the promotion of sustainable design and construction 21 - Potential for creation and loss of green infrastructure/ open space for development 22 - Depending on the location may disproportionately impact on local residents	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
68	Pedestrianisation of High Street between Wigford Way and Tentercroft Street	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	P ↑	P ↑	N/A	N/A	P ↑	N/A	N/A	N/A	P ↓	P ↑	N/A	P ↑	N/A	N/A	N/A	6 - Reducing the number of cars will improve local air quality 7 - Pedestrianising may also help to reduce carbon emissions 9 - Pedestrianising the town centre may be beneficial for the protection of the numerous heritage assets in the vicinity, 30 SMs and 2 Registered PAGs 10 - Pedestrianisation may also help to improve the streetscape 13 - May make the town more attractive for tourists 17 - Opportunity to use recycled materials 18 - Will improve access to basic services 20 - Will help to promote healthy lifestyles	
69	Bus priority measures to improve access to the proposed Public Transport Interchange at Lindongate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11 - Will improve access to employment and educational opportunities	
Eastern Bypass																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
70	Construction of the Eastern Bybass	N/A	C ↓	P ↓	P ↓	P ↑	P ↑	P ↑	N/A	P ↑	P ↑	P ↑	P ↑	P ↑	P ↓	P ↑	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↓	N/A	2, 3, 4, 5, 14 - Creation of new road infrastructure will have negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9, 10 - Has the potential to have negative impacts on heritage assets and the urban and rural landscape 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 13 - Improving access to Spalding will encourage tourist travel into the area 16 - Has the potential to use natural resources more efficiently, eg. using recycled aggregate. 17 - Has the potential for the promotion of sustainable design and construction 21 - Potential for creation and loss of green infrastructure/ open space for development 22 - Depending on the location the new road network may have a disproportionate impact on local residents	
Southern Bypass																										

Policy No.	LTP3	SEA Topics																							Comments
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23	
71	Completion of the full orbital relief road	N/A	C ↓	P ↓	P ↓	N/A	P ↑	P ↑↑↑	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↓	P ↑	N/A	P ↑	N/A	N/A	N/A	P ↑	P ↓	N/A	2, 3, 4, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil and water quality if not appropriately designed and the impacts mitigated 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9 - Hall Close, a SM, is situated within 2,000m of the proposed route 10 - New development could impact on the local landscape 11, 15 - Will improve access to major infrastructure, employment and educational opportunities 12 - Potential for land take to facilitate development 17 - Has the potential for the promotion of sustainable design and construction 21 - Potential for creation and loss of green infrastructure/ open space for development 22 - Depending on the location the new road network may have a disproportionate impact on local residents
8 - Tackling Congestion - Grantham																									
Public Transport																									
72	Continued upgrades to the bus service with new low floor buses and the raising of kerbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	N/A	P ↑	N/A	11, 18 - Will improve access to basic services and employment and educational opportunities 19 - Improvements will make the bus service and thus sustainable transport more accessible 22 - Will make the bus more accessible for people with disabilities

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
73	Improve pedestrian access to the Train Station by regenerating the area adjacent to the railway	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	P ↑	P ↑	N/A	N/A	N/A	N/A	P ↑	P ↓	P ↑	P ↑	N/A	N/A	N/A	N/A	4 - The station is approximately 560m away from a river 6 - May encourage people to walk to the station rather than drive 7 - Reduced car trips will reduce carbon emissions 10 - Regeneration will improve the streetscape 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Will encourage people to walk rather than use their cars 17 - Promotes sustainable transport design 19 - Improvements will make the train service and thus sustainable transport more accessible	
74	Improve integration of bus and rail	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	P ↑	N/A	N/A	P ↑	P ↑	N/A	P ↑	N/A	N/A	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11 - Will improve access to employment and educational opportunities 13 - Improving the integration of services may make Grantham more attractive for tourists 16, 19 - Increases the use and availability of sustainable transport 17 - Provides the opportunity to promote sustainable design and construction techniques	
Town Centre Improvements																										
75	Continued improvements to Market Place and Westgate - rationalise parking, improve facilities for pedestrians and include public art	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	9 - May improve the setting 10 - Public art may improve the streetscape 13 - Improving the streetscape and improving pedestrian and parking 20 - Improving facilities for pedestrians may encourage more people to walk, promoting healthier lifestyles
Bridge Strikes																										

