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Executive Summary

This document is the third Local Transport Plan (LTP3) to be produced by the County Council and replaces the second Local Transport Plans for Greater Nottingham (which was produced jointly with the city of Nottingham) and for North Nottinghamshire. LTP3 details the transport strategy for the whole of the county of Nottinghamshire for the fifteen year period 1 April 2011 to 31 March 2026.

The LTP3 consists of two separate documents – the local transport strategy detailing how transport improvements will be delivered in the county; and an implementation plan setting out the types of measures and where investment will be prioritised to deliver the local transport strategy. The local transport strategy element of LTP3 will be reviewed at least every five years to ensure it still meets the needs of the county. To ensure the implementation plans take account of realistic funding levels, they will run for the same period as Central Government's capital funding allocations. The Implementation Plan will be reviewed annually to ensure the effective delivery of the local transport strategy. An annual programme of measures will be developed each year. The LTP3 is also supported, and influenced, by numerous other corporate, transport related and externally produced documents.

The LTP3 has been developed following extensive consultation with a wide range of consultees; and consultation will continue to be undertaken on the development of strategies and programmes of work during the Plan period. To help deliver seamless cross-boundary transport, consultation has included neighbouring and national transport authorities. Formal and informal mechanisms are in place to ensure consistency with their plans and programmes.

The LTP3 transport goals are to:

- **provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel**
- **improve access to key services, particularly enabling employment and training opportunities, and**
- **minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.**

These goals are underpinned by 12 local transport objectives which identify how transport in the county will help support economic growth; protect the environment; improve health and safety; improve accessibility; and maintain and improve existing infrastructure.

The consultation undertaken in the development of LTP3 has helped shape the transport goals and objectives of the Plan. These goals and objectives have particular regard to delivering national objectives (such as the Delivering a Sustainable Transport System and subsequent advice); County Council corporate objectives (such as the Strategic Plan 2011-2014 and Sustainable Community Strategy 2010-2020); as well as local, regional and national objectives, such as those relating to housing, economic development, education, health, social inclusion, crime and disorder, environment and social service.

Identifying the existing transport conditions and the challenges that may be faced in the future has also played an important role in developing how to make transport improvements in the future. An evidence base has therefore been gathered to help inform the local transport goals, objectives and transport strategy that has been developed to deliver the local transport objectives. The evidence base will also be used to develop future programmes of work that are included within the Implementation Plan.

Background

Nottinghamshire is a large diverse county with three very distinct areas:

- the relatively affluent suburbs surrounding the city of Nottingham
- the towns and villages in the north west that grew out of the textile and coal industries, and
- rural areas to the east and south characterised by prosperous market towns and villages in the Trent valley.

Outside the suburbs surrounding the city of Nottingham, the main towns are Mansfield, Sutton in Ashfield, Kirkby in Ashfield, Newark on Trent, Worksop and Retford.

About a third of the county's population live in rural areas, where ensuring that services are accessible can be challenging. Population projections and demographic change inform us that there will potentially be a need for 100,000 new homes in the coming years. Growing numbers of people are choosing to live in the rural or semi-rural areas of the county which can impact on the quieter lifestyles they are looking for, as well as the location of key services which are crucial for the longer-term survival of rural or isolated communities. The longer-term projected decline in the number of children and young people, and rising numbers of older people raise significant issues for the type of services needed in the future.

There were serious impacts on communities in the north and north west of the county in the early 1990s due to structural economic changes on traditional industries. After that time the county recovered well until the 2008 worldwide recession brought the sustained economic growth to a sudden end. There are also disparities in deprivation, health, crime, education and employment between districts and communities within Nottinghamshire. Deprivation levels are highest in the urban parts of north west Nottinghamshire, particularly in Ashfield, Mansfield and Worksop. The spatial variation in employment rates and qualification levels correlates closely with deprivation.

The 2001 Census shows that 20% of the population of Nottinghamshire has a limiting long-term illness, which is above both regional and national averages – only Rushcliffe district is lower than the national average. The percentages of obese adults in Ashfield and Mansfield are also higher than the average in the East Midlands and England, whilst child obesity levels in Ashfield, Bassetlaw and Mansfield districts are higher than the average in England.

