

# North East Lincolnshire Local Transport Plan



Highway Strategy

2016

**engie**



Working in Partnership



# Executive Summary

---

North East Lincolnshire Council's 'Highway Strategy' has been created to form a medium-to-long term transport planning platform, creating a foresight to enabling development and improving existing conditions on our local highway network. North East Lincolnshire Council is promoting this document in order to excel in its role as the Highway Authority. This document sits underneath the Local Transport Plan overarching strategy.

North East Lincolnshire Council's Local Transport Plan (LTP) has been developed to support sustainable growth and the economic development aspirations of the Council. The plan is not a "bidding" document and there is no direct link between it and the funds being made available to the Council by Central Government. The Local Transport Plan does however form the high level strategy through which highways and transport networks will be improved and managed. It forms the foundation through which bids for additional funding are developed and provides a basis for linking physical regeneration and development to the provision of appropriate transport and access requirements.

Following extensive consultation with local stakeholders and transport operators, the Council have identified the following as key priorities for transport:

- Enable sustainable growth through effective transport provision.
- Improve journey times and reliability by reducing congestion.
- Support regeneration and employment by connecting people to education, training and jobs.
- Enable disadvantaged groups or people living in disadvantaged areas to connect with employment, health, social and leisure opportunities.
- Improve the health of individuals by encouraging and enabling more physically active travel modes.
- Provide safe access and reduce the risk of loss, death or injury from transport collisions or crime.
- Improve the journey experience on the local transport network.
- Ensuring that transport projects contribute to environmental excellence, including managing air quality and reducing transport related greenhouse gas emissions.

In delivering schemes and initiatives that deliver against these priorities, the LTP supports regeneration and economic growth by providing and maintaining the infrastructure and networks needed for the efficient and effective movement of goods and people vital to long term sustainable economic growth. The plan also identifies road safety, traffic, public transport and active travel projects that help improve accessibility, reduce road traffic collisions, encourage healthy travel modes and enhance our local natural and built environments.

North East Lincolnshire currently suffers from peak hour traffic congestion, yet has the potential, drive and ambition to grow further. Creation of this document has enabled us to assess where pressures exist on our local roads, both at present and in the future, and start to look at innovative, forward-thinking solutions.

As time progresses, priorities change, and so will the aspirations for growth in specific areas. We have recently seen large developments approved on our doorstep, such as the ABLE UK industrial development in Killingholme, significant portside growth proposals via the South Humber Industrial Investment Programme (SHIIP) and the creation of Scartho Top. New developments such as these have the potential to shape North East Lincolnshire for generations to come, and should be supported by appropriate infrastructure to ensure that potential is realised. This will require the 'Highway Strategy' to be regularly updated.

Transport issues affect all of our residents, from trips to the school to lorries at our ports, from driving to work to walking to the shops. We cover a wide range of topics under the headline of 'transport', from the obvious items such as congestion improvements, safety and enabling new housing sites, through to more subtle aspects including air quality, severance and job creation. Each of these aspects are considered herein to inform a comparative basis for potential schemes to enable a look ahead to provide a high-quality transport network suitable for everyone.

# Contents

---

- 1 Introduction
- 2 Policy Review
- 3 Existing Highway Network
- 4 Planning for Growth
- 5 Demand Generation and the Planning Process for Highways
- 6 Prioritisation Framework
- 7 Option Generation: Junctions
- 8 Option Generation: Links
- 9 Governance, Processes and External Factors
- 10 Conclusions and Recommendations
- 11 Glossary of Terms

# Figures and Tables

---

## Figures

Figure 1.1	Hierarchy of Strategies within 'The Transport Plan' of NELC 2016 Constitution
Figure 2.1	Local Enterprise Partnerships
Figure 2.2	LTP Alignment to Council Plan
Figure 3.1	DfT National Average Speed Comparison
Figure 3.2	'Statistical Neighbour' Network Speed Comparison
Figure 3.3	Road Hierarchy in North East Lincolnshire
Figure 3.4	Highways England Network
Figure 3.5	North East Lincolnshire Traffic Flows 0700 – 1900
Figure 3.6	Heavy Goods Vehicle (HGV) Route Usage in North East Lincolnshire
Figure 3.7	North East Lincolnshire Developed Area Over Time
Figure 3.8	Plan of A18 – A180 Link Road
Figure 3.9	Percentage of Economically Active Age Residents with Access to a Car or Van
Figure 3.10	Car Ownership Comparison between Great Britain and North East Lincolnshire
Figure 3.11	Historic Car Ownership
Figure 3.12	Current Junction Performance in North East Lincolnshire
Figure 4.1	Housing Growth Sites in new Local Plan
Figure 4.2	Employment Allocations on South Humber Bank in New Local Plan
Figure 5.1	Traffic Growth Predictions in the Local and National Context
Figure 5.2	Increases of Flow and Associated Junction Type
Figure 5.3	DMRB Highway Link Standards by Flow
Figure 5.4	DMRB Highway Link Standards by Type
Figure 8.1	New Local Plan - Journey Time Impact of Construction
Figure 8.2	Journey Time Savings Comparison for Potential New Highway Links
Figure 8.3	South Humber Bank Link Road
Figure 8.4	A18 Area of Concern
Figure 9.1	High Level Governance Structure for Major Highway Projects

## Tables

Table 2.1	Local Plan (2016) Strategies
Table 2.2	Relationship between LTP Challenges and Local Plan Strategic Objectives
Table 3.1	North East Lincolnshire Major Traffic Signal Junction Performance
Table 3.2	North East Lincolnshire Major Roundabout Performance
Table 6.1	Summary Scheme Appraisal Table
Table 6.2	Assessment Weighting Proportions
Table 6.3	Scoring Criteria Weightings
Table 6.4	Policy Criteria Connections
Table 7.1	Junction Prioritisation Matrix
Table 8.1	Link Road Prioritisation Matrix

# I. Introduction

---

## 1.1 Introduction

North East Lincolnshire Council (NELC) is promoting this document to excel in its role as the Highway Authority and assist in the delivery of growth proposals in the emerging Local Plan. The Highway Authority has a responsibility to maintain, manage and repair the highway, and we aim to exceed our statutory function and improve the highway network and seek innovative solutions to existing and foreseeable problems. In its role as the Highway Authority, NELC maintains roads, cycle paths, footways and Public Rights of Way among other statutory responsibilities.

North East Lincolnshire Council produced an updated Constitution in January 2016. This contains a series of 'constitutional documents', which are either statutory or considered of particular significance by elected members. The Policy Framework from North East Lincolnshire Council's January 2016 constitution includes:

- The Council Plan
- The Local Plan
- The Development and Growth Plan
- The Transport Plan
- The Safer and Stronger Communities Partnership Plan
- The Health and Wellbeing Strategy

This document has been constructed to sit within the Local Transport Plan (LTP) group of documents, focussing on major schemes to address key transport issues in North East Lincolnshire. The 'Highways Strategy' fits into the hierarchy of the decision making process as indicated below.



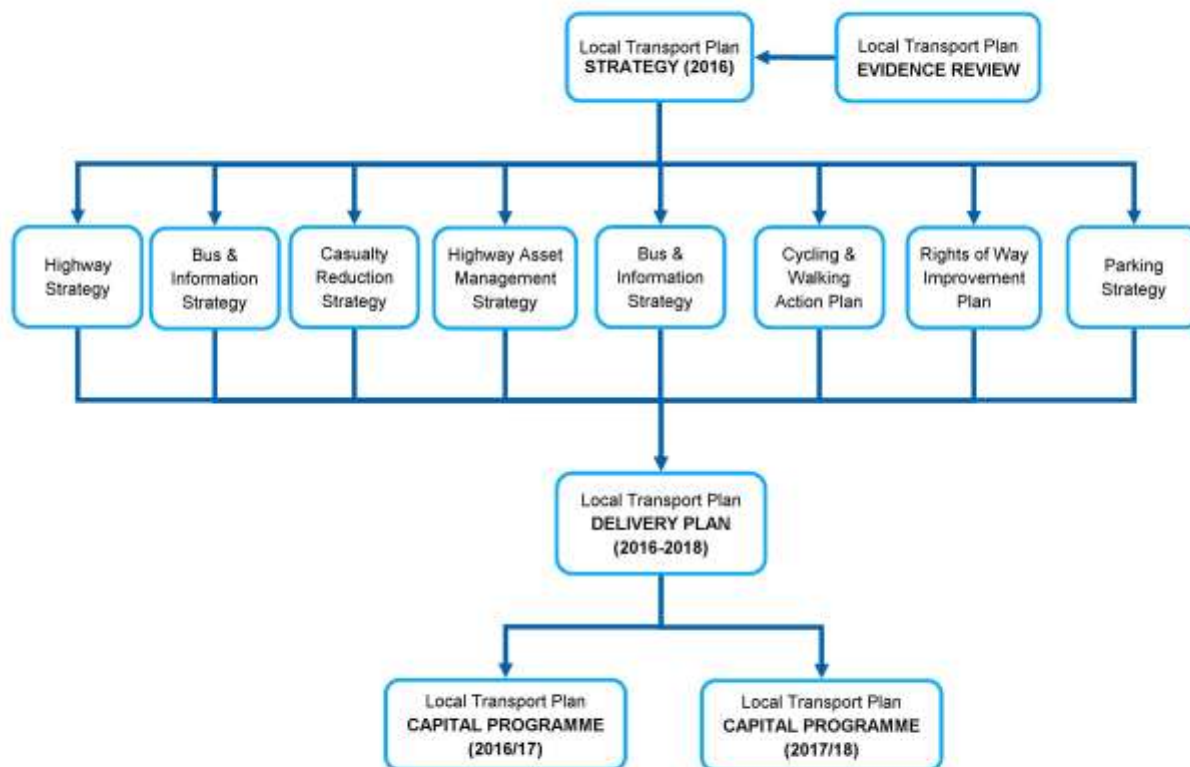


Figure 1.1 – Hierarchy of Strategies within ‘The Transport Plan’ of NELC 2016 Constitution

Schemes are suggested to support factors such as housing and economic growth, to improve safety, congestion and air quality. This document sets out to improve the highway network over the medium to long term by shaping and realigning infrastructure to enable growth. It is anticipated that NELC would look to the highway network to improve longer term conditions for residents, stakeholders and potential developers, adopting a longer term transport strategy. The Highways Strategy will sit in a ‘suite’ of other similar documents which will also promote measures to encourage cycling, walking and public transport. Sustainable transport access is key to delivering the growth proposals within the emerging Local Plan. Modal shift away from the private car, and a reduction in single occupancy car journeys, are vital elements of the balance required to minimise congestion on the highway network.

It is intended that this document has a shelf life of 15 years, but this may be subject to change depending on delivery of schemes herein, changing priorities within North East Lincolnshire, political factors and opportunities to support other schemes. This document should be reviewed at regular intervals to accommodate any emerging risks, pressures, and significant changes in behaviour or demand.

Emerging funding opportunities may well present their own requirements to review and amend this document. The national picture of external funding for major highway projects has changed significantly in recent years. The DfT has devolved a percentage of funds to Local Enterprise Partnerships (LEP), to be delivered on more localised priorities by a competitive bidding process. This is discussed in further detail in Section 6. Timescales for funding bids to the LEP have been short, and has prompted a requirement to see potential major highway schemes ‘on the shelf’ and ready to be promoted at short notice. Such has also



been apparent with the DfT's most recent major funding pot, 'Local Pinch Point Fund', with notice of approximately two months to submit bids. This is likely to remain the case for the short term (0-10 years). The medium term (10-20 years) outlook is largely dependent on political factors and the national drive and desire for growth. Indeed, the National Planning Policy Framework (NPPF) was introduced in March 2012 to make growth easier to deliver and provide a boost to the economy. If this policy is revisited as expected, the growth agenda may well shape how funds are made available and the ease of acquisition of funding for major schemes. The longer term outlook is driven largely by political factors, but in the context of major highway schemes, dependent on having schemes to classify as 'long term' projects. Although broader policies and priorities change, the requirements of the highway network are relatively stable and likely to remain unchanged.

NELC's Regeneration Partnership with ENGIE was created to speed up the pace of regeneration in North East Lincolnshire. Alongside accelerating delivery of growth in housing and economic sectors, highway infrastructure needs to be provided to match generated demand, as well as improve on existing congestion hot-spots. Highway infrastructure is key to the targets for the partnership, and as the highway network is already under pressure, innovative solutions should be identified, assessed and delivered by the Regeneration Partnership.

LTP Governance arrangements have recently been reviewed. In their new context, schemes are considered against key LTP targets and indicators of success, and entered into the delivery programme based on impact on a specific area. Higher impact schemes are given higher priority. This fits in with the objectives of the Highway Strategy (HS). The HS aims to deliver significant impact major schemes, and may require policy and financial support from LTP to support the infrastructure works. An example of this is the recent scheme at Riby Square; whereby the main junction was funded by Department for Transport (DfT), but other junctions on approach (Such as Lockhill Roundabout, Orwell Street and Humber Street) required amendments in order to make the main junction work. These were delivered through the LTP and other locally sourced funding.

The LTP Delivery Plan identifies a robust methodology for managing the LTP Programme has been developed alongside the delivery of the annual LTP Capital Programme. The governance arrangements provide a detailed and transparent way of working covering all elements of the LTP programme from scheme inception through to delivery and evaluation. As well as ensuring that our programme and schemes stay on track, the performance management and reporting arrangements are designed to provide communication and accountability to local communities and partner organisations.

As part of the planning process and to ensure that any new development does not have an unacceptably negative impact on the transport network, the Council often makes legal agreements with developers to secure appropriate measures to mitigate the effects of the development. The main types of legal agreement used in this process are Section 106 agreements and Section 278 agreements.

A Section 106 (S106) Agreement (of the Town and Country Planning Act 1990) allows a local Planning Authority to enter into a legally-binding agreement or planning obligation with a landowner in association with the granting of planning permission. Typically, a S106 Agreement is used to secure financial contributions from a developer, for example to fund improvements to the highway or to fund public transport services. This type of agreement is a way of delivering or addressing matters that are necessary to mitigate the effects of the development in planning terms. They are increasingly used to support the provision of services and infrastructure, such as highways, recreational facilities, education, health and affordable housing.

A Section 278 (S278) Agreement of the Highways Act 1980 is an agreement between the Council and a developer which describes proposed modifications to the existing highway network to facilitate or service a

proposed development (typically the scope of any off site works that are required to mitigate the impact of the development on the existing road network). A S278 Agreement only applies to works on existing highways.

The S278 Agreement provides a legal basis for the responsibilities (financial and otherwise) of parties involved in constructing works on the public highway, typically including the agreed highway works design, payments associated with the works and possible claims and land provision and dedication.

Examples of such works could be the construction of new access/junction, improvement of the existing highway/junctions, or safety related works such as traffic calming or improved facilities for pedestrians and cyclists.

North East Lincolnshire has been examined in its entirety, including Grimsby, Cleethorpes, Immingham and surrounding settlements.

## 2. Policy Review

---

### 2.1 The National Context

In 2010, when the previous LTP was being developed there were significant aspects of Government policy were still under review following the recent election of the Coalition Government. Since then there have been several major policy announcements that have helped shaped this review of the LTP. In the following sections we consider the main national policy statements that have shaped the way in which this refreshed LTP has been developed.

#### **Environment Act (1995)**

Part IV of the Environment Act 1995 and supported with statutory technical guidance provided by the Department of Environment, Food and Rural Affairs (DEFRA) governs the Council's statutory responsibilities for air quality. Transport related emissions can be a significant contributor to poor air quality, as such it is important that where possible interventions are delivered to alleviate problems and improve air quality.

#### **Traffic Management Act (2004)**

The day to day responsibilities of the Council as a local highway authority were established by the Traffic Management Act 2004 and its subsequent guidance. Between them they place a 'Network Management Duty' on local highway authorities. The aim of this duty is to minimise disruption to all highway users and to make the most efficient use of the highway network. This legislation is of particular relevance to the Highway Strategy, as it requires that the local Highway Authority 'identify things (including future occurrences) which are causing, or have the potential to cause, road congestion or other disruption to traffic; and consider any possible action which could be taken in response to (or in anticipation of) anything so identified.

#### **The Eddington Transport Study (2006)**

The Eddington Transport Study helped provide the evidence to the government on the long-term links between transport and the UK's economic prosperity. The report concluded that the existing road and rail networks were broadly adequate but significant bottle necks and pinch-points existed. Investment in these parts of the networks was required to relieve congestion and allow growth. The report set the scene for the acceptance by successive governments that transport has a major role to play in supporting economic growth at both local and national levels.