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
76	Implement an area wide HGV ban	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Will improve local air quality 15 - May improve accessibility by preventing bridge strikes	
East-West Relief Road																										
77	The first phase of the relief road from the A1 to the B1174 to be constructed by a developer with a new all movement junction on the A1. This includes a viaduct over the railway.	P ↑↑↑	P ↓↓	P ↓	P ↓	N/A	P ↑	P ↓↓↓	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↓	P ↑	N/A	P ↑	N/A	N/A	N/A	P ↑	P ↑	N/A	1 - Woodnook Valley an SSSI, Harlaxton Wood an Ancient Woodland, Trent Valley and Rises and Lincolnshire and Rutland Limestone both Natural Areas, are all within 2000m of the proposed scheme route 2, 3, 10, 13 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, landscape, heritage assets and agricultural land if not appropriately designed and the impacts mitigated 4 - The scheme is approximately 500m from a river 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 9 - Harlaxton Manor a Registered PAG and Bowl Barrow a SM are within 2000m of the proposed scheme route 11, 15, 18 - Will improve access to basic services, major infrastructure, employment and educational opportunities 12 - Potential for landtake to facilitate development 17 - Provides the opportunity to promote sustainable design and construction techniques 21 - Potential for creation and loss of green infrastructure/ open space for development	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									22 - Construction of the road may adversely affect local residents	
9. Tackling Congestion - Boston																										
Public Transport																										
78	Ongoing enhancements to public transport with a continuation of the Boston IntoTown bus service, real time information and improvements to the bus station in terms of accessibility, facilities and pedestrian linkages.	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	P ↑	P ⇅	P ↑	P ↑	P ↑	N/A	P ↑	N/A	6 - Improvements should encourage people to use the bus as opposed to the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 16 - Journeys by bus are more resource efficient than by car 17 - Provides the opportunity to promote sustainable design and construction techniques 19 - Will help to promote bus use 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different services	
Walking and Cycling																										
79	Continued walking and cycling improvements	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	P ⇅	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	P ⇅	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential for landtake to facilitate development 16, 19 - Increases the use and availability of sustainable transport 20 - Promotes healthy lifestyles 21 - Potential for creation and loss of green infrastructure/ open space for development	
Car Parking																										

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
80	Car parking and signing strategy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10 - May help to reduce street clutter	
Traffic Management																										
81	Continued traffic management improvements including updating existing facilities, banning some turning movements and introducing one way systems	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	6 - Will improve local air quality 11, 18 - Will improve access to basic services, employment and educational opportunities
Proposals for the LTP3 Period																										
82	Market Place Enhancement Scheme - improving the streetscape, refurbishment of the footways and making the area more pedestrian friendly by removing a large amount of the parking	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	P ↑	N/A	S ↑	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	P ↑	S ↑	N/A	N/A	9, 10 - Plans to improve the streetscape will enhance the urban landscape and setting 12 - Potential to increase green infrastructure 13 - Enhancing the streetscape and improving facilities for pedestrians may encourage tourism 20 - Will help to promote healthy lifestyles 21 - 12 - Potential to increase green infrastructure