Commentators on the economy are cautious as the current economic situation is uncertain and there is the possibility that the economy could worsen and experience double-dip recession leading to further job losses, putting further pressure on employment opportunities. The reductions in public sector funding and consequent job losses could affect Nottinghamshire particularly harshly given that seven of the ten largest employers in the county are public sector organisations. A key feature of the transport strategy, particularly in the short-term, will therefore be to help Nottinghamshire recover from the recession by supporting the economy and helping people access jobs and training opportunities. The transport strategy will also focus on how it can help address the disparities between districts and communities in Nottinghamshire.

The Government's Comprehensive Spending Review has resulted in substantial reductions in funding generally available to the County Council. Funding available for transport improvements in Nottinghamshire has also reduced substantially and will result in the County Council being unable to deliver the range of transport improvements seen in the last 10 years.

Existing transport conditions and future challenges

Nottinghamshire, generally, has good longer distance transport links including the M1 and A1, the East Coast and Midland Mainline rail lines, as well as the close proximity of East Midlands and Robin Hood airports. Similarly the county has good local east/west and north/south networks but there are still several challenges to delivering effective and efficient transport networks across the county.

Traffic growth across the county has been reversed, with a 1% reduction in vehicle kilometres travelled between 2005 and 2009. In 2009 traffic mileage in rural areas was at the same level as it was in 2005 which, whilst good, underlines the reliance on the private car for journeys from some

rural areas due to a lack of alternatives. As traffic growth has been constrained, CO₂ from road traffic has also been constrained.

Journey times across the county have also reduced but there remain a number of 'hotspots' where delays occur which are generally along routes into the urban centres. Journey time reductions have helped deliver air quality improvements across the county but poor air quality due to transport remains an issue at specific locations, primarily at 'bottle necks' where there are not feasible infrastructure remedies.

The current recession may have an impact on people's travel patterns, both in terms of the number and distance of journeys made. As the economy starts to recover there may be increases in the numbers of private car journeys as people return to work and people may have to travel further to take advantage of employment opportunities. Similarly, future housing and employment development could have a significant negative impact on the operation of the highway network, both in terms of delay and capacity. It is therefore vital that the district councils apply appropriate development control measures to ensure development has no impact on the existing highway network.

There have been huge decreases in the numbers of people killed and injured in road accidents. There remain, however, variations across the county and issues with some road users that will need to be addressed (currently motorcyclists, young drivers and people speeding).

The condition of the County's A, B and C roads are maintained to a high level and the condition of other transport assets is improving, including footways in local centres and the Rights of Way network. Ensuring that the network is maintained and is resilient to predicted pressures (including funding and those brought about by climate change) will be a challenge during the LTP3 period.

The numbers of people travelling by bus and rail has increased considerably as access to services has been maintained at high levels; partnership working with operators has delivered quality services; and passenger transport infrastructure has been improved. Cycling levels, however, have decreased, particularly in the north of the county.

The County Council currently provide significant revenue funding to support bus services and the availability of such funding will come under considerable pressure due to reductions in Central Government funding. Maintaining the existing levels of the bus network will therefore become an issue due to the reduced levels of County Council funding used to support bus services.

There is still significant scope for people to reduce the numbers of short car journeys and undertake more healthy active travel for such journeys. Similarly, there is scope to further increase public transport patronage instead of car journeys where good bus and rail services already exist. Increasing walking, cycling and public transport passenger levels is vital to deliver many of the objectives of the LTP3 and will require a reversal of current trends in some districts. A crucial element of this will be the promotion of facilities and services, as well as promoting the benefits of undertaking active travel. The promotion of walking, cycling and passenger transport is funded primarily from limited County Council revenue funding. The reductions in funding from Central Government mean that this funding will be constricted even further. It will therefore be essential that other funding sources are secured to fund promotional measures in order to maximise the walking, cycling and passenger transport networks.

Delivering a reliable, resilient transport system which supports a thriving economy and growth

The transport sector is a vital component of the economy, impacting on the development of local, regional and national growth. Efficient transport systems provide economic, social and environmental benefits that help deliver employment opportunities, accessibility to wider markets, time and cost savings through journey time reliability, and can help attract inward investment. The County Council's approach to delivering a reliable, resilient transport system which supports a

thriving economy and growth will focus primarily on making the best use of our existing transport networks to reduce delay on the network through a multi-disciplinary partnership approach.

Working with district councils, the County Council will look to reduce the need to travel through effective land-use planning and development control, as well as managing the impacts of parking effectively – including parking provision for new developments. This will also help ensure access to key services, particularly employment and training.