#### **The Stern Review (2006)**

Around the same time that Eddington was highlighting the economic importance of transport, a review led by economist Nicholas Stern concludes that climate change is the greatest and widest-ranging issue to economic growth. According to the review, without action the overall costs of climate change will be equivalent to losing at least 5% of global GDP every year. As a key contributor to carbon emissions transport has a role to play in helping to address climate change. The review is seen as a key cornerstone in the government's desire to cut carbon and meet its international targets on emissions.

Between them the Eddington Study and Stern Review have helped focus national transport policy for the last decade and were instrumental in the adoption of the 2011 adoption of the "Creating Growth, Cutting Carbon" Government white paper.

## **Local Transport Act (2008)**

The Local Transport Act 2008 is the key Government policy that guides Local Transport Plans. The Act places a statutory duty on all local authorities to produce and maintain Local Transport Plans for their area. In line with the Government's localism agenda the DfT no longer prescribes the content of LTPs or how they are monitored and reviewed, instead they are developed at a local level and approved by local decision makers. In this respect LTPs are here to address local transport issues important to local stakeholders. This has been a subtle change from previous LTPs which were required to address various themes dictated by Central Government.

## **The Climate Change Act (2008)**

Most significantly this Act set out a legally binding target for the UK to cut its greenhouse gas emissions by 80% by 2050. As vehicle pollutants are a significant contributor to national emissions it will be necessary to consider how transport can be decarbonised. This will need to be achieved through a mix of strategies, from replacing some journeys with cycling, walking and public transport alternatives to seeking advances in technology that develop ultra-low emission vehicles and improve fuel efficiency. The Paris Agreement on Climate Change (2015) will provide a further impetus towards the removal of carbon emissions from the transport system at a national and local level.

During the lifetime of this LTP there are likely to be significant new policy announcements from the Government on climate change and the role of transport. As these are developed we will seek to integrate these policies into the delivery of the LTP.

## **Creating Growth, Cutting Carbon (2011)**

'Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen' is a government White Paper published in January 2011. It confirmed the DfT's two key objectives for transport; to provide the infrastructure that supports economic growth and reduce carbon emissions.

A key theme of the report is to encourage journeys to be made by cycle, on foot or by public transport. As nearly two thirds of all journeys nationally are less than five miles, addressing these short local trips can have a significant impact on traffic congestion, journey times and traffic related carbon emissions and air quality. There are however limits to how many car journeys it is practical to replace with cycling, walking and public transport alternatives particularly in the more rural parts of the Borough or where longer distance trips are being made. The Government is therefore committed to supporting manufacturers and the public to make car travel greener by investing in electric vehicle / ultra-low emission technologies and initiatives such as car-share and car clubs. In line with the current move towards devolved decision making the delivery mechanisms are to be decided upon at a local level with local transport authorities leading on the delivery of schemes that best address the transport needs of their local area.

## **Localism Act (2011)**

The Localism Act (2011) set the scene for the devolution of certain decision making powers away from Central Government to locally accountable bodies. The Act had four main themes;

- New freedoms and flexibilities for local government,
- New rights and powers for communities and individuals,
- Reform to make the planning system more democratic and more effective,
- Reform to ensure that decisions about housing are taken locally.

## **Reforming our Railways: Putting the Customer First (2012)**

This Command Paper sets out the Government's vision for the railways, alongside the policies that are needed to realise that vision. Making life better for customers – both passengers and freight users – is at the heart of the approach which should ensure that the railways are financially sustainable in the longer term and can contribute towards the country's economic growth and environmental goals.

Although no significant rail infrastructure investment has been highlighted in North East Lincolnshire over the course of this LTP it is likely that local users of the network will see quicker journey times thanks to better maintained track & signalling equipment, new smart ticketing being rolled out across the rail network and technological advances in the way passengers purchase tickets

## **National Planning Policy Framework [NPPF] (2012)**

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities. NPPF constitutes the Government's view of what sustainable development in England means in practice for the planning system. The policy identifies three dimensions to sustainable development; economic, social and environmental.

Within the context of the LTP, the NPPF provides a steer for Local Authorities to actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable. It acknowledges that the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. It adds that transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives.

All developments that generate a significant amount of trips should be supported by a Transport Statement or Transport Assessment which takes into account opportunities for safe, sustainable access and whether improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. However the guidance from the Government is that development should only be prevented on transport grounds where the residual cumulative impacts of development are 'severe'.

## **Health and Social Care Act (2012)**

This Act transferred the Public Health function away from the NHS to local authorities. Significantly this brought Public Health and Transport under the same umbrella organisation. It is widely acknowledged that environment and the way people get around can have major implications on their physical and mental well-being. Adopting a transport plan that supports people to be physically active by enabling cycling and walking opportunities can lead to reduced levels of many life limiting conditions. In addition enabling easy access to healthcare provision can lead to more people attending health centres receiving early treatment which in the long term brings with it significant health improvements and financial savings.

## **Door to Door (2013)**

The DfT's 'Door to Door: A Strategy for Improving Sustainable Transport Integration' report aims to support and encourage people to make their whole "door to door" journey using sustainable transport. Travelling on foot, by bike and using public transport must be integrated, and comparable to the ease of using a car in order for it to be a realistic alternative for travellers. This includes providing safe walking and cycling routes between residential areas, railway and bus stations, and other key trip generators. The four key areas within the report are:

- Improving the quality and availability of transport information,
- Making smart and integrated ticketing the norm,
- Improving connections at every stage of the journey,
- Enhancing transport facilities.

### **Action for Roads: A network for the 21st Century (2013)**

Whilst the majority of this paper concerns the national motorway network it does consider locally managed roads which make up 98% of the national road network. It concludes that keeping this network functioning is vital to promoting national and local growth. It also highlights that the local road network has a daily impact on the lives of millions of people. The report sets out the Highways Maintenance Efficiency Programme (HMEP) framework through which the Government has been working with local authorities to develop and share best practice.

### **Get Britain Cycling (2013)**

In 2013, the All Party Parliamentary Cycling Group held an inquiry into how barriers to cycling could be addressed and opportunities taken to encourage more people to cycle more often. The report concluded that investment in cycling provided a high degree of value for money and provided significant savings across the wider public sector when compared to road investment. The result was the Get Britain Cycling Report which included eighteen recommendations under five broad headings;

- A new priority for investing public funds including a desire to see investment of at least £10 per head of population per year on cycling projects by 2020
- Redesign of our roads, streets and communities to make them more cycling friendly
- Safe driving and safe speed limits suggesting the expansion of 20mph in towns and 40mph rural roads to protect cyclists
- Training and education, providing cycle training to all children and adults and promoting cycling as a normal activity
- Political leadership, the appointment of a national Cycle Champion and the production of a national action plan to increase cycle usage from less than 2% (UK average) of all trips in 2011 to 10% of all journeys by 2025 and to 25% by 2050.

In 2015, the Council adopted a motion calling on local MPs to lobby the Government to implement these recommendations with the aim of getting a better deal for cyclists in North East Lincolnshire.

### **National Infrastructure Plan (2014)**

A majority of economic studies report that infrastructure has a significant positive effect on output, productivity, and growth rates, and is a key driver of jobs throughout the economy. As such, it is a key element of the government's long-term economic plan. The National Infrastructure Plan (2014) sets out details of the key national infrastructure including roads, railways, local transport networks and airports necessary to support growth. Locally, the capacity improvements along the A160 corridor between the A180 and the Port Of Immingham are seen as a key project to open up growth opportunities at the port and on nearby sites along the South Humber Bank. In 2015, the National Infrastructure Commission was formed to oversee the delivery of key nationally significant infrastructure projects.

### **Cities and Local Government Bill (2016)**

The Cities and Local Government Bill progressing through Parliament will allow for the transfer of wide-ranging powers to local areas. When enacted, this will create the framework for locally negotiated deals between central and local government to accelerate economic growth and public service reform. In response to this opportunity, North East Lincolnshire Council may agree to form part of a new, Combined

Authority for Greater Lincolnshire with North Lincolnshire Council, Lincolnshire County Council and the seven District Councils across Lincolnshire.

Securing greater local influence and control over national skills, business support and infrastructure investment programmes as part of a Combined Authority represents a significant opportunity to accelerate economic and housing growth in NEL.

## 2.2 The Regional Context

During the lifetime of this LTP the Council is likely to undergo further changes in the way in which it commissions and delivers public services. The growing devolution agenda and the Council's desire to enter into dialogue with North Lincolnshire Council, Lincolnshire County Council and the six Lincolnshire Districts to create a Greater Lincolnshire area may have a major impact on the way in which highways and transport services are delivered across the wider region. Whilst the impact of these changes is not yet known, the key local challenges will remain and we will continue to work with our local partners to bring about positive change for the area and its people.

### Local Enterprise Partnerships (LEPs)

The Government's policy of devolving powers away from Westminster to more local bodies has brought about the creation of Local Enterprise Partnerships (LEPs). LEPs were established around the UK in 2011, to replace Regional Development Agencies. They are jointly run by local authorities and the private sector and have been established with the aim of allowing local areas to have more influence over their economies, creating jobs, whilst addressing barriers to employment. LEPs will also focus on efforts to align improvements to the built environment (i.e. housing, the public realm, workspace and transport) with business investment. Local Enterprise Partnerships are a direct result of an increasing realisation that the need to improve an areas' infrastructure cannot be assessed without an in depth understanding of the geography of jobs and where future job creation is likely to come from. The importance of combining physical regeneration with economic interventions to create a viable economic future for areas has been recognised as a key priority that LEPs will help deliver. North East Lincolnshire Council is part of two Local Enterprise Partnerships, the Humber LEP (HELP) with a strong focus on developing a skilled and productive workforce and key infrastructure improvements that supports thriving successful businesses and the Greater Lincolnshire LEP (GLLEP) with strong focus on three of North East Lincolnshire's key economic sectors; agri-food, manufacturing/engineering and the visitor economy.



Figure 2.1 - Local Enterprise Partnerships



## **Humber Local Enterprise Partnership (HLEP)**

The Humber LEP (HLEP) includes representatives from businesses and commerce, the University of Hull, and the four Local Authorities in the Humber area (Hull, East Riding of Yorkshire, North Lincolnshire and North East Lincolnshire). It has developed a Strategic Economic Plan (SEP) which is an overarching plan for growth to 2020 setting the overall context and priorities under which other more detailed plans and strategies sit. The SEP focuses on three key ambitions; developing a skilled and productive workforce, thriving successful businesses and most significantly to our LTP, an infrastructure that supports growth including support for road improvements that alleviate congestion and open up new development sites.

The idea of the Humber being the nations 'Energy Estuary' underpins the Humber SEP, this highlights the economic contribution of renewable energy, chemicals/petrochemicals, food, port and logistics, and the visitor economy.

Funding for the HLEP has been awarded through Growth Deal funding from the Government, a competitive process which to date has seen over £47m of investment in projects across the Humber region including £1m towards the redevelopment of Cleethorpes town centre and resort, £1m to highway improvements that support business growth near Stallingborough and more than £1.5m of funding to undertake highway and public space improvements along Osborne Street and Bethlehem Street in the centre of Grimsby.

## **Greater Lincolnshire Local Enterprise Partnership (GLLEP)**

The Greater Lincolnshire LEP (GLLEP), a partnership including of public and private bodies from across North Lincolnshire, North East Lincolnshire, Lincolnshire County Council and the Lincolnshire District Council areas.

The Greater Lincolnshire SEP has strong focus on three of North East Lincolnshire's key economic sectors; agri-food, manufacturing/engineering and the visitor economy. The strategy places considerable emphasis on investment in infrastructure – including road/rail and broadband – to unlock economic and housing growth.

North East Lincolnshire is the terminus point for the key A16 and A46 highway routes that run northwards from Lincolnshire. Each of these routes suffers from outdated junction infrastructure, which has historically not been amended in line with growth and now presents restrictions for future growth in both housing and economic market places. These problems will be addressed following the announcement of £4.2m of Growth Deal allocation to undertake major improvement schemes at Tollbar Roundabout and Nuns Corner. The schemes will improve traffic flow at two key strategic junctions in North East Lincolnshire. In addition to easing congestion issues, the improvements will support acceleration of housing and employment growth in the area.

The Government's Growth Deal investment in Greater Lincolnshire now totals £146.2m, focusing on key priorities that will truly make a difference to the local economy.

## **Transport for the North**

The Northern Powerhouse report in March 2015, sets out the ambitions of Transport for the North (TfN), including an acknowledgement of the role of the Humber Ports (including Immingham and Grimsby) in providing freight transport links to Continental Europe and the wider world beyond supporting growth in the north of England. Following its publication a major multi-modal freight and logistics study has been commissioned to inform the development of future transport investment. Once a full study is published the Council will work with regional partners to ensure that the identified improvements are supported to help grow the local economy as part of the Northern Powerhouse where the relevant powers exist for the Sub

National Transport Bodies. Subsequent to the Transport for the North discussions, the authorities across the Midlands are working together to form the Midlands Engine. North East Lincolnshire Council will be consulting with both bodies to maximise the benefits of membership for the authority and the surrounding area.

## **2.3 The Local Context**

The Government's drive towards localism and the devolution of powers to local bodies will mean a greater emphasis on the links between the LTP and other local plans and policies in the future. At a strategic level, the eight Local Transport Challenges wholly reflect the broader North East Lincolnshire priorities and can be readily set in the National context as described previously.

Our new Local Plan is currently under development and it is clear that the growth and housing aspirations set out within the plan will need to be supported by enhancements to local infrastructure if our local roads and transport networks are not to be a brake on development.

In the following sections we look at some of the local plans, policies and strategies that interact with the Council's Local Transport Plan.

### **Rights of Way Improvement Plan [ROWIP] (2008)**

North East Lincolnshire's 190km of public rights of way (PRoW) network is a valuable asset offering opportunities for walking, cycling and horse riding. Although walking and cycling are the most popular recreational past times, North East Lincolnshire has a low uptake compared nationally and to the neighbouring authorities. The Government believes this should be tackled by widening the appeal of using the PRoW for all sections of the community by investigating present and future needs and drawing up an Action Plan forming part of a 10 year Rights of Way Improvement Plan. The ten year RoWIP approved by the Council in 2008 contains a list of actions to be delivered during the course of the plan, they include:

- Overcoming legal deficiencies
- Improve the condition of the network
- Making the network safer
- Improving accessibility
- Extending and linking the network

As Public Rights of Way are important elements of the local transport mix these actions are all considered to be key actions for the LTP strategy.

### **Parking Strategy (2011)**

The Council's Parking Strategy adopted in 2011 reflects the commitment that North East Lincolnshire Council continues to give to the development of a balanced and integrated transport network for the Borough. The Strategy provides detailed information covering both on and off street parking provision. It contains a series of aims to be addressed to effectively manage car parking and access across the Borough:

- To ensure that there is an adequate supply of parking spaces, in highly accessible locations, for essential purposes whilst reducing conflicts with other highway activities;
- To ensure that those who face limitations due to disability, age or other mobility restrictions can use the most appropriate mode of transport to access town and district centres and other facilities;
- To ensure that all visitors to North East Lincolnshire are provided with an attractive range of travel options within the area and for visits to local attractions;

- To improve the quality of key access routes and transport services into town centres; and,
- To maximise opportunities to improve parking provision through early planning of development and regeneration<sup>1</sup>.

Faced with a growing economy and the potential for continued increase in car ownership, a progressive programme of effective parking measures put in place now will ensure that the economy and community of the Borough will continue to flourish. These measures will, by necessity, be focussed on keeping the road network, particularly in central areas, free from the detrimental effects of traffic congestion and pollution whilst improving road safety for the public.

### **Health & Wellbeing Strategy (2013)**

The health and wellbeing strategy sets out the key priorities that North East Lincolnshire Health and Wellbeing Board will seek to deliver, with the residents and communities in the borough over the three year period to 2016. Its purpose is to improve health and wellbeing by guiding the commissioning intentions and service plans of all Board members. The strategy is a statement of the board's vision, outcomes, priorities and principles for the period 2013-16, drawing heavily on the joint strategic needs assessment (JSNA) and other evidence to identify the health and wellbeing needs and assets within North East Lincolnshire.

The focus of the Health and Wellbeing Board is to take action to foster healthy people living in healthy places, as by doing that we acknowledge the impact of place on people's lives and the inter-relationship between people and place in the creation of health and wellbeing. The Health & Wellbeing Strategy clearly shows the links between health and transport, particularly the role that active transport modes can have in raising physical and mental wellbeing.

### **Council Plan (2014)**

The Council Plan sets out two broad headings that will be the organisations focus moving forward. These are "Stronger Economy" and "Stronger Communities". As one of the Council's key local strategies the Local Transport Plan is also aligned to these priorities, supporting growth and a stronger economy by enabling access and supporting business transport whilst also undertaking our duties as a local highway authority.