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
83	Distributor road to the west of Boston	P ↑↑↑	C ↓↓	P ↓	P ↓	P ↓	P ↓	P ↓↓↓	N/A	P ↑	P ↑	P ↑	P ↑	N/A	P ↓	N/A	P ↑	P ↑	P ↑	N/A	N/A	P ↑	P ↓	N/A	1, 2, 3, 4, 9, 10, 14 - Creation of new road infrastructure has the potential for significant negative impacts on biodiversity, soil, water, landscape, heritage assets and agricultural land if not appropriately designed and the impacts mitigated 5 - The land immediately to the west of Boston has a 1% chance of flooding each year 6 - Creating new road infrastructure may lead to an increase in the number of cars in the area reducing local air quality. However, it may also help to reduce congestion and thus improve local air quality 7 - Could lead to a reduction or increase in CO2 emissions 11, 18 - Will improve access to basic services, employment and educational opportunities 12 - Potential for landtake to facilitate development 16 - Provides the opportunity to use natural resources more efficiently for instance, recycled material for the road surface 17 - Provides the opportunity to promote sustainable design and construction techniques 21 - Potential for creation and loss of green infrastructure/ open space for development 22 - The scheme may disproportionately affect local residents	
10. Better Air Quality																										
City of Lincoln																										
84	Reduction in the size of the NO2 AQMA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A - Air quality will not change as a result of changing the boundaries of the AQMA in areas that are already compliant	

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health								
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23			
85	Reduction in the size of the PM10 AQMA to the Broadgate/Monk Road/Clasketgate/Lindum Hill traffic signals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A - Air quality will not change as a result of changing the boundaries of the AQMA in areas that are already compliant
South Kesteven																											
86	Declaration of an NO2 AQMA	N/A	N/A	N/A	N/A	N/A	P ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	S ↑	N/A	6 - Introducing an AQMA should result in reduced NO2 levels 20, 22 - Improving local air quality will have health related benefits for local residents	
11. Reducing Carbon																											
Carbon Reduction Transport Initiatives																											
87	Encouraging sustainable travel	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	P ↑	N/A	S ↑	N/A	N/A	P ↑	N/A	P ↑	P ↑	P ↑	N/A	P ↑	N/A	6 - May lead to an increase in the use of sustainable forms of transport as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 13 - Improved cycling, walking and public transport facilities may encourage tourism 16, 19 - Will help promote cycling, walking and the use of sustainable forms of transport 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different services		
Alternative Fuels																											
88	Continue to work with partners to establish committed demand for new or retro fitted dual fuel vehicles sufficient to justify investment in fuelling infrastructure.	N/A	N/A	N/A	N/A	N/A	S ↑	S ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S ↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Using alternative fuels such as biogas will help to reduce emissions of PM10 and NOX and thus improve local air quality 7 - Using alternative fuels will reduce the need for burning fossil fuels 16 - A more sustainable use of natural resources	

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
89	Continue working with partners to establish interim fuelling infrastructure, including workshop with food manufacturers to explore opportunities.	N/A	N/A	N/A	N/A	N/A	S↑	S↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Using alternative fuels such as biogas will help to reduce emissions of PM10 and NOX and thus improve local air quality 7 - Using alternative fuels will reduce the need for burning fossil fuels 16 - A more sustainable use of natural resources	
90	Work in partnership with others to establish a county wide fuelling infrastructure potentially open to all.	N/A	N/A	N/A	N/A	N/A	S↑	S↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Using alternative fuels such as biogas will help to reduce emissions of PM10 and NOX and thus improve local air quality 7 - Using alternative fuels will reduce the need for burning fossil fuels 16 - A more sustainable use of natural resources	
91	Possible set up a grant scheme for coach and bus operators - accessing the fuel supply and paying a premium.	N/A	N/A	N/A	N/A	N/A	S↑	S↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Using alternative fuels such as biogas will help to reduce emissions of PM10 and NOX and thus improve local air quality 7 - Using alternative fuels will reduce the need for burning fossil fuels 16 - A more sustainable use of natural resources	
92	Over time through contract specification and option tendering to start to favour lower emission alternatives.	N/A	N/A	N/A	N/A	N/A	S↑	S↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6 - Using alternative fuels such as biogas will help to reduce emissions of PM10 and NOX and thus improve local air quality 7 - Using alternative fuels will reduce the need for burning fossil fuels 16 - A more sustainable use of natural resources	
Reducing Energy Use																										
93	Use of solar powered LED lights at rural bus stops	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	P↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design	
94	The use of low energy LED signal heads at new traffic signal installations, along with extra low voltage microprocessor controllers	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	P↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design	