A targeted programme of smarter choices measures (such as travel plans, promotion and marketing of sustainable travel, and the better use of technology) will be delivered with a range of audiences to help influence travel behaviour as funding allows. The smarter choices measures will be supported by safety and training measures to enable people to safely use the more sustainable modes of transport. The co-ordinated management of both planned (such as street works) and unplanned (such as road accidents) incidents and events will also play a role in helping keep traffic moving on the county's roads.

In addition to public transport services, traffic management and infrastructure improvements will be provided where necessary to improve the availability and ease of walking, cycling and public transport.

Accessibility and transport choice will also be a key element in transport's role in regeneration initiatives. Improving access to local centres, alongside physical improvements, will help improve their character, vitality and viability. Similarly, protecting the rural environment from the impacts of transport, alongside helping to make rural areas attractive and accessible will assist in maximising their economic potential. Regeneration benefits will also be sought through securing strategic transport improvements when opportunities arise.

The resilience of the transport assets will principally depend on effective maintenance programmes. This will include the utilisation of the transport asset management plan and highway asset management system to deliver more effective life-cycle planning and whole-life costing. The future impacts on the network will also be addressed through effective flood risk management as well as through adaptation responses to the predicted impacts of climate change.

Improving connectivity to inter-urban, regional and international networks, primarily by public transport will be achieved through working with partners to improve longer distance services by rail and coach through frequency and journey time improvements; as well as to improve infrastructure. The County Council will also contribute to the development of high-speed rail to affect its impact on Nottinghamshire.

Encouraging sustainable and healthy travel

Almost everyone is a pedestrian at some time and therefore walking is the most accessible mode of transport available to the county's residents. Surveys in Nottinghamshire have shown that there are relatively high levels of cycle ownership throughout the county, so there is therefore a realistic opportunity to increase the number of commuter and leisure journeys that are made on foot and by cycle. Walking and cycling are a very simple way for people to incorporate more physical activity into their lives and are very important for increasing access to jobs and services for many people. When replacing trips by car they can also help reduce emissions, ease local congestion and improve air quality.

The promotion of sustainable, active, healthy travel through smarter choices measures and travel planning will be key to encouraging and increasing walking, cycling and public transport use. The provision and maintenance of highway facilities to enable people to walk and cycle, as well as access active leisure pursuits will be considered to support the smarter choices measures and travel planning. Public transport will also play a major role in encouraging sustainable travel through the provision of an affordable, reliable and convenient public transport network.

Safety concerns are often cited as a reason why people do not walk or cycle meaning that they are missing the opportunity to do more physical activity and improve their health. Fear of crime also

has similar impacts and affects some sectors of the population more than others, with women, parents, the young, the elderly and ethnic minorities having particular safety concerns that need to be taken into account in transport provision. These concerns become even more acute when they relate to trips after dark. The reduction of actual and perceived fear of crime is therefore an opportunity to increase the use of more sustainable modes of travel and measures to achieve this will be considered (such as initiatives to reduce fear of crime on public transport; the creation of safer environments; and the enforcement of traffic violations). Improved road safety will also continue to play a major role in encouraging walking and cycling. This will be achieved through targeted education and publicity, enforcement and engineering measures.

Improving access to key services, particularly enabling employment and training opportunities

The vision for accessibility in Nottinghamshire is for everyone, particularly people from less affluent backgrounds or without access to a car, to be able to reach the opportunities and services that they need. This will be achieved by mainstreaming accessibility considerations into land-use planning and locational decisions in the longer term; innovative and accessible service delivery in the medium-term, and smarter choices measures, particularly travel planning and information provision, in the shorter term.

Partnership working with service providers to ensure they are delivered effectively, alongside the provision of walking and cycling improvements to key services will be important to improve accessibility to local services. In addition to playing a vital role in delivering a sustainable transport system, the provision of an affordable, reliable, and convenient passenger transport network is essential in improving access to key services. The County Council's approach to delivering such a network will involve working with operators to improve the quality of services; improved infrastructure; better integration with other transport modes; promotion and marketing of all services and facilities; enforcement issues; pricing policies to compete with car parking in town centres; and the removal of barriers preventing people from using public transport.