---

<sup>1</sup> North East Lincolnshire Council's Parking Strategy 2011

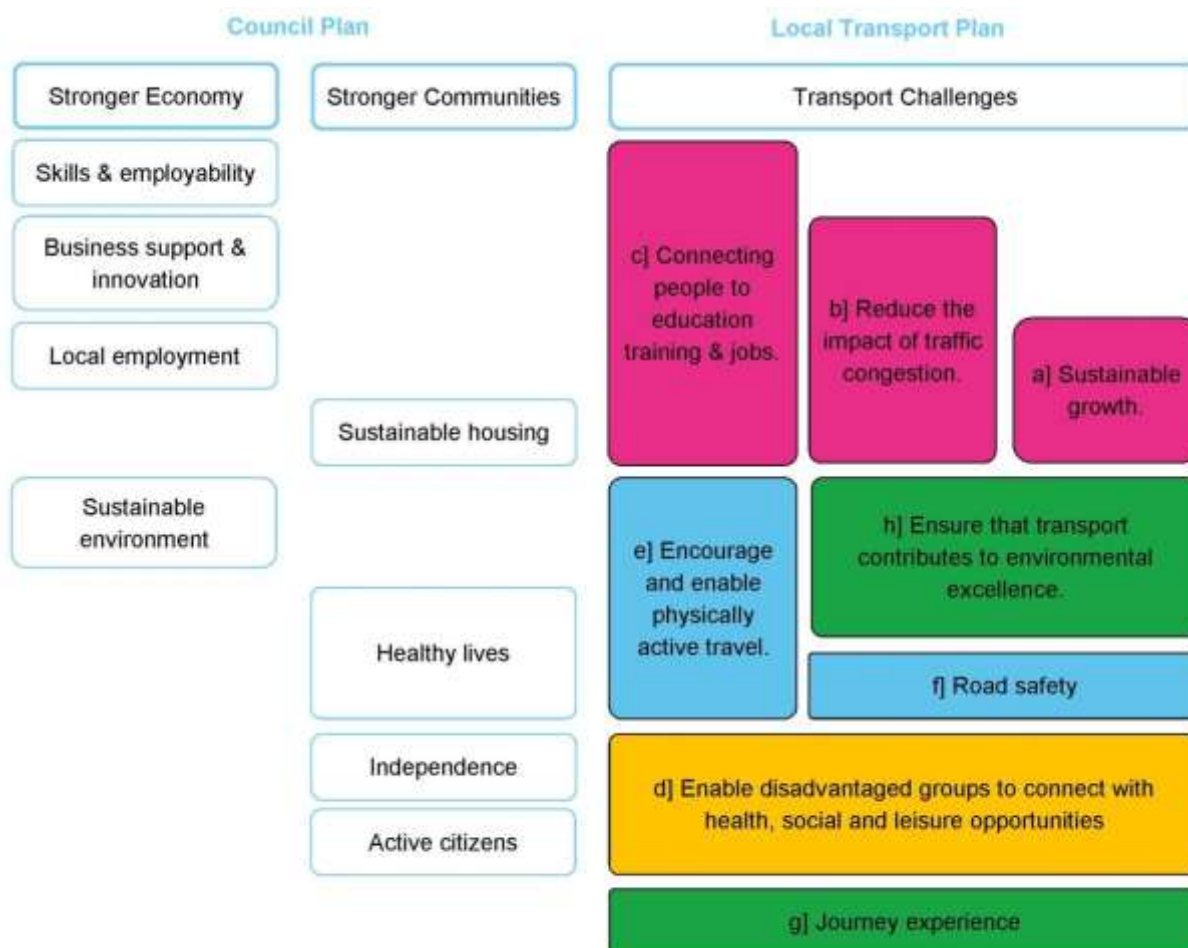


Figure 2.2 - LTP Alignment to Council Plan

### Children and Young Peoples Plan (2014)

The 2014-2016 Children and Young People's Plan is based entirely on the views and opinions of children and young people. The priorities and actions in the plan have been developed through consultation with children and young people. Of particular significance to the LTP are the issues of road safety, access to school and training opportunities and the desire for independent travel.

### Strategic Housing Land Availability Assessment (SHLAA) (2014)

The SHLAA provides an assessment of the land available to meet North East Lincolnshire's housing need over the coming 15 year period. It identifies sites in the borough with the potential to accommodate housing development and assesses when they could potentially be developed.

The SHLAA has been informed by a separate Strategic Housing Market Assessment (SHMA) that reviewed the projected economic growth, changes in population and household make up, concluding that around 495 households per annum (between 2011 and 2030) would be needed to meet demand.

The evaluation of each potential site includes an assessment of the transport accessibility with those site where sustainable transport access is possible being preferable than those that would be heavily reliant on private car travel.

## **Travel Plan Guidance (2014)**

The Council provides guidance for developers on the creation of travel plans. These documents are required through the planning process for all new developments that generate a significant level of additional traffic.

Within the context of this strategy, Travel Plans can play an important part in encouraging and supporting people to choose sustainable travel modes to work and can be used by businesses and organisations to address transport and travel issues faced by people travelling to and from a site. Through a mixture of information, advice, IT, communications, technology, incentives and demand management, Travel Plans can encourage and make it easier for people to reach sites by sustainable modes while reducing the need to use private cars.

## **Development & Growth Plan (2015)**

Invest North East Lincolnshire, the Development and Growth Plan sets out the Council's plan for unlocking economic growth and highlights the importance of transport as one for the cross-cutting themes that create the environment for growth. It goes on to conclude the role of highways and transport assets as drivers of growth need to be fully recognised and enhanced if the area is to fulfil its potential.

## **Asset Management Strategy for Highway Services (2015)**

North East Lincolnshire Council recognises the importance of the highway infrastructure in the context of the well-being of all who use it. The Council as Highway Authority is committed to the good management of the highway asset not only for now but also, for future generations, and recognises that effective asset management is essential to deliver clarity around standards and levels of service, and to make best use of available resources.

The Asset Management Strategy underpins the Highway Asset Management Policy and is one of the key strategic documents related to the delivery of the Council's highway services. The strategy sets out the key asset groups and components and describes the desired outcomes for each of the asset groups.

## **Winter Service Policy (2015)**

The Highway Authority is under a statutory duty to maintain the highway. In order to facilitate safe movement, as far as reasonably practicable, during bad weather, the Highway Authority will undertake prioritised precautionary treatment and, subject to available resources, snow clearing operations on the adopted highway.<sup>2</sup>

The categorising of routes to receive the stated level of highway winter service is primarily based upon the amount and character of traffic that would normally be expected to use the route. This has regard to the wider objectives for transport integration and network management, including strategies for public transport, walking and cycling.

Full details of the Council's responsibilities is outlined in the Winter Service Policy, the key LTP considerations are:

- Ensuring as far as it practical that the highway network is safe to use.
- Ensure that treatments are prioritised towards strategic routes and bus public transport corridors.

---

<sup>2</sup> Highways Act 1980 S41 [1]

## Home to school transport policy (2015)

Parents/carers are legally responsible for ensuring their child's regular attendance at school. In some cases the local authority has a duty to support parents/carers with transport to school. The home to school transport policy describes how the local authority interprets its duty and applies its powers in respect of home to school transport. The arrangements apply only to pupils resident in North East Lincolnshire, or deemed by legislation to be the responsibility of the local authority.

In addition to transport based on distance the Council also has a duty to make transport arrangements for all children who cannot be reasonably expected to walk to the nearest suitable school because the nature of the route is deemed unsafe to walk.

## Local Plan (2016)<sup>3</sup>

The Local Plan looks forward to 2032 and is a key document which will guide the changing use of land in the North East Lincolnshire and define the purpose to which it is put in the future. The Plan has three central themes:

- Building the economy we need;
- Building the homes we need; and,
- Building the place we need.

The Plan sets out the Council's vision and strategy for development, including why, where and how the Borough will grow. The Plan is a plan for growth and aims to ensure North East Lincolnshire becomes a sustainable location in which people can live, work, and enjoy their recreation, both now and in the future. It is a wide ranging strategy that covers many aspects of life in the Borough, consequently the Plan has ten strategic objectives at its core. These are;

SO1 Population	Meet development needs and facilitate economic development by supporting population growth, retaining working age population and providing for a generally ageing population.
SO2 Climate change	Address the causes and effects of climate change by promoting development that minimises natural resource and energy use; reduces waste and encourages recycling; reduces pollution; brings about opportunities for sustainable transport use; responds to increasing flood risk; and, incorporates sustainable construction practices. Promote appropriate distribution of development and the role of green infrastructure in mitigating aspects of flood risk. Recognise the increased stress on habitats and species that climate change causes
SO3 Economy	Support environmentally responsive local economic growth by promoting conditions that sustain an increase in the number of better paid jobs; removing barriers to investment and access to jobs; and, raising skills. Promote rural regeneration and diversification, including a strengthened tourism offer.
SO4 Housing	Significantly boost housing supply to meet the existing and future housing needs of the whole community. High quality market and affordable housing, specific provision for the elderly, special needs housing and gypsy and travellers accommodation will be supported. A balanced supply of deliverable sites will be identified to achieve as a minimum, the objectively assessed needs of the Borough, identified overall housing target.
SO5 Social and health inequality	Narrow the gap in terms of social and health inequality by addressing issues of housing choice, providing accessible employment and training opportunities, promoting healthier lifestyles, providing healthcare and community facilities, improving educational attainment and cultural facilities; and establishing protecting, and maintaining a network of accessible good quality open space, sport and recreation facilities.

<sup>3</sup> Local Plan 2016, North East Lincolnshire Council

SO6 Built, Historic and Natural Environment	Ensure that the development needs of the Borough are met in a way that safeguards and enhances the quality of the built, historic and natural environment. Direct development to locations of least environmental value and proactively manage development to deliver net gains in biodiversity overall. Encourage the use of brownfield land.
SO7 Transport	Improve accessibility to jobs and services by sustainable transport modes, including cycling and walking; reduce the overall need to travel with employment and housing growth spatially balanced; and, provide the necessary infrastructure to support sustainable growth.
SO8 Town centres and local facilities	Strengthen the vitality and viability of town centres, meeting the needs for retail, commercial and leisure uses, focusing appropriated uses on town centre sites, promote regeneration where appropriate and support the retention of local community and service facilities
SO9 Design	Raise the quality of developments by applying the principles of good sustainable and inclusive design; promote safe, secure and accessible streets and places; and, recognise the importance of supporting and strengthening local character and distinctiveness.
SO10 Minerals and Waste	Safeguard important mineral resources and support minerals infrastructure for the future. Promote the application waste hierarchy in the management of waste and deliver sustainable facilities to manage waste.

Table 2.1 – Local Plan (2016) Strategies

LTP Challenges	Local Plan: Strategic Objectives									
	SO1	SO2	SO3	SO4	SO5	SO6	SO7	SO8	SO9	SO10
A: Sustainable growth through effective transport provision		✓	✓				✓	✓		
B: Reduce congestion			✓				✓			
C: Connect people to education, training & jobs	✓		✓				✓			
D: Accessibility to key local services	✓			✓	✓		✓	✓		
E: Safe access and reduce risk of loss or injury					✓		✓		✓	
F: Improve health by encouraging active travel					✓		✓			
G: Journey experience							✓			
H: Environmental excellence		✓				✓	✓			✓

Table 2.2 - Relationship between LTP Challenges and Local Plan Strategic Objectives

As the table above shows there are strong synergies between the strategic objectives set out in the Local Plan and the LTP Challenges, demonstrating that the two documents are complementary to each other and both have the Council's core values of a stronger economy and stronger communities at their core.

## Economic Strategy (2016)

The North East Lincolnshire Economic Strategy sets out how the Council we will bring together the skills, capacity and resources of the public, private and voluntary/community sectors to realise North East Lincolnshire's potential for economic growth; and to ensure that all local residents can benefit from future growth and prosperity.

The strategy has been developed jointly by North East Lincolnshire Council and the Development and Growth Board, a public/private partnership tasked with responsibility for setting the economic strategy for the area. The strategy sets out a long-term vision for the local economy and details the priority actions that will be delivered to help achieve our objectives over the next three years.



The strategy confirms the idea that for the area to realise its full potential in terms of economic growth, the infrastructure that underpins the future development needs to be strong, resilient and sustainable. It contains actions aimed at improving junctions and road capacity by working with partners to secure the necessary public/private sector funding. In addition the strategy seeks to bring about improved freight and passenger rail links to support future growth.



areas. For example, Nottinghamshire, York and Doncaster are all in the same category; each has a clear economic centre and outer road network which are predominantly designed to national speed limit standards.

The DfT also published detailed statistics of how these indicators perform, enabling a detailed comparison between North East Lincolnshire and its closest 'Statistical Neighbours'. 'Statistical Neighbours' are areas which have similar characteristics to a base area. A comparison between North East Lincolnshire and its 'Statistical Neighbours' is presented in Figure 3.2 below.

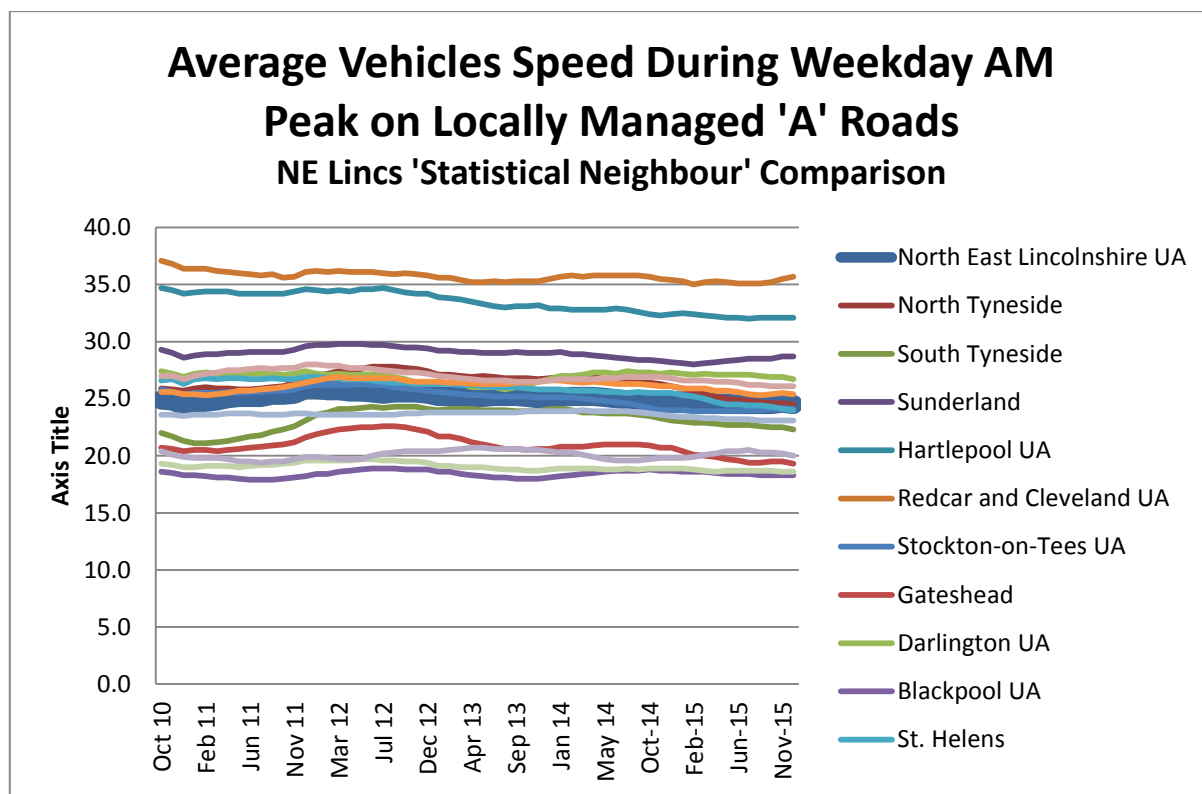


Figure 3.2 - 'Statistical Neighbour' Network Speed Comparison

This data shows that North East Lincolnshire has slightly lower than average vehicle speeds in the morning peak period. Vehicle speeds are significantly slower than in Redcar and Cleveland, Hartlepool and Sunderland, but significantly faster than Blackpool, Stoke-on-Trent, Plymouth and Gateshead. North East Lincolnshire has similar or slightly slower speeds than Doncaster, North Tyneside and Darlington.