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		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape	Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23	
95	The continued adoption of more efficient technologies in street lighting.	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	7 - Uses a renewable form of energy 16 - Promotes the use of natural resources in a more sustainable manner 17 - Sustainable design
96	New street lighting policy to encourage dimming and part-night lighting	N/A	C ↑↑	N/A	N/A	N/A	N/A	P ↑↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	P ↑↑	P ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	2 - Reducing lighting during the night time may have a positive influence on ecology 7 - By using street lighting only when necessary electricity can be saved and thus carbon emissions reduced 10 - Dimming may also help to enhance the streetscape 16 - Reducing the amount of time that streets will result in natural resources being used more efficiently 17 - Promotes sustainable design 20 - Personal safety may be a concern should streets not be lit after dark
12. Other Quality of Life Issues																									
Quality of Public Spaces and Better Streetscapes																									
97	Enhance streetscape	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P ↑↑	N/A	N/A	P ↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10 - Enhancing the streetscape will enhance the attractiveness of the urban landscape 13 - Improving the visual quality and character of the Lincolnshire should encourage tourism
Healthy Communities																									
98	Improved facilities for pedestrians and cyclists through the Community Travel Zone, Rural Priority Initiative and Rights of Way Improvement Plan	N/A	N/A	N/A	N/A	N/A	S ↑↑	S ↑↑↑	N/A	N/A	N/A	P ↑↑	S ↑↑	N/A	N/A	N/A	P ↑↑	N/A	P ↑↑	P ↑↑	P ↑↑	S ↑↑	N/A	N/A	6 - May lead to an increase in sustainable travel as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 18 - Will improve access to basic services and employment and educational opportunities 12 - Potential to increase green infrastructure 16, 19 - Increases the use and availability of sustainable transport 20 - Promotes healthy lifestyles 21 - Potential to increase access to green

Policy No.	LTP3	SEA Topics																							Comments	
		Biodiversity, Flora and Fauna		Soil	Water		Air	Climate		Cultural Heritage & Landscape		Material Assets							Population & Human Health							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									infrastructure	
99	Continued work under the 'Healthy Schools' initiative as part of the development of school travel plans	N/A	N/A	N/A	N/A	N/A	S↑	C↑↑↑	N/A	N/A	N/A	P↑	N/A	N/A	N/A	P↑	P↑	N/A	P↑	P↑	P↑	N/A	P↑	P↑	6 - Travel Plans should encourage people to use forms of transport other than the car and thus improve local air quality 7 - Reduced car trips will also reduce CO2 emissions 11, 15, 18 - Will improve access to basic services, employment and educational opportunities and major infrastructure 16, 19 - Increases the use and availability of sustainable transport 20 - Will help promote healthy lifestyles 22 - Will help to provide access to different service 23 - Will encourage community engagement in transport planning	
100	Continuation of the Choose Active Travel, Choose Health' initiative	N/A	N/A	N/A	N/A	N/A	S↑↑	S↑↑↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	N/A	N/A	P↑↑	P↑↑	N/A	N/A	N/A	6 - May lead to an increase in walking and cycling as opposed to car trips and thus improved local air quality 7 - Reduced car trips will also reduce CO2 emissions 16, 19 - Encourages the use of healthy, sustainable transport such as cycling and walking 20 - Should lead to an improvement in health	
Reducing the Impact of Traffic																										
101	Continued speed management measures including traffic calming and improved signing carried out as part of the Community Travel Zones and Rural Priority Initiatives	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↑↑	N/A	P↑↑	N/A	20 - Should lead to reduction in the number of accidents and injuries sustained on the transport network 22 - Alleviate accidents in high incident areas	
102	Routing of HGVs away from communities by weight restrictions	N/A	N/A	N/A	N/A	N/A	P↑	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	P↓	N/A	N/A	N/A	N/A	P↑	N/A	P↑	N/A	6 - Will improve local air quality 14 - May reduce access to major infrastructure 20 - Will help to reduce the number of	

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		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9	SEA 10	SEA 11	SEA 12	SEA 13	SEA 14	SEA 15	SEA 16	SEA 17	SEA 18	SEA 19	SEA 20	SEA 21	SEA 22	SEA 23		
																									accidents 22 - Will improve the lives of local residents	