Minimising the impacts of transport on people's lives, maximising opportunities to improve the environment and helping tackle carbon emissions

The effects of transport on the environment, landscape and biodiversity, including wildlife, is assessed within the Strategic Environmental Assessment (SEA) of the LTP3.

To help ensure that the highway network is resilient in the face of a changing climate, the County Council has undertaken an assessment of the likely effects of climate change on policies, standards and assets to help reduce CO₂ emissions from its activities, and to minimise the disruption and costs caused by climate change in the future. This assessment forms the County Council's strategy to adapt to climate change's impacts and a number of adaptation responses to the likely effects on the highway assets (including structures, roads, footways, or the surrounding soft estate) have been developed.

It is widely accepted that climate change is already happening, that there is a need to act to avoid its worst impacts, and that decarbonising transport is an essential part of the solution. Whilst it will be a major change, moving to a low carbon economy and transport system also presents opportunities not just for climate change but for the economy, improved health, and the wider environment. It will help people enjoy a better quality of life, without compromising the quality of

life of future generations. The County Council will support the development of a low carbon transport system through supporting change to new vehicle technologies and lower carbon fuels; promoting lower carbon transport choices; encouraging a transfer to lower carbon vehicles; and education on lower carbon transport issues.

Congestion management will play a major role in minimising the impacts of transport on people's lives, maximising opportunities to improve the environment and helping tackle carbon emissions. Addressing transport related air quality issues, particularly within air quality management areas will

involve working with district councils to assess and monitor air quality and develop action plans to improve air quality where necessary. Noise from vehicles (private, freight and public transport) can be a significant problem and reducing it is the main area of influence that the County Council can have on noise. The Council will aim to address noise from transport principally through the promotion of quieter modes of transport; highway improvements to address noise issues when appropriate; helping to manage commercial traffic when possible; and the effective co-ordination of street works.

The quality of the environment in Nottinghamshire and its communities has a major impact on many aspects of the county's life. The County Council has long recognised the need for a continued programme of investment to improve the environment. Improvements to the environment can have a positive social and economic regeneration impact. There is clear evidence that the response of individuals to their environment is closely linked to the quality of their everyday surroundings. It affects the pride that people have in their community and has a major influence on their outlook on the wider world.

The County Council will therefore look to maximise opportunities from transport to improve biodiversity, the natural, historic and physical environment. This will be achieved by providing high quality spaces for people that are not dominated by motor vehicles through guidance on the provision for new developments; local centre improvements; the management and provision of street furniture and signage; and links to regeneration proposals. The impacts of transport improvements and highway management on heritage assets and biodiversity will also be considered and used to enhance biodiversity and other assets whenever possible.

Monitoring

The County Council has determined a series of indicators to be monitored over the LTP3 period. These have been informed by:

- Government guidance concerning indicators and targets
- the Sustainable Community Strategy 2010-2020 and Strategic Plan 2011-2014 for Nottinghamshire
- the transport vision, goals and objectives
- consultation with County Council elected members, the public and stakeholders
- the Strategic Environmental Assessment of the LTP3
- robust analysis of empirical information, and
- available funding and value for money.

A hierarchy of indicators has been developed which is:

- **key outcome indicators** including targets for the relevant national indicators and any other indicators that directly measure the achievement of transport objectives
- **intermediate outcome indicators** which represent proxies or milestones towards key outcomes and includes targets for some national indicators (e.g. bus punctuality), and
- **contributory output indicators** measuring the delivery of schemes, policies or initiatives that will contribute towards the achievement of targets in the two categories above.

The national and local indicators included within the Plan have been selected with a view to ensuring that all aspects of the strategy delivery are monitored for effectiveness. This ensures that all projects can be justified in terms of their contribution towards achieving the local objectives but also reinforces their contribution to the national objectives.

There are also a number of additional output indicators included in the Strategic Environmental Assessment of the LTP3 which will be used to supplement the LTP3 indicators when reviewing the performance and impacts of the LTP3.

1. Introduction

This document details the transport strategy for the whole of the county of Nottinghamshire for the fifteen year period 2011-2026. The county of Nottinghamshire comprises the seven districts of Ashfield, Bassetlaw, Broxtowe, Gedling, Mansfield, Newark & Sherwood and Rushcliffe as shown in figure 1 on page 2.