## 3.2 Categorisation of Routes

Figure 3.3 below shows the road hierarchy in North East Lincolnshire. This shows how the main flows of traffic access the internal network and also indicates how funds are allocated for maintenance. Many of the schemes herein are to positively impact upon junctions on the 'A' road network. Typically, flows match road categories, so higher flows are usually apparent on 'A' road, with 'B' roads managing more localised flows, and 'C' category and 'Unclassified' roads facilitating residential highway functions.

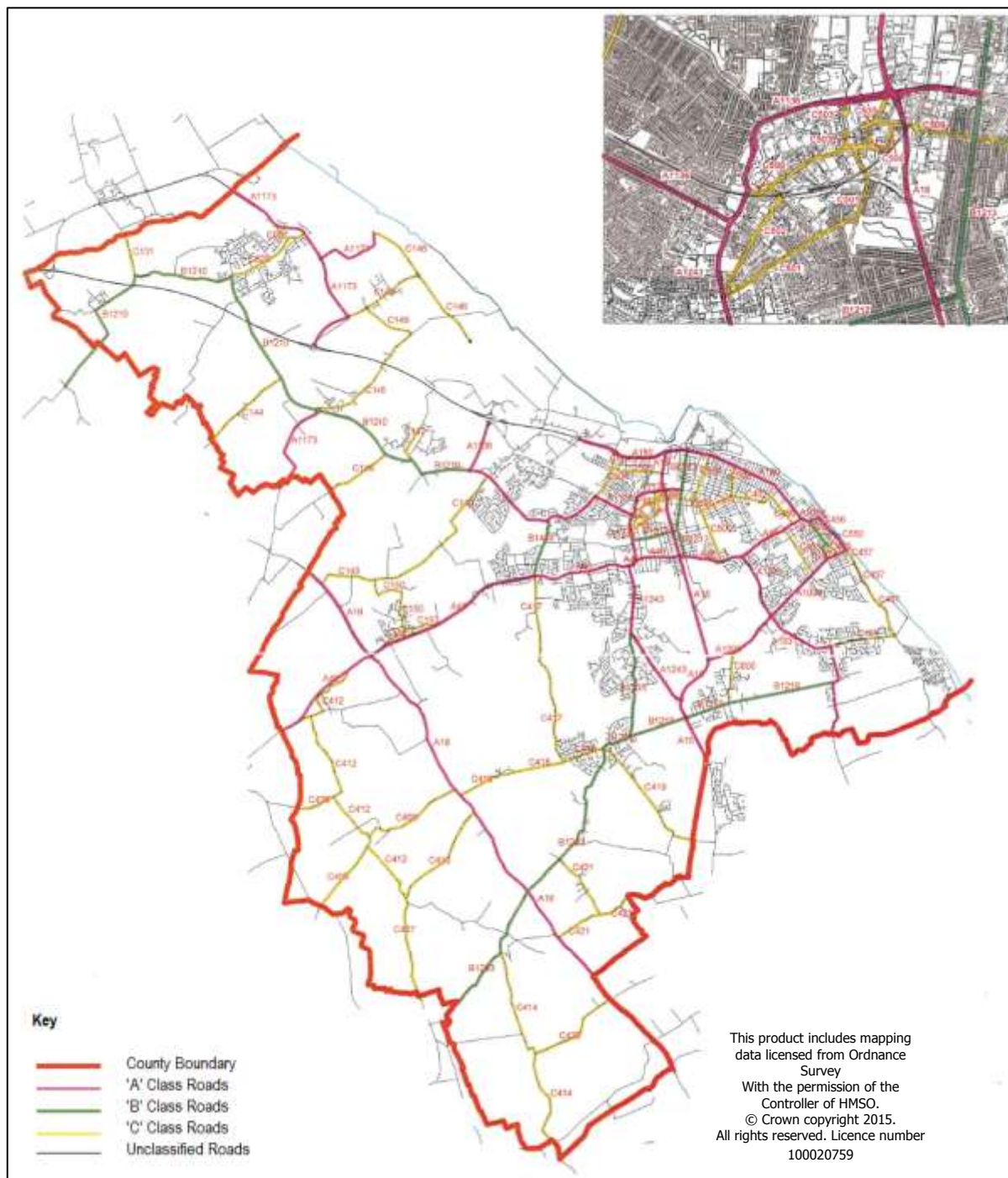


Figure 3.3 - Road Hierarchy in North East Lincolnshire

### 3.3 Highways England Network

Highways England (HE) is an arm of the DfT which is responsible for operating, maintaining and improving the strategic road network in England. HE's network in North East Lincolnshire is indicated below, taking in the A180 between the county boundary and Pyewipe Roundabout.

The Highways England network includes some of the highest flows of traffic in North East Lincolnshire, as displayed in Figure 3.4. This is largely due to the access to the wider national highway network via the A180. The HE network in North East Lincolnshire starts at Pyewipe Roundabout and runs to the western boundary of the administrative area, where it continues on to the M180. HE's network within North East Lincolnshire is crucial to economic growth in the emerging Local Plan. Much of the forecast economic growth is located portside, and is focussed on the renewable energy sector. High quality access to the national highway network is a critical factor in providing the transportation requirements of these sectors. Sufficient capacity on the A180 is therefore crucial to the delivery of North East Lincolnshire's New Local Plan.

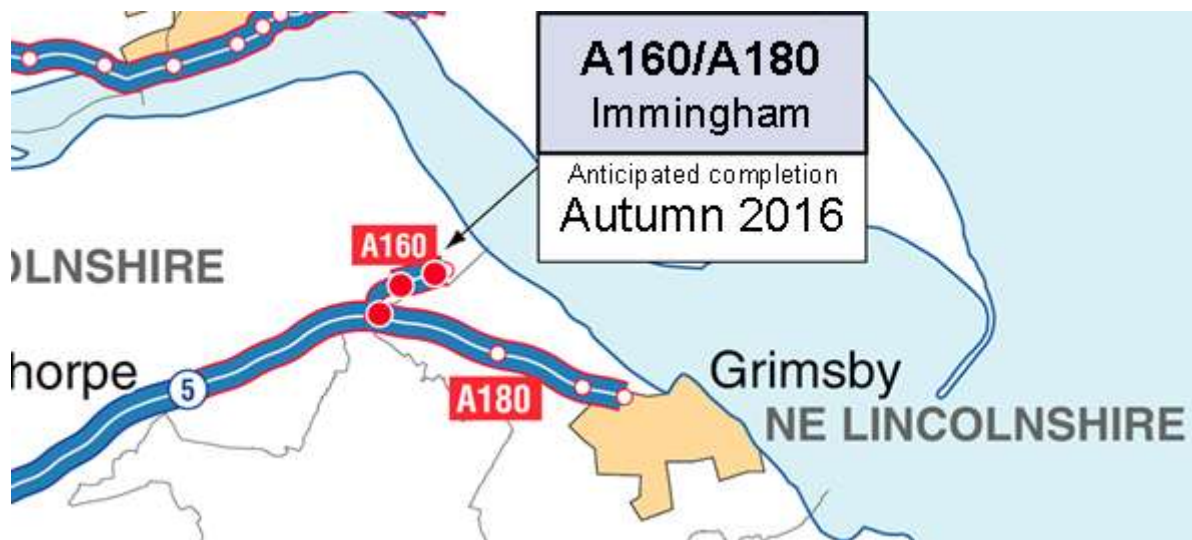


Figure 3.4 - Highways England Network

The A160, although outside of North East Lincolnshire, is crucial for access to the Port of Immingham and the South Humber Bank. The A160 is managed by Highways England, and is currently (2016) undergoing significant improvements to help deliver portside growth, reduce the number of HGV's passing through Immingham town centre, and deliver wider environmental improvements. The junction of the A160 and A180 (Brocklesby Interchange), is located within North East Lincolnshire.



### 3.4 Traffic Flows on North East Lincolnshire's Strategic Highway

The map below shows 2014 vehicle flows on key routes in North East Lincolnshire. It demonstrates the level of dependency on the A180 for strategic traffic movement, particularly between Lockhill Roundabout and the western county boundary. It is by far the most heavily trafficked road in North East Lincolnshire, carrying flows of double the next busiest road. Figure 3.5 also demonstrates the importance of the A46 and A16 to the local economy, both carry high volumes of traffic. Other high flow roads of note include the A1136 (Great Coates Road) between the B1219 roundabout and Yarborough Road, and three of the main approaches to Hewitt's Circus.



Figure 3.5 - North East Lincolnshire Traffic Flows 0700 – 1900

### 3.5 Freight Traffic

Industrial complexes in Grimsby and Immingham make assessment of freight routes an important consideration for North East Lincolnshire. Figure 3.6 below shows the key routes for Heavy Goods Vehicles (HGVs). This shows that the key route for HGVs is the A180 and access to the port land at Grimsby and Immingham.

Considerations for HGVs and their impact on the highway network and air quality will be essential to deliver the growth proposals for the South Humber Bank over the new Local Plan period.

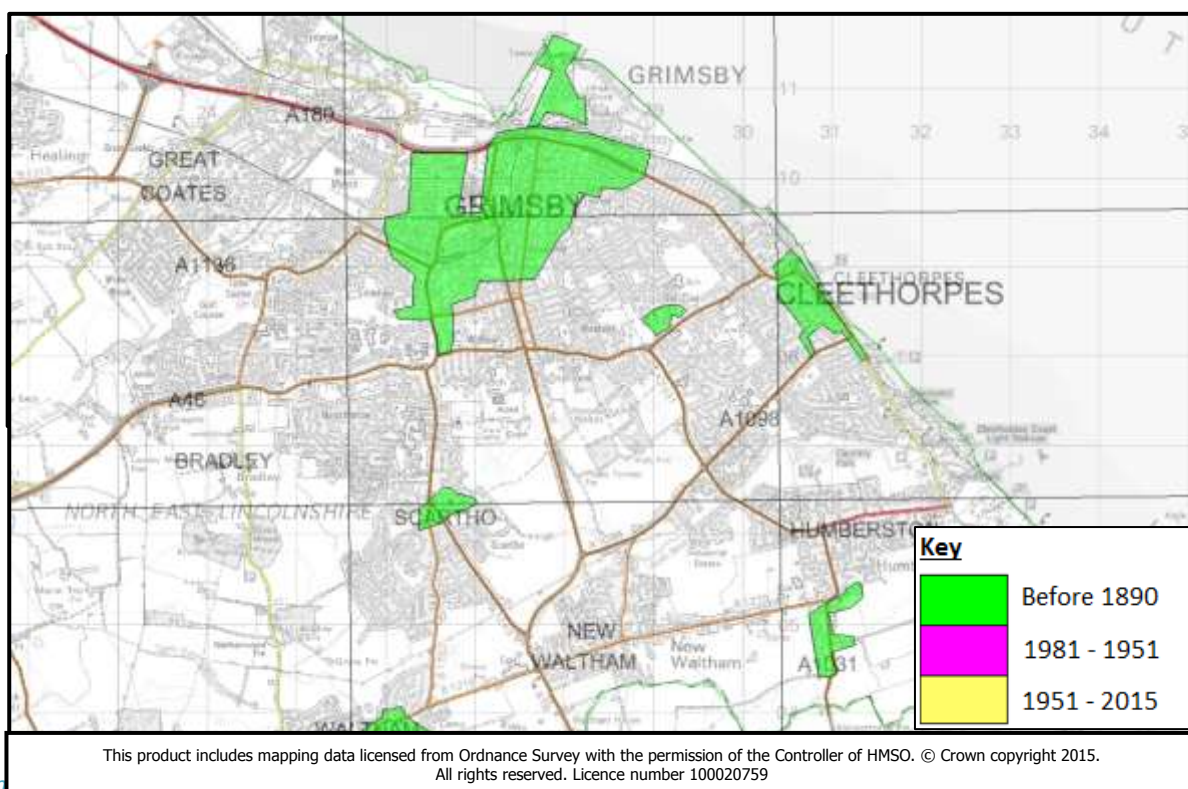


Figure 3.6 - Heavy Goods Vehicle (HGV) Route Usage in North East Lincolnshire

North East Lincolnshire, as many other areas, has grown up and developed over time. If the Council were to plan the borough again the transport network would look very different. As it is, the network has to be utilised within the existing footprint and maximised to get the volumes of vehicles moving safely and with minimal congestion. Figure 3.7 below demonstrates how central North East Lincolnshire has grown from a small but dense populous in Grimsby and Cleethorpes prior to 1890 into the area we know now.



Figure  
North



3.7 -  
East

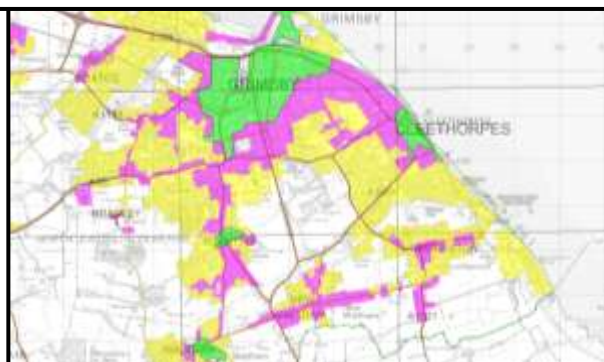
Lincolnsh

Some strategic highway schemes have been promoted through the years, as roads have become busier and more people have access to

The A180 runs from the M180 to Cleethorpes and opened in 1983, primarily as a strategic route for from Grimsby and Immingham Docks on the South Humber Bank to the wider national highway network.

The A16 was upgraded over three phases in the 1990s and included the construction of Peaks Parkway. This was a significant benefit to the local highway, as it provided an alternative north – south route to Scartho Road, which had become heavily congested.

More recently, construction has been completed on the A18 – A180 link road. This will have benefits to the residents of Immingham as it will significantly reduce the number of HGVs using the main route (Pelham Road) through the town centre. The scheme was also designed to improve air quality at an Air Quality Management Area (AQMA) and provide better journey times for commercial traffic from Immingham Dock.



cars.

was  
traffic



Figure 3.8 - Plan of A18 – A180 Link Road

### 3.6 Characteristics and Trends

North East Lincolnshire has low car ownership compared to the national average, as demonstrated in Figure 3.10 below. This is due to lower employment rates in some areas, and the traditional availability of work near to where employees live, therefore reducing the requirement for access to a private car. The area has historically excelled in food processing industries, which results in low paid jobs and low disposable income. This is reflected in Figure 3.9 below, which shows significantly lower car ownership in highly densely populated areas such as the East Marsh Ward. The East Marsh ward is also adjacent to the food processing industries, many of which are located in the port of Grimsby and contributes to low car ownership levels.

North East Lincolnshire, and the Humber area in general, has recently sought to establish itself as an industry leader in the Renewable Energy sector. The intention is to raise aspiration and income levels. In the context of highways and transport, this will lead to higher car ownership levels than those at present.

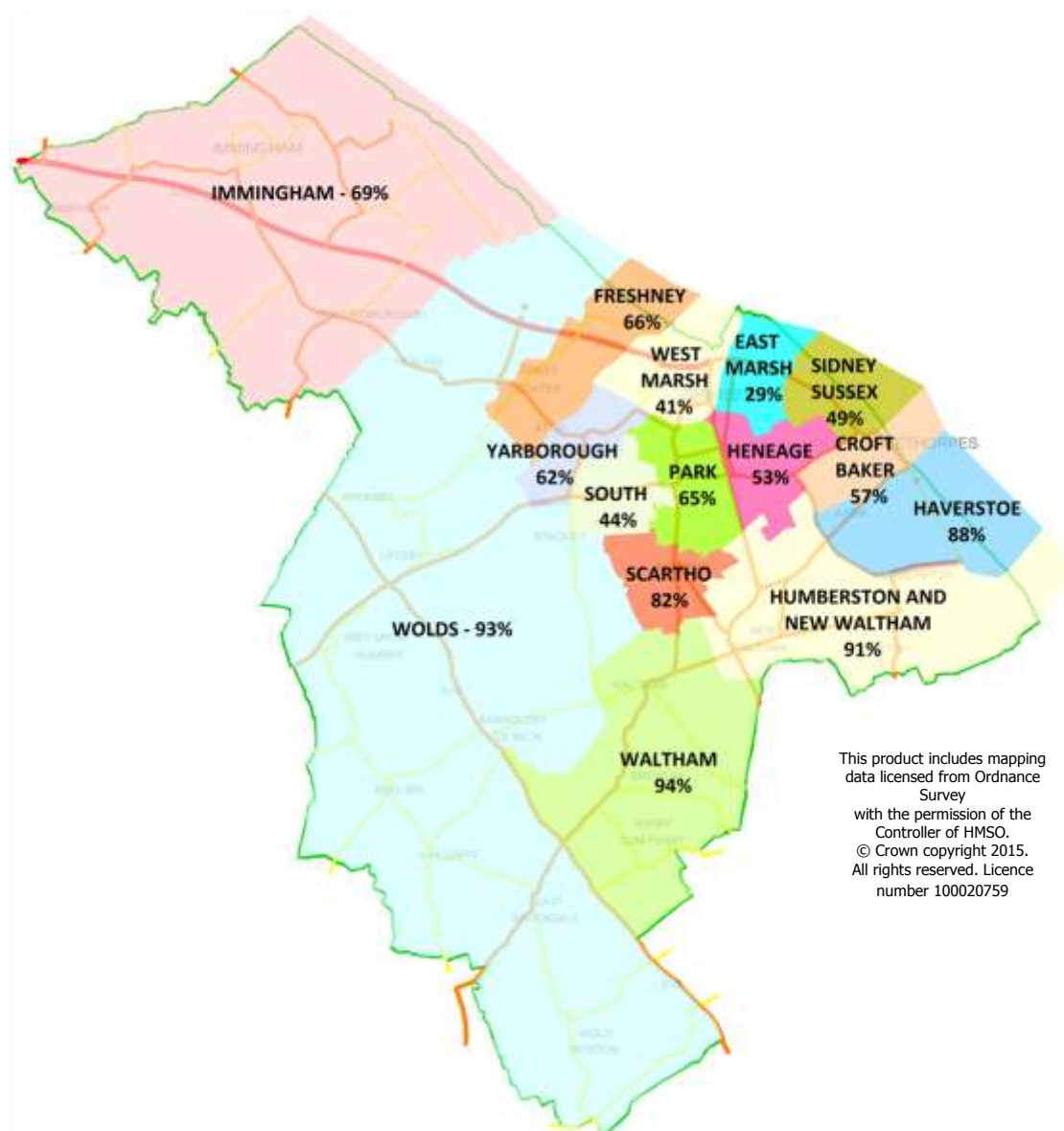
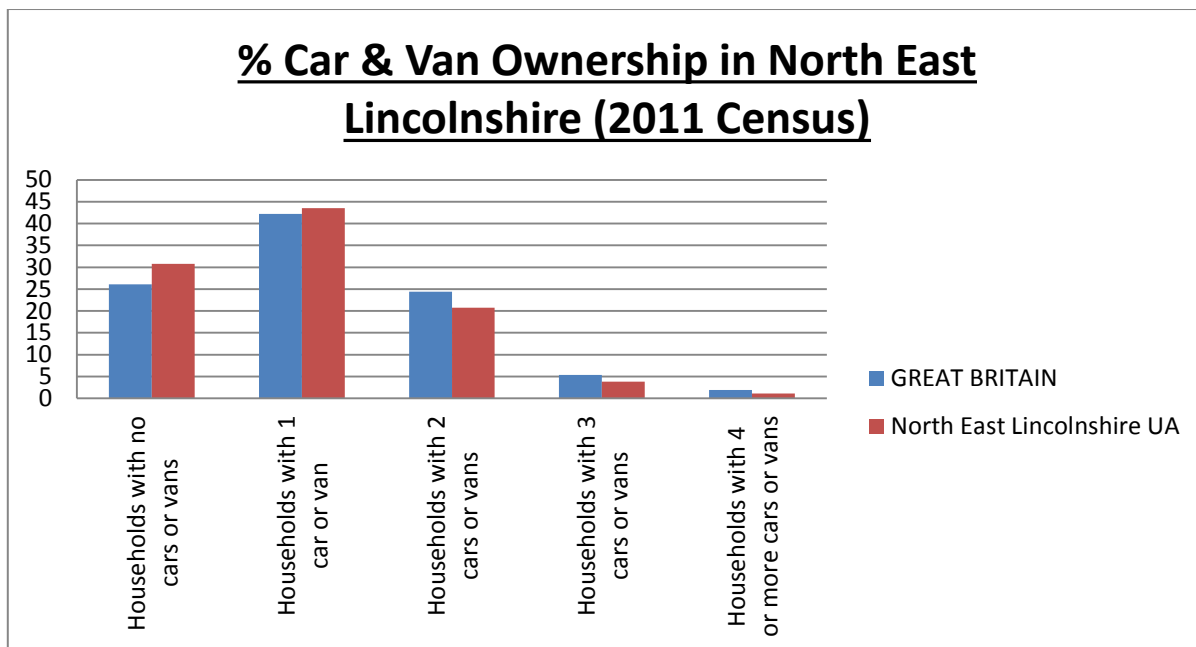


Figure 3.9 - Percentage of Economically Active Age Residents with Access to a Car or Van



*Figure 3.10 - Car Ownership Comparison between Great Britain and North East Lincolnshire*

Sustainable travel in North East Lincolnshire is considered within the LTP and other supporting documentation. Cycling, walking and Public Rights of Way are all considered within the LTP, with some consideration given in supporting strategic documentation, all of which have the potential to reduce traffic growth and should be given appropriate support to do so.

Car ownership trends have continued to grow exponentially; approximately 75% of all UK households now have access to a private car or van, according to the most recent Census data. Indeed, since cars became a popular mode of transport in the 1950s, private vehicle ownership has continued to increase as vehicles have become more affordable. Between 1951 and 2011, total UK housing stock has almost doubled, leading to a compound increase in both dwellings and vehicles. The average UK household has access to 1.26 cars, according to DfT's 'Trip End Model Presentation Program' (TEMPRO).

Sustainability is also an important aspect of trend analysis in forecasting highway demand. Uptake of cycling, walking and public transport is key to the continued operation of a safe and fit-for purpose highway network. Access to sustainable modes are a crucial element of the Local Transport Plan, and are considered within adjacent strategy documents as displayed in Figure 1.1 (Hierarchy of Strategies Within 'The Transport Plan of NELC 2016 Constitution'). This meets modern transport principals of promoting alternatives to the car and shifting towards a low carbon society, meeting the national commitment of reducing carbon emissions by over 80% between 1990 and 2050.

As described above, much of North East Lincolnshire's highway network was constructed prior to the 'boom' in car ownership in the 1960s and 70s. In this period, car ownership went from around 14% to 52% of all UK households.



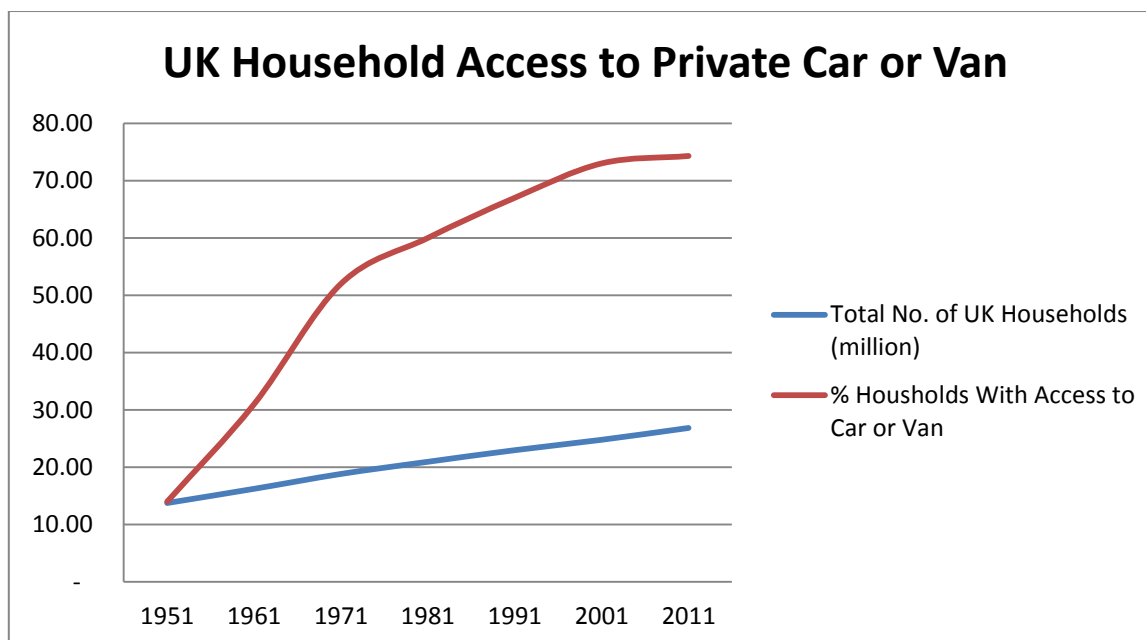


Figure 3.11 - Historic Car Ownership (Source: DfT and ONS)

### 3.7 Current Highway Performance

North East Lincolnshire's highway network has been built up gradually over a long period of time, and has largely been shaped by housing development in line with industrial growth on the South Humber Bank and the coalescence of Grimsby and Cleethorpes. This had led to a situation whereby some highway infrastructure had not been updated in line with the demands of increases in population and locations of growth.

There are industry standard computer programmes for analysing the performance of junctions; LinSig is used to analyse traffic signal junctions, and Junctions 9 (J9) for roundabouts and priority junctions. The key junctions in North East Lincolnshire identified in the map below have been analysed in the aforementioned software to establish a 'base' scenario.

Congestion is measured by traffic modelling; results are shown in terms of Practical Reserve Capacity (PRC) and Ratio of Flow to Capacity (RFC). Effectively, these modelling outputs demonstrate how congested a junction is. PRC measures performance at signalised junctions, and is defined as 'the amount by which traffic demand can grow before theoretical capacity is reached'. Maximum capacity in a signal junction is assumed to be 90% in all traffic models. This is to allow a degree of flexibility for the daily fluctuations in traffic.

When analysing the results ('Max PRC' column of Table 3.1, below), where Bargate / Westward Ho / Welholme Road indicates -8.3% PRC, this actually means that the junction is running at 98.37% of its capacity. A junction showing a negative figure for PRC shows that the junction is currently running over (exceeding) its capacity. Where this occurs, the practical impact is that a signal junction cannot process the total demand, so vehicles will have to wait for more than one full traffic light cycle in order to traverse the junction.

Ratio of Flow to Capacity (RFC) is used to measure performance of roundabouts. RFC is a measure of how full the roundabout is, and a level of 0.85 (or above) is considered the point at which action should be considered.

The result of a junction exceeding its PRC or RFC is significant and compounded levels of queuing, slower speeds and longer trip times, i.e., congestion. Congestion has a negative effect on external factors including safety, air quality, ecology, employment and the economy.

Key:

Green – junction within capacity;

Amber – junction slightly over capacity;

Red – Junction highly over capacity

Site Location	Assessment Year	AM Peak PRC (%)	PM Peak PRC (%)
Clee Road / Brereton Avenue	2015	21	5.7
Fryston Corner	2014	16.7	15.2
Bargate at Westward Ho	2015	-8.3	2.9
Riby Square	2015	17.3	12.1
Cleethorpe Road / Park Street	2014	3	8.2
Cleethorpe Road / Victor Street	2015	15.8	27.7
Convamore Road / Eleanor Street	2015	154.7	55.4
Corporation Road / Boulevard Ave	2015	30.1	-9.3
Corporation Road / Alexandra Street / Rendall Street	2015	229.8	87.7
Bargate / Dudley Street / Grosvenor Street	2014	29.6	35.6
Dudley Street / Littlefield Lane / Cromwell Road	2015	2.5	-15.3
Ladysmith Road / Durban Road	2015	46.5	49.2
Ellis Way at ASDA	2015	85.2	17.9
Cartergate / Frederick Ward Way	2015	59.2	88.9
Frederick Ward Way at Freshney Place Car Park	2015	178.9	120.9
Peaks Parkway / Victoria Street / Ellis Way	2014	3.0	-0.9
Hainton Square	2015	8.2	-2.9
Freeman Street / Wellington Street	2015	47.1	48
Great Coates Road / Larmour Road	2014	-27.7	-15.5
Hainton Avenue / Pasture Street	2015	91.2	92.6
Weelsby Road / Hainton Avenue	2015	21.8	18.5
Oxford Street / Victor Street	2015	145.2	80.8
Peaks Parkway / B&Q	2015	81.1	28.9
Peaks Parkway / Welholme Road	2015	43	25.8
Scartho Road / Hospital Entrance / Cragston Ave	2015	20.4	11.2
Scartho Road / Matthew Telford Park	2015	-5.1	-1.5
Corporation Road / Victoria Street / Market Street	2015	13.5	-0.7
Weelsby Road / Ladysmith Road	2015	19.5	0.4
Peaks Parkway / Weelsby Road	2015	-25.3	-30.7
Wellington Street / Victor Street	2015	139.2	109.2
Hewitt's Avenue / Tesco	2015	51.2	21.6
Laceby Road / Winchester Ave	2015	7.7	-2.9
Hewitt's Avenue / Peaks Lane	2014	4.6	9.5
Scartho Road / Sutcliffe Avenue	2014	-5.3	-11.3
Pelham Road / Washdyke	2015	83.9	105.1

Table 3.1 - North East Lincolnshire Major Traffic Signal Junction Performance

Key:

Green – junction within capacity;

Amber – junction slightly over capacity;

Red – Junction highly over capacity

Site Location	Assessment Year	AM Peak RFC	PM Peak RFC
A180 Pyewipe	2014	1.72	1.42
A180 Westgate	2014	1.65	1.91
A180 Lockhill	2014	0.96	1.14
A180 Great Coates Interchange			
A180 Stallingborough Interchange			
A180 Brocklesby Interchange			
A1136 Great Coates Road	2014	0.80	0.86
Toothill Roundabout	2014	0.81	0.87
Market Hotel Roundabout	2015	0.64	0.81
Littlecoates Road / Cambridge Road	2015	1.37	1.35
Cambridge Road / Chelmsford Ave / Westward Ho	2015	1.25	1.24
Bradley Crossroads	2014	0.57	0.69
A46 / A18	2014	0.39	0.64
Nuns Corner	2014	0.98	0.98
Love Lane Corner	2015	0.85	1.03
Fiveways Roundabout			
Hewitt's Circus	2014	0.87	0.93
Low Farm	2014	1.08	0.83
Louth Road Roundabout	2013	0.48	0.69
Toll Bar	2014	1.02	1.04
Scartho Fork	2014	0.58	0.82
A1173 / Kings Road Roundabout	2014	0.68	0.48
Stallingborough Interchange	2014	0.44	0.53
Pelham Road / Kings Road			
Laporte Road / Hobson Way / Kiln Lane			
North Moss Lane / Kiln Lane / Trondheim	2014	0.42	0.43
A1173 / Kiln Lane	2014	0.97	0.73
Grimsby Road / Station Road / High Street (Waltham)	2014	0.74	0.94
Waltham Brigsley Road Mini Roundabout			
Station Road / Peaks Lane / Humberston Ave (New Waltham)	2014	0.68	0.56
Humberston Road / Church Ave / North Sea Lane (Humberston)	2014	0.66	0.55

Table 3.2 - North East Lincolnshire Major Roundabout Performance (Ratio of Flow to Capacity)