The important links which many parts of the county have with other areas in the East Midlands and beyond can be seen from figure 1, including:

- the urbanised south east of the county's links to the 'Three Cities' sub-region of Derby, Leicester and Nottingham
- the west of the county's links with east Derbyshire
- Bassetlaw district's links with South Yorkshire, and
- Newark & Sherwood district's links with Lincolnshire.

The structure of the public sector in the county is complex, with seven district/borough councils, 10 town councils, 151 parish councils. Many organisations operate on a countywide basis – e.g., Nottinghamshire Police, Nottinghamshire Fire and Rescue Service, Connexions, and Jobcentre Plus. Others, including the two Primary Care Trusts follow different and variable boundaries. In addition, partners in Greater Nottingham (Broxtowe, Gedling and Rushcliffe districts along with Hucknall and Nottingham City) have been undertaking joint work in planning, housing, economic issues and transport; recognising its important role as an employment, retail, service and cultural hub for southern Nottinghamshire.

Nottinghamshire is a large diverse county covering 805 square miles, in which there are three very distinct areas:

- the relatively affluent suburbs surrounding the city of Nottingham
- the towns and villages in the north west which grew out of the textile and coal industries, and
- rural areas to the east and south characterised by prosperous market towns and villages in the Trent valley.

Outside the suburbs surrounding the city of Nottingham, the main towns are Mansfield, Sutton in Ashfield, Kirkby in Ashfield, Newark on Trent, Worksop and Retford.

In mid-2008, the population was 776,500, with each of the seven districts having between 100,000 and 116,500 residents. About a third of the county's population live in rural areas, where ensuring that services are accessible can be challenging.

Population figures show a high number of older people in Newark & Sherwood and Gedling; a high number of young adults in Broxtowe; and higher numbers of young children in Ashfield and Mansfield. Although birth rates have risen recently, the longer term projected decline in the number of children and young people, and rising numbers of older people raise significant issues for the type of services needed in the future. Population projections and demographic change (e.g., the increasing numbers of single-person households) inform us that there will potentially be a need for 100,000 new homes in the coming years. Growing numbers of people are choosing to live in the rural or semi-rural areas of the county which can impact on the quieter lifestyles they are looking for, as well as the location of key services which are crucial for the longer term survival of rural or isolated communities.

Less than 3% of the county's population is from ethnic minority groups, although there is a larger percentage in the areas close to Nottingham. There has been a substantial increase in the number of migrant workers since 2004, although the number of entrants has decreased more recently.

Nottinghamshire's environment and landscape is varied and valuable, with the countryside, buildings and people's sense of belonging shaped by its history. Nottinghamshire's natural and

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historic landscape, the 4,000 listed buildings, 28 registered parks, 150 historic towns and villages designated as conservation areas, all contribute to environmental quality and sense of place.