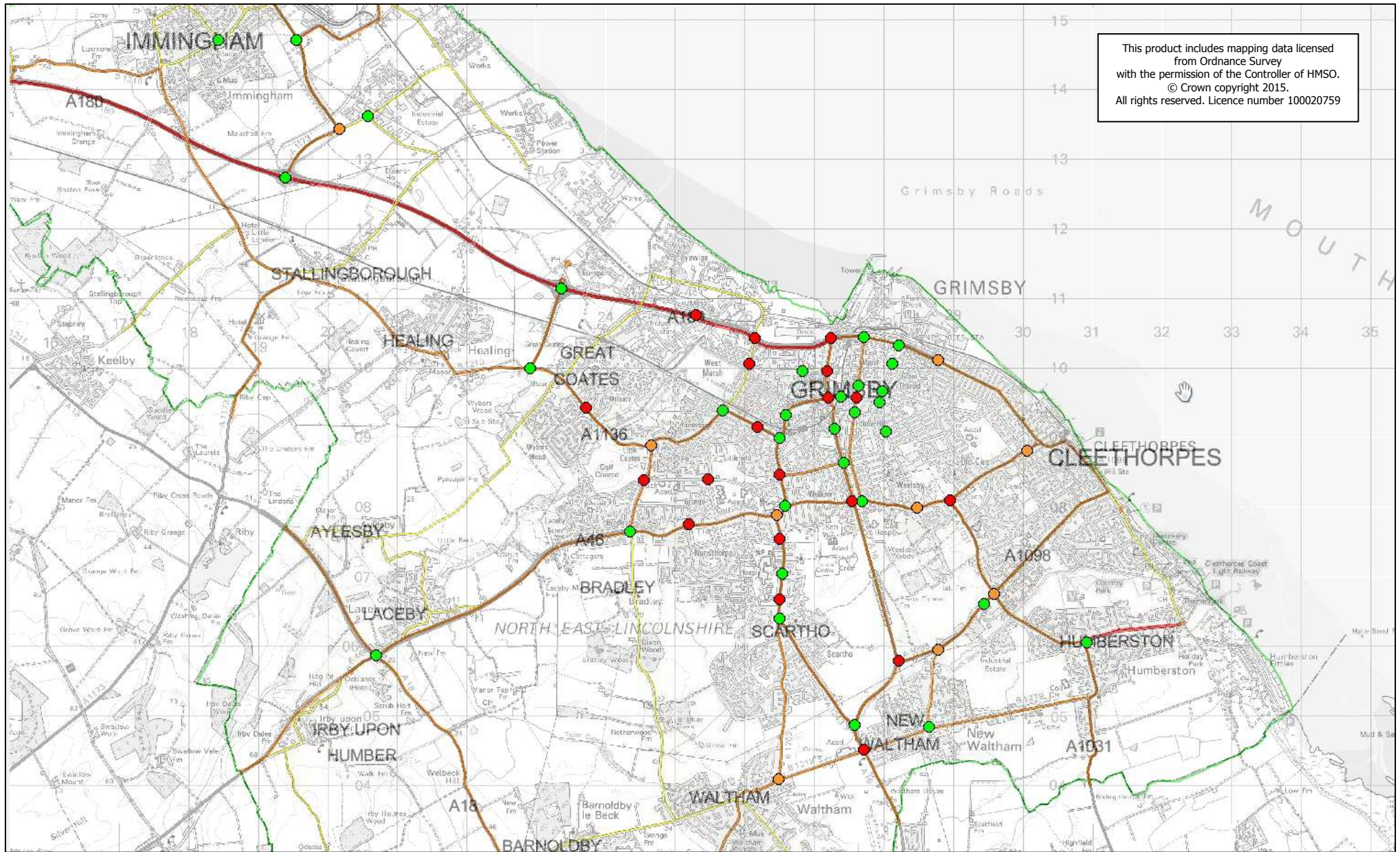


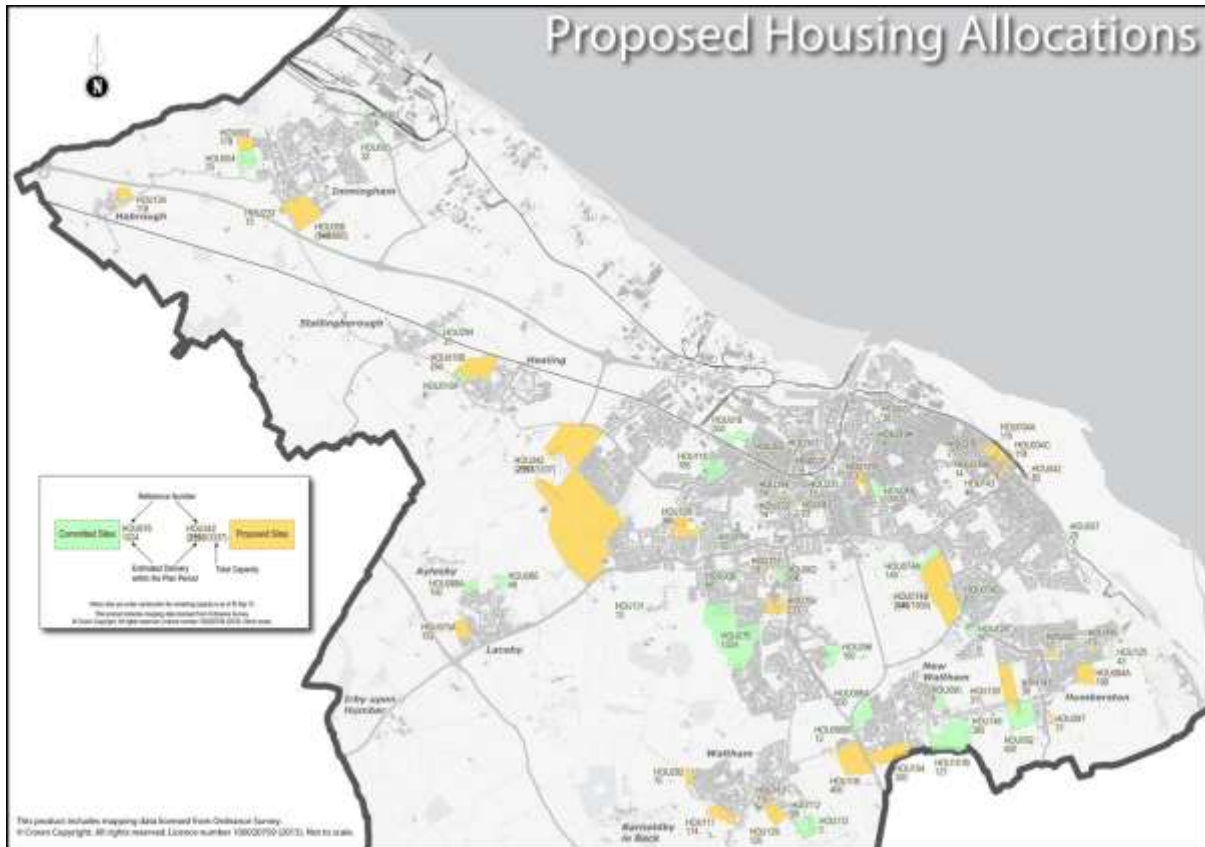
Figure 3.12 - Current Junction Performance in North East Lincolnshire (From Tables 3.1 and 3.2 Above)

## 4 Planning for Growth

## 4.1 Planning for Growth

North East Lincolnshire is promoting an ambitious new Local Plan. Strategic employment sites on the South Humber Bank, along with growth in Grimsby town centre provide the drivers for significant housing growth.

The plan below shows the proposed housing sites in North East Lincolnshire's new Local Plan . These housing allocations have been assessed against criteria set out in National Planning Policy Framework (NPPF) to prove that development is sustainable and suitable for growth.



*Figure 4.1 - Housing Growth Sites in new Local Plan*

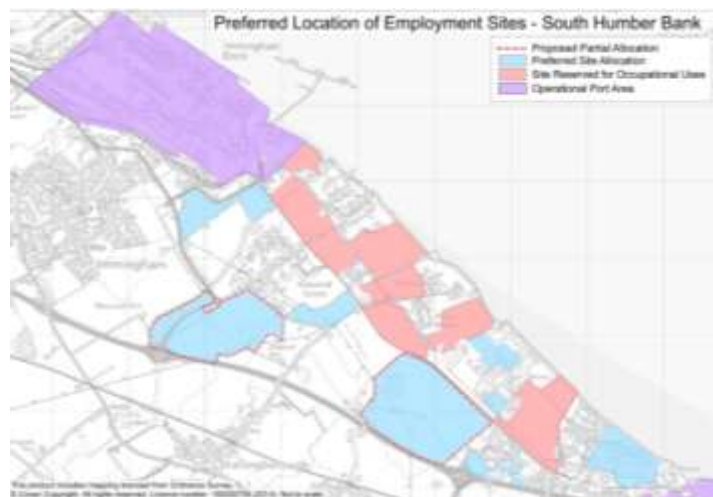


Figure 4.2 - Employment Allocations on South Humber Bank in New Local Plan



# 5 Demand Generation and the Planning Process for Highways

Traffic generation for the Local Plan essentially has three key considerations. These are:

- Background growth,
- Traffic generation (typically by housing) and
- Traffic destination (typically by employment or leisure offer).

## 5.1 Background Growth

The Department for Transport (DfT) operates a high level traffic growth prediction tool called TEMPRO. TEMPRO predicts that traffic will continue to grow locally, although below the national average. This is displayed in Figure 5.1 below, and is typically in regards to cars.

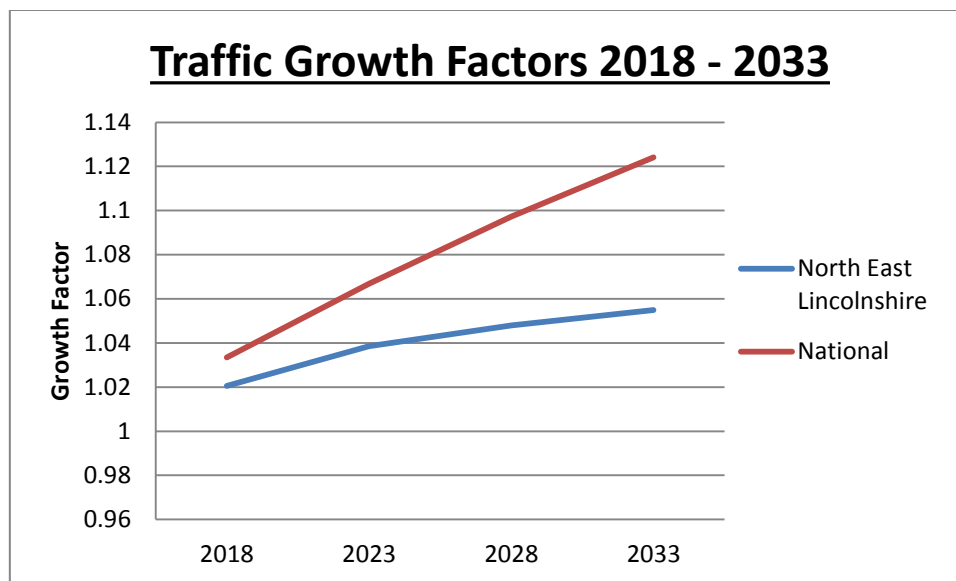


Figure 5.1 - Traffic Growth Predictions in the Local and National Context

The other consideration for background growth is in regards to Heavy Goods Vehicles (HGV's) for industrial growth. The DfT's 'Road Traffic Forecasts 2015' states that it expects HGV traffic to grow by 9.3% over the new Local Plan period.

## 5.2 Traffic Generation

Traffic generation is typically a result of housing development and economic growth. Locally, we retain many of the principals from DfT's 'Guidance on Transport Assessment' (2007). Although this guidance has now been withdrawn and replaced with National Planning Policy Framework (NPPF), there remain some useful principals. For example, trip distribution methodology options, how to quantify the number of trips per dwelling from a proposed development and the threshold for traffic to request a detailed junction assessment, are all practical considerations which can be carried over without impeaching on the principals of NPPF.

## 5.3 Traffic Destination

These same principals are also applied to traffic destination points; a new employment site may also consider use of a 'gravity model;' which will provide a more robust analysis of where potential employees

are likely to travel from. This is usually based on Census data. A residential development is more likely to apply turning proportions of existing traffic

National Planning Policy Framework (NPPF) has no specific transportation assessment methodology for analysing and mitigating against increases in traffic and congestion as a result of development. Instead, NPPF states only that ‘development should only be prevented on transport grounds where the residual cumulative impact of development are severe’ with a presumption in favour of development.

In many circumstances, it is appropriate to use the principals set out in the Department for Transport’s (now superseded by NPPF) ‘Guidance on Transport Assessment’. This guidance considers an impact of 5% or 30 two way trips at a particular junction to be substantial enough to warrant analysis and potential mitigation in order to reduce the impact of development.

## 5.4 Future Options

Within this document, we have already identified that areas of the highway network are suffering congestion. We have also considered the ambitious level of growth proposed in the new Local Plan for both industrial and housing growth. In order to deliver the proposed growth, infrastructure must be in place to accommodate increased traffic levels.

This section of the document considers the requirement for junction upgrades and new highway infrastructure, as well as how to prioritise which potential schemes should come forward first.

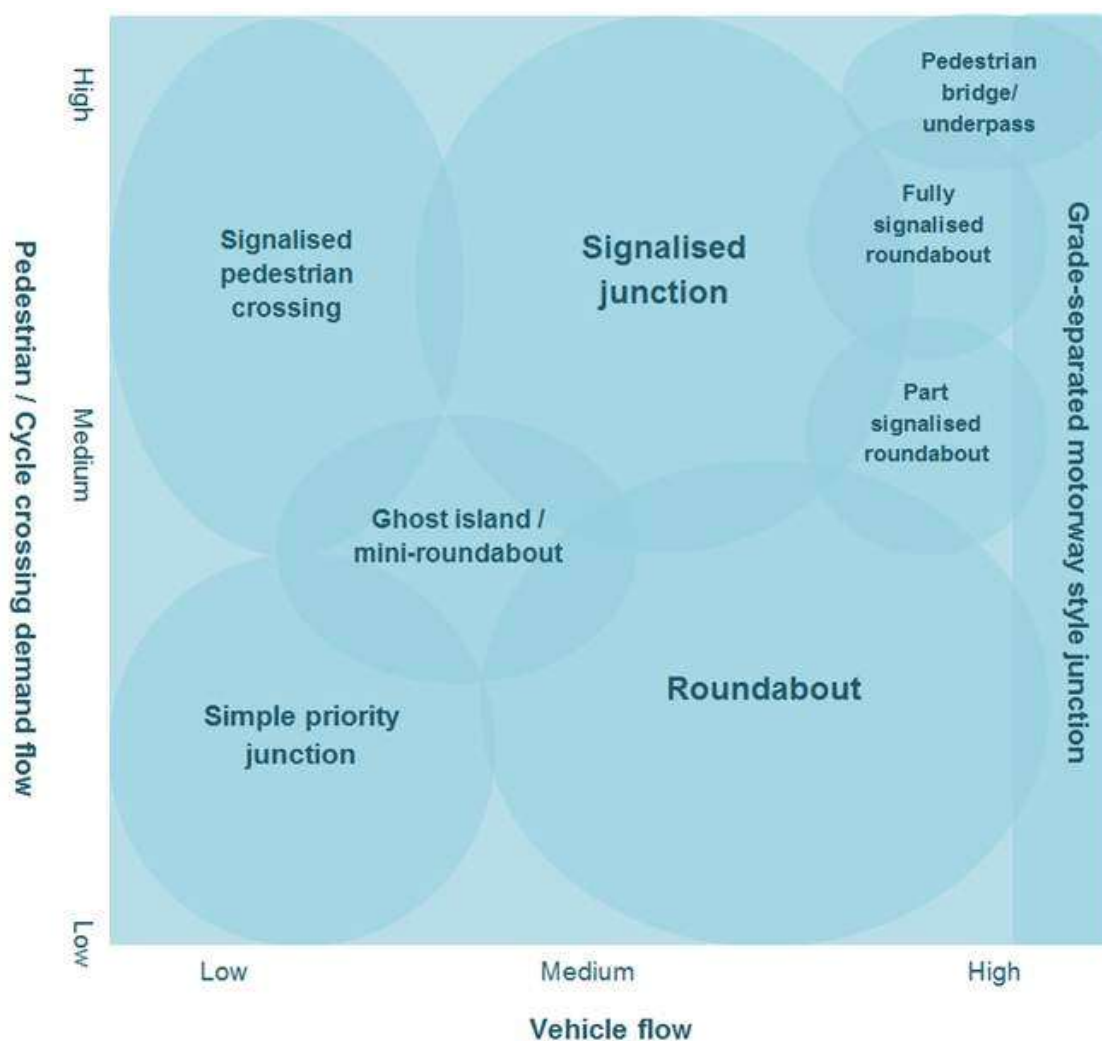


Figure 5.2- Potential junction type by interaction of modes

While Figure 5.2 is a useful tool for high level analyses of junctions, the capacity of links overall and congested corridors are not considered. The Design Manual for Roads and Bridges (DMRB) is the national standard for highway design for the strategic road network, and offers some guidance on requirements for new roads, although this is also open to a level of interpretation.

Figures 5.3 and 5.4 below are extracted from DMRB and detail how flow influences the design standard of highway links. However, some ambiguity exists in considering new links. If a proposed road has a flow of 1,400 vehicles per hour, for example, these tables imply that the road could be constructed to Urban All-Purpose Road (UAP1), 2, 3 or 4 standard, depending on road width. In practise, much will depend on the practical purpose of the road. If a new road is specifically to service a new development, it may be suitable to lean more towards UAP3 or 4; if it forms part of a strategic highway link, it would be more appropriate to design to UAP1 or 2 standard.

North East Lincolnshire has a network which, as discussed in Section 3, has been built up over a long period of time; during this time, demand has growth beyond the design capacity of some junctions as geographical gaps have been filled with development. Therefore, being able to improve the design standard of particular existing highway links and junctions is limited, as the area has been built up around the transport network. If a road has heavy traffic but also has direct driveway access from it, the limit of design standard to which a link may be upgraded would be UAP2. If additional demand is required above and beyond this level, Compulsory Purchase Order (CPO) may be considered in order to deliver appropriate, safe highway infrastructure on key strategic link roads. This was last undertaken in North East Lincolnshire in preparation for Peaks Parkway to be constructed in the 1990s.

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)									Dual Carriageway			
		Total number of Lanes									Number of Lanes in each direction			
		2				2-3	3	3-4	4	4+	2		3	4
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	UM	Not applicable										4000	5600	7200
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

Figure 5.3 – DMRB Highway Link Standards by Flow

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
<b>General Description</b>	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
<b>Speed Limit</b>	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
<b>Side Roads</b>	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
<b>Access to roadside development</b>	None. Grade separated for major only.	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
<b>Parking and loading</b>	none	restricted	restricted	unrestricted	unrestricted
<b>Pedestrian crossings</b>	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
<b>Bus stops</b>	none	in lay-bys	at kerbside	at kerbside	at kerbside

Figure 5.4 – DMRB Highway Link Design Features by Type

Technology has the potential to play an important role in the accommodation of future traffic growth. North East Lincolnshire Council (NELC) has recently invested in a new Urban Traffic Management Control (UTMC) system called PC SCOOT (Split Cycle Offset Optimisation Technique), which has the potential to maximise the performance of each set of traffic signals based on real-time vehicle detection. The system can cast a net over several sets of traffic signals to form a dedicated 'region'. The UTMC system will try to co-ordinate and maximise throughput within this 'region'.

NELC has also invested in traffic modelling technology, and operates a cutting-edge strategic traffic model which can be used for testing the impact of major schemes, and help to examine proposed solutions to traffic issues. Traffic modelling has moved at such pace over the last 10-15 years that a more robust understanding of how the highway network operates is now more accessible than ever before.

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)									Dual Carriageway			
		Total number of Lanes									Number of Lanes in each direction			
		2				2-3	3	3-4	4	4+	2		3	4
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	UM	Not applicable										4000	5600	7200
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

**Table 2 Capacities of Urban Roads**  
**One-way hourly flows in each direction**

Notes

1. Capacities are in vehicles per hour.
2.  $HGV \leq 15\%$
3. (\*) Capacities are excluded where the road width is not appropriate for the road type and where there are too few examples to give reliable figures.

*Figure 5.5 - DMRB Highway Link Design Features by Type*



## 6 Prioritisation Framework

### 6.1 Scheme appraisal

The review of the relevant policy documents has highlighted the importance of promoting economic growth as a key cross-cutting policy theme which is incorporated within all documents. There are many other themes relating to accessibility & wellbeing and environmental considerations contained within the evidence base documents in Section 2. To build upon the existing evidence compiled to date, these themes have been incorporated into the following suggested Group Headings and Sub Categories.

Group Headings	Sub Categories
Economy and Growth	Gateway Impacts (Overall Improvements in Journey Times, Accessibility, On Site Facilities)
	Support Future Housing
	Creation of New Jobs
	Journey Time Improvements and Reliability
Environmental	Carbon Reduction
	Air Quality and Noise
	Impact on areas of Environmental Significance
	Aesthetic and Visual Amenity
Accessibility & Well Being	Accessibility from Residential Areas to Employment, Education and Other Opportunities
	Active Travel
	Severance
	Road Safety
Scheme Acceptability and Funding Risks	Stage of Scheme Development
	Acceptability
	Funding Source
	Scheme Cost
	Aligned with Supporting Policy Documents

Table 6.1 Summary scheme appraisal table

### 6.2 Assessment Weighting

For each sub category, a weighting has been applied based on the importance that each heading has in the local context as described in the paragraphs above. Table 1.3 details the weightings applied to scheme appraisal. These proportions are consistent with guidance from regional funding bodies such as the Greater Lincolnshire Local Enterprise Partnership (GLLEP), and therefore considered suitable for usage as a proxy for acceptability into external funding programmes.

Group Headings	Group Weight Proportion
Economy and Growth	40%
Environmental	15%
Accessibility & Well Being	25%
Scheme Acceptability and Funding Risks	20%

Table 6.2 - Assessment Weighting Proportions

### 6.3 Scoring Criteria

The summary of the proportion of the score for each Group Heading that is employed is as follows:

	Criteria	Definitions	Score	Available Evidence Base	Score (with Weight)
Economy and Growth	A) Gateway Impacts (Overall Improvements in Journey Times, Accessibility, On Site Facilities)	Strong Positive	2	Trips Impacted (Traffic Data, TRADS Data) Freight Movement (Tonnes) PT Information / Frequencies / Patronage Journey Time Savings (High Level Paramics)	6
		Positive	1		3
		Neutral	0		0
		Negative	-1		-3
		Strong Negative	-2		-6
	B) Support Future Housing	Housing > 2,500 Dwellings	4	Local Plan, GIS Shapefile, Local Planning Authority	20
		Housing 1,000 - 2,500 Dwellings	3		15
		Housing 500 - 1,000 Dwellings	2		10
		Housing 0-500 Dwellings	1		5
		Housing 0 Dwellings	0		0
	C) Creation of New Jobs	Enables Development of Enterprise Zones / Strategic Employment Sites	2	Local Plan Documents, Employment Shapefile, English Partnerships Employment Density Estimates, Local Authority,	10
		Enables Sub Regional Job Creation	1		5
		Neutral	0		0
		Results in loss of Jobs	-1		-5
	D) Journey Time Improvements and Reliability	Significant Congestion Relief on Trans European Network	3	MasterMap Data, Junction Model Data, Documented Congested Areas, Local Plan Infrastructure Studies, Link Flows, Passenger Counts, Route Utilisation Studies	6
		Significant Congestion relief on a key transport corridor	2		4
		Localised Congestion relief	1		2
		Neutral	0		0
		Localised Congestion increase	-1		-2
		Congestion increase on a key transport corridor	-2		-4
		Congestion increase on Trans European Network	-3		-6
Environmental	E) Carbon Reduction	Significant Reduction in Carbon Emissions	2	High Level Modelling Results GIS Route Analysis Assessment Estimation of transfer of trips	2
		Slight Reduction in Carbon Emissions	1		1
		Neutral	0		0
		Slight Increase in Carbon Emissions	-1		-1
		Significant Increase in Carbon Emissions	-2		-2
	F) Air Quality and Noise	Significant AQMA improvements	3	High Level Modelling Results AQMA Impacts Number of dwellings affected by scheme	3
		Significant Air Quality and / or Noise Improvements	2		2
		Moderate Air Quality and / or Noise Improvements	1		1
		Neutral	0		0
		Moderate Air Quality and / or Noise disbenefits	-1		-1
		Significant Air Quality and / or Noise disbenefits	-2		-2
		Significant AQMA disbenefits	-3		-3
	G) Impact on areas of Environmental Significance	Significant Improvement	2	Impact on Areas of Environmental Significance (Government Websites, Local Authority Info)	2
		Moderate Improvement	1		1
		Neutral	0		0
		Moderate Disbenefit	-1		-1
		Significant Disbenefit	-2		-2
	H) Aesthetic and Visual Amenity	Introduction of new landscaping area	2	Replacing 'green' with 'grey', Character based or location defining infrastructure removal	4
		Increase in aesthetic potential / area	1		2
		Neutral	0		0
		Decrease in aesthetic potential / area	-1		-2
		Removal of longstanding / landscaped urban area	-2		-4

Accessibility & Well Being	I) Accessibility from Residential Areas to Employment, Education and Other Opportunities	Significantly improved access from residential areas to developments	2	Links to Transformational Employment Areas (including: AMEP, RGF, Logistics Park, Humber Green Port Corridor, Europarc, Grimsby Shopping Centre, Border Inspection, New Morrison Fish Processing, Biofuel Production) GIS assessment (Ward Analysis) Land Use Data, Indices of	6
		Moderately improved access from residential areas to developments	1		3
		Neutral	0		0
		Moderately poorer access from residential areas to developments	-1		-3
		Significantly poorer access from residential areas to developments	-2		-6
	J) Active Travel	Significant improvement in Pedestrian / Cycle Facilities	2	LUTI Assessment Study PT Frequency Shapefiles (Health Websites) Severance info - Demographics Existing Cycle and Pedestrian Facilities	4
		Moderate improvement in Pedestrian / Cycle Facilities	1		2
		Neutral	0		0
		Slight disbenefit in Pedestrian / Cycle Facilities	-1		-2
		Significant disbenefit in Pedestrian / Cycle Facilities	-2		-4
	K) Severance	Significant improvements to severance	2	Severance info - Demographics, Indices of Deprivation, Local Knowledge, Crime Info	4
		Moderate improvements to severance	1		2
		Neutral	0		0
		Moderate disbenefit to severance	-1		-2
		Significant disbenefit to severance	-2		-4
	L) Road Safety	Reduction in 2 KSI's/yr	3	Accident Data and Cluster Analysis	6
		Reduction in 1 KSI's/yr	2		4
		Reduction in 0-1 KSI's/yr	1		2
		Neutral	0		0
		Increase in KSI's / yr	-1		-2
Scheme Acceptability & Funding Risks	M) Stage of Scheme Development	Detailed Design	3	Local Authority Scheme Promoter	12
		Preliminary Design	2		8
		Feasibility	1		4
		Aspirational	0		0
	N) Acceptability	Significant Public and Stakeholder Support	2	Local Authority Scheme Promoter Records of consultation (Letters, workshops, publication in policy Documents)	8
		Moderate Public and Stakeholder Support	1		4
		No Consultation Undertaken	0		0
		Moderate Public and Stakeholder Opposition	-1		-4
		Significant Public and Stakeholder Opposition / Bid Rejection	-2		-8
	O) Main Funding Source	Central Government	NA	Local Authority Scheme Promoter	NA
		Local Authority	NA		NA
		Developer Contributions	NA		NA
	P) Scheme Cost	>£10m	NA	Local Authority Scheme Promoter	NA
		£5m - £10m	NA		NA
		£2.5 to £5m	NA		NA
		£1 to 2.5m	NA		NA
		£0.5 to £1m	NA		NA
		<£0.5m	NA		NA
	Q) Aligned with Supporting Policy Documents	The Humber Transport Body Assurance Framework	NA	Review of Policy Documents	NA
		NELC Local Transport Plan 3	NA		NA
		A Plan for Humber	NA		NA
		NELC Plan	NA		NA
		Draft Local Plan (IDP)	NA		NA
		Strategic Housing Land Availability Assessment	NA		NA
		Development and Growth Plan	NA		NA
		NELC Sustainable Communities Strategy	NA		NA
		Highway Strategy	NA		NA
		Creating Growth, Cutting Carbon	NA		NA

Table 6.3 Scoring criteria matrix

# 7 Option Generation: Junctions

## 7.1 Junction schemes

Table 7.1 provides a good basis from which to start considering where the priorities lay within North East Lincolnshire. This can be considered in the prioritisation matrix which is developed in Section 6. Prioritisation is a result of the combination of appraisal criteria, presented in 'Overall Score' in Table 7.1 below. The maximum total score possible is 82. Junctions with no congestion issues are omitted from this list unless a specific reason is known to require additional capacity, for example, committed development.

Junction Schemes	Overall Score
A180 at Westgate Roundabout	54
A180 at Pyewipe Roundabout	52
Toll Bar	44
Littlecoates Road at Cambridge Road	44
Nuns Corner	41
Great Coates Road at Larmour Road, Wybers Way	39
A1136 at Great Coates Road	39
A1173 Kiln Lane	39
Peaks Parkway at Weelsby Road	37
Scarcho Road at Matthew Telford Park	35
A180 at Lockhill Roundabout	35
Low Farm Roundabout	33
Corporation Road at Boulevard Avenue	33
Corporation Road at Victoria Street	32
Scarcho Road at Hospital Entrance	31
Bargate at Westward Ho and Wintringham Road	30
Hewitts Circus	28
Love Lane Corner	26
Stallingborough Interchange	26
Great Coates Interchange	23
Peaks Parkway at Ellis Way, Victoria Street, Frederick Ward Way	22
Cambridge Road at Chelmsford Ave, Westward Ho	21
Cleethorpe Road at Park Street	20
Dudley Street, Cromwell Road, Littlefield Lane	17
Weelsby Road at Ladysmith Road	17
Clee Road at Brereton Avenue	16
Hewitts Avenue at Peaks Lane	16
Toothill Roundabout	16
Scarcho Fork	15
Lacey Road at Winchester Avenue	14
Hainton Square	14
Watham Mini Roundabout	14
Scarcho Road at Sutcliffe Avenue	13

**Table 7.1 - Junction Prioritisation Matrix**

The result of this assessment is a list of potential schemes with comparable impact on the highway network. Although the list can be subject to prioritisation on the basis of 'Overall Score', there may be instances when a deviation from this is necessary. For example, if a major development comes forward in a specific area, driver behaviours change, or key trip end points, such as new employment destinations, are created. Table 7.1 should, however, form the basis for how highway schemes are identified and funding sought in the immediate future in order to resolve existing and immediately foreseeable issues.

# 8 Option Generation: Links

## 8.1 Links

New link roads, and improvements to existing link roads, need to be considered in the analysis of future growth.

Improvements to existing roads are difficult to truly demonstrate the value of. As discussed in Section 5, highway links are often subject to certain criteria which dictate their design profile. However, vast increases in demand on a particular stretch of highway may lead to an eventual saturation point within the link, and require significant upgrades. This may involve Compulsory Purchase Order (CPO) of land outside the highway boundary.

Conversely, safety can be considered as a key reason for upgrading links. The A18 has a significant history of accident issues, which could be resolved with substantial investment. This section of the report considers how these schemes may be assessed.

Effective planning for growth on the highway network requires a strategic approach, one which looks ahead, beyond the Local Plan period which runs to 2032. Highway schemes typically take many years to consider alongside other options, design assessing different options, constraints and impacts and finally to implement when appropriate funding is secured. North East Lincolnshire's emerging New Local Plan indicates a long term destination shift towards the South Humber Bank as a more attractive destination for economically driven vehicular trips. This will be aided in part by the proposed link road between the A1136 and A46 and junction improvements along the existing network.

## 8.2 A1136/A46 link

Initial studies indicate that this link road has the potential to significantly reduce journey times in the AM peak period. The impact of this link could reduce all journey times across the network by almost two minutes, as highlighted in Figure 8.1 below. This is a cross-network benefit, as it is taken as an average of all users on the strategic network in the AM peak period. This benefit would be applied to more than 85,000 trips every working day, providing a significant economic benefit to road users. Further benefits of this link road are indicated in the Inter Peak period.

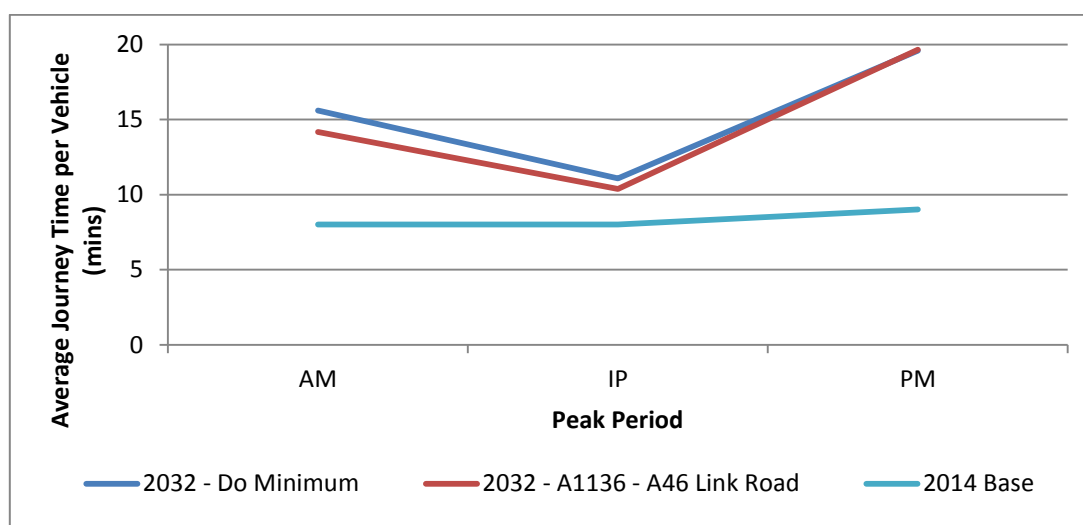


Figure 8.1 – New Local Plan - Journey Time Impact of Construction

The A1136 / A46 link road is identified as a commitment in the emerging Local Plan, to be delivered in the plan period. However, there is a continuing requirement as part of sound strategic planning to consider

future scenarios and long term future growth. The potential of a further section of link road which could provide a link between the A46 and A16 has also undergone preliminary testing. The initial modelling results show that there could be further significant benefits to journey times across the strategic network within North East Lincolnshire. Additional journey time benefits of this link are seen in all three peak periods, with journey time savings of approximately 1 minute, which would apply to around 260,000 highway trips every working day.

The potential of a further link, between the A16 and Cleethorpes has also been subject to initial modelling. Journey time savings of approximately 1 minute in the AM peak and 2 minutes in the PM peak would apply to approximately 185,000 vehicle trips in total every working day.

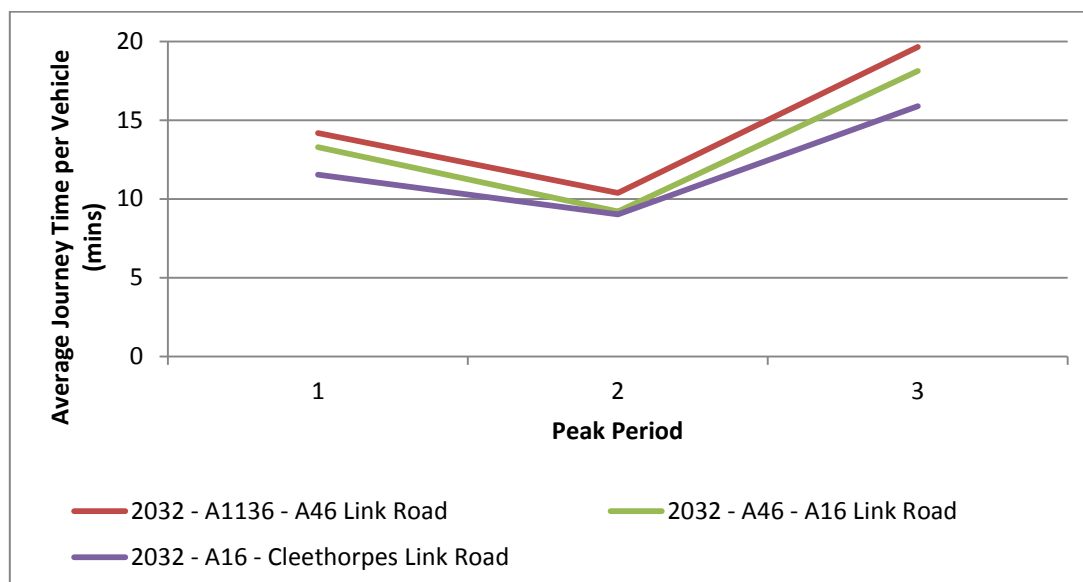


Figure 8.2 - Journey Time Savings Comparison for Potential New Highway Links

Over time, the potential of further link roads, which are not committed infrastructure within the new Local Plan, will be explored further. This will include monitoring travel patterns and network capacity, assessing alternative sustainable transport options alongside exploring potential benefits, challenges and deliverability of potential additional link roads. This strategic planning will take many years to progress, as evidenced by the recent A18 – A180 Link Road major scheme; although this was comparatively simple, 10 years have elapsed between the initial business case and construction. Part of the requirement for further assessment would be for variable demand modelling, which would consider the point at which uptake of sustainable transport outweighs the desire for private car use.

### 8.3 South Humber Bank Link Road

The concept of a 'South Humber Bank Link Road' connecting Hobson Way with Moody Lane, which would provide a route between the industrial areas of the South Humber Bank, has been an ambition of the local highway authority since LTP2. This scheme would also enable new areas for development, and reduce demand on the A180 by removing the HGV demand between Grimsby and Immingham Docks.

An upgrade to Moody Lane would be required to bring it up to an adoptable standard, alongside creation of a new link road from the roundabout stub to the existing Moody Lane end point.



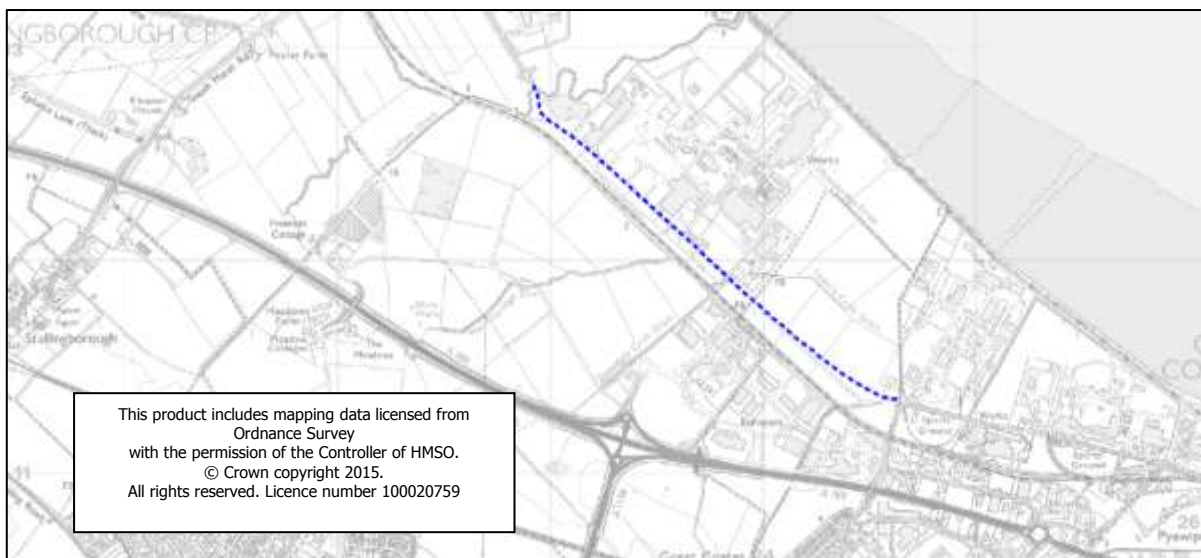


Figure 8.3 - South Humber Bank Link Road

## 8.4 A18 route improvements

As discussed above, the A18 requires significant upgrades in order to meet safety standards. Implementation of the A1136 – A46 link road and A16 – A46 link road may reduce the requirement for upgrades to the A18 due to provision of a suitable alternative strategic route for heavy traffic flows. This could result in the reclassification of the A18. However, as new link road schemes are often very complex and time consuming schemes to deliver, safety improvement to the A18 require implementation in the shorter term. The area of concern is highlighted in Figure 8.4 below.

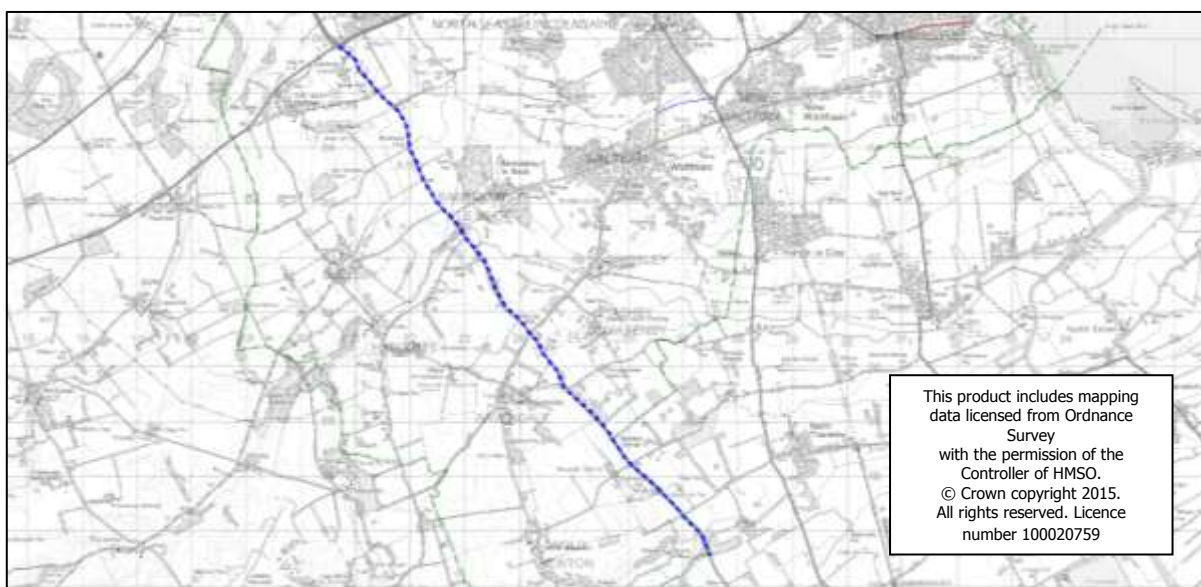


Figure 8.4 - A18 Area of Concern

Link Road Schemes	Overall Score
A46 - A1136 Link Road	59
A46 - A16 Link Road	52
Humberland Link	50
A16 - Cleethorpes Link Road	43
A18 Improvements	22

Table 8.1 - Link Road Prioritisation Matrix



# 9 Governance, Processes and External Factors

## 9.1 Governance

Major highway schemes will require a significant amount of guidance and governance in order to be successful and deliver the outcomes as proposed. There are a number of formalities which should be considered in line with the scale of the project.

Because major highways schemes which are externally funded will essentially be conducted by NELC in partnership with ENGIE, there is a clear need for a collaborative approach. Any bids for external funding will be submitted by NELC as the local authority (bidding body), with the intention of ENGIE delivering the works. Therefore, at the highest level of scheme delivery, from the outset of bidding, there needs to be a joint approach.

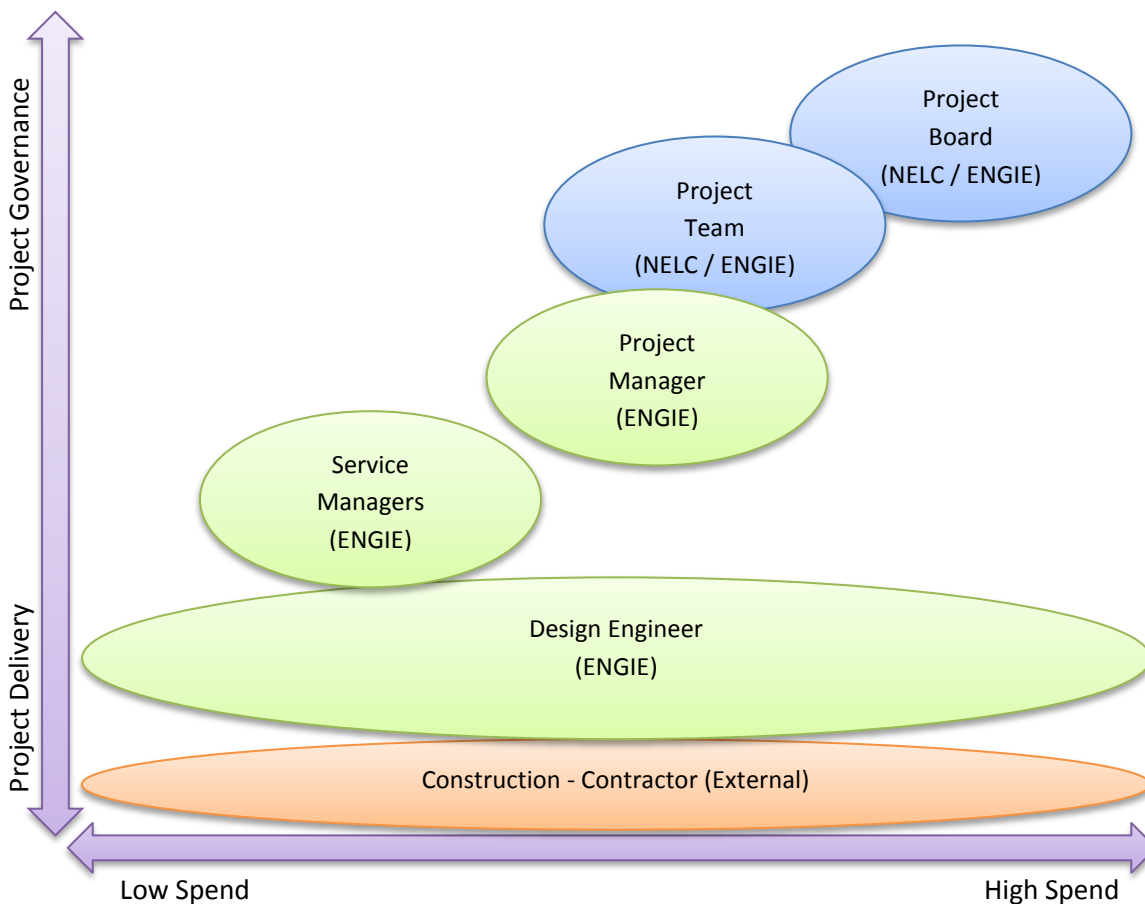


Figure 9.1 - High Level Governance Structure for Major Highway Projects

The above demonstrates that larger projects require a higher level of project governance (project board), whereas comparatively lower cost projects require a lower level of governance and could be managed entirely by project of service managers. Because of the profile of schemes, Project Boards and Project Teams should contain members from both NELC and ENGIE.

# 10 Conclusions and Recommendations

---

## 10.1 Conclusions and recommendations

This section presents the conclusions drawn from this strategy document and proposed recommendations to move forward.

- Table 7.1 presents a list of junctions which will require significant upgrades during the new Local Plan period to 2032. Although it is possible to prioritise this last based on the 'final score' column, a pragmatic approach will be taken in regards to pursuing sites which can deliver benefits in line with growth ambitions. Town and Country Planning Act 1990 - Section 106 contribution date restrictions may also influence which schemes come forward as priorities.
- Table 7.1 is not exhaustive, and it may be wise to assess junctions close to capacity with the potential to restrict development as time progresses. For example, Scartho Fork is shown at 0.82 RFC, and it is known that committed development will take this junction over capacity. This will require a significant upgrade in order to enable growth, and other junctions may be similar. Strategic highway schemes will be pursued in line with restraints.
- Schemes in Tables 7.1 and 8.1 should be pursued and/or investigated further in order to deliver NELC growth ambitions.
- Consultation on the delivery of schemes herein will be proportionate to the level of impact, spend, requirement of the Regeneration Partnership and any specific issues dictated by funding bodies. This will be considered on a scheme-by-scheme basis.
- Table 6.4 explains the requirement for improved highway links. The benefits of undertaking these schemes are not only to users of the proposed improvements, but also users of the existing highway by means of alternative attractive provision. Significant levels of growth proposed in the new Local Plan require significant highway infrastructure to ensure a safe and useable asset is retained for future generations. Improvements to existing highway links, and the creation of new highway links, are crucial in the delivery of accelerated economic growth in North East Lincolnshire. New highway links and the improvement of existing highway links will be pursued for delivery in line with growth plans and deliverability.
- This document forms part of the Local Transport Plan (LTP) 'group', and sits at a level between the LTP strategy and the LTP Delivery Plan.
- This document will be reviewed regularly in line with growth proposals and predicted changes to the network, or production of refreshed Local Transport Plans looking forward.
- This strategy should be adopted alongside the LTP.

# II Glossary of Terms

---

<b>ABP</b>	Associated British Ports, operators of ports in Grimsby and Immingham.
<b>AQMA</b>	Air Quality Management Area, declared in zones at which levels of pollutants are deemed excessive
<b>Archaeology</b>	Pertaining to studies of historic culture or behaviour
<b>BCR</b>	Benefit Cost Ratio, a measure of how much monetary value is gained from potential scheme implementation
<b>CPO</b>	Compulsory Purchase Order, pertaining to land acquisition.
<b>Delay</b>	Time based performance measure used to test potential highway schemes for viability. Less 'delay' means a more efficient network.
<b>Ecology</b>	Studies pertaining to wildlife in their natural environment.
<b>Environment</b>	Other biophysical issues not detailed specifically. In this instance, includes factors such as flooding, plant life and visual appeal.
<b>LinSig</b>	Traffic modelling software used to test potential highways schemes performance. Usually measures in 'PRC' (below) and limited to one or two junctions in close proximity.
<b>LTP</b>	Local Transport Plan; NELC adopted document detailing the strategy behind delivering transport interventions.
<b>LTP3</b>	3 <sup>rd</sup> Local Transport Plan, a document outlining NELC's transport strategies with a rolling annual delivery plan
<b>PRC</b>	Practical Reserve Capacity, a congestion based performance measure used when testing schemes for viability in LinSig. Further info on page 17.
<b>S-Paramics</b>	Traffic modelling software used to test potential highways schemes performance. Has several useful performance measures, and provides an overview of network wide implications.
<b>S106 / Section 106</b>	Town and Country Planning Act 1990 financial contributions to mitigate against the impacts of a development. These are often time constrained to five years.
<b>Services (underground / overhead)</b>	May refer to provision of existing electric, gas, water and other connected utility delivery infrastructure, e.g. pipes or pylons
<b>SHLAA</b>	Strategic Housing Land Availability Assessment relevant to North East Lincolnshire detailing a rolling 5 year supply of potential housing sites.