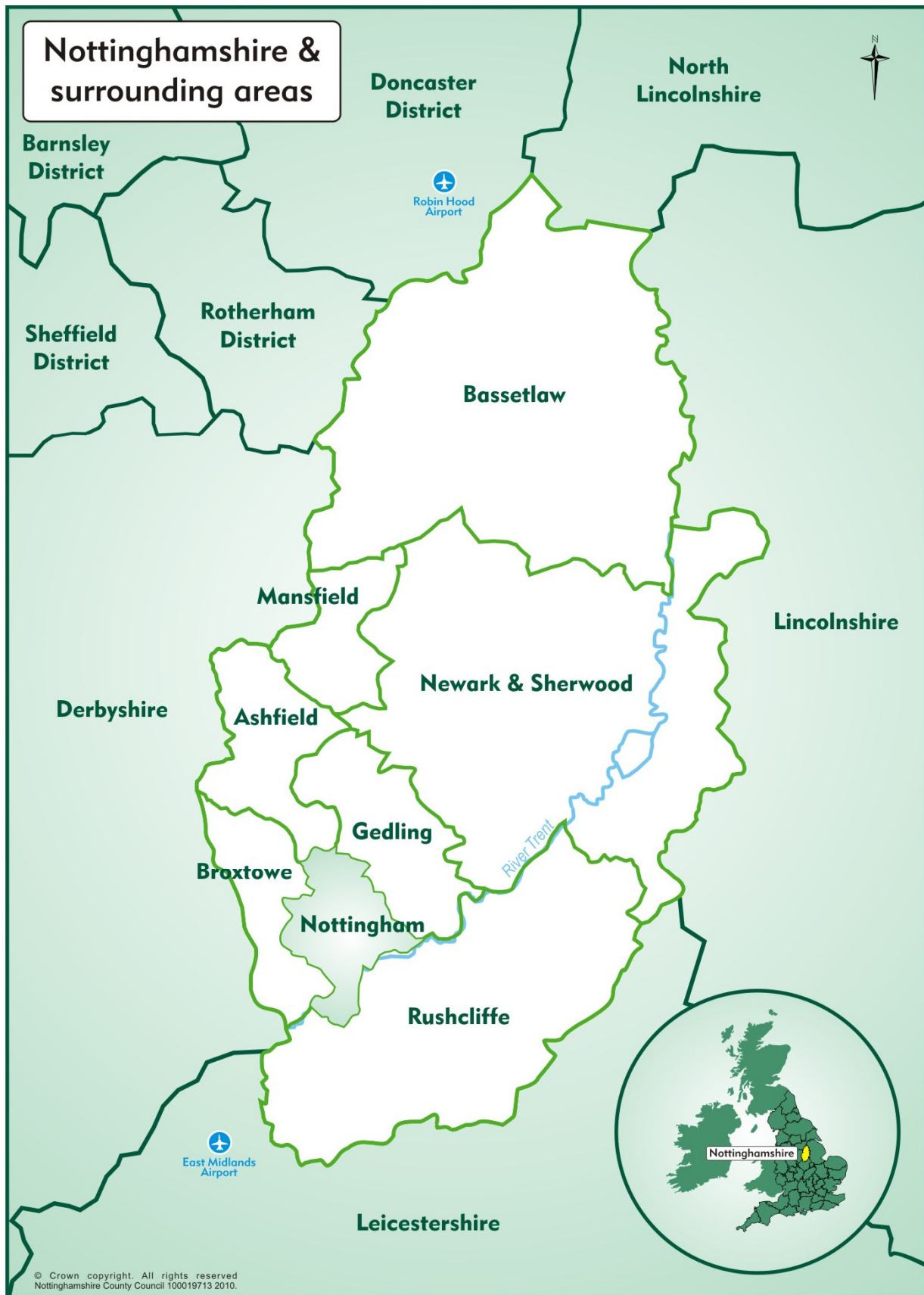


Figure 1: The county of Nottinghamshire

History shows that an over reliance on traditional industries can create serious difficulties. In the early 1990s Nottinghamshire experienced major shocks due to the structural economic changes affecting coal, textiles, clothing and other manufacturing industries. These changes had a very serious impact on some communities, particularly in the north and north west of the county.

After that time the county recovered well as new industries came to the area, existing businesses expanded, and employment grew to record levels. Until very recently, unemployment has been very low, although levels of worklessness, qualification, and skills' levels have caused concern in some areas (again the north and north west of the county).

During 2008 the worldwide recession, caused by the near collapse in financial markets, brought the period of sustained economic growth to a sudden end. In 2008, the recession began to impact upon the local economy and employment – a significant drop in output has been reported and unemployment has risen sharply. In Nottinghamshire, finance, retailing, construction and manufacturing have been significantly affected. Whilst the length and depth of the recession remains uncertain, it will clearly impact upon the county's economy in the longer term. Unemployment is likely to rise for many months before companies have enough confidence to start recruiting again. It is thought that it will take several years before a sustained recovery in employment levels takes place. Although Nottinghamshire's economy has become more diverse and innovative some areas of the county have low skills, low innovation, and low wages (particularly across the north of the county). There are significant concentrations of worklessness in several areas of the county caused by limiting long-term illness. Some highly qualified Nottinghamshire residents have to accept jobs which require lower level knowledge and skills. The public sector is a significant source of jobs in the county and it is likely that far less investment in public services will be seen in the future.

There are also disparities in deprivation, health, crime, education and employment between districts and communities within Nottinghamshire.

A key feature of any transport strategy, particularly in the short-term, will therefore be the need to help Nottinghamshire recover from the recession by supporting the economy and helping people access jobs and training opportunities. The transport strategy will also need to focus on how it can help address the disparities between districts and communities in Nottinghamshire.

1.1 The third Local Transport Plan

This Nottinghamshire Local Transport Plan is produced by the County Council and replaces the second Local Transport Plans for Greater Nottingham (which was produced jointly with the city of Nottingham) and for North Nottinghamshire.

The main functions of the third Local Transport Plan (LTP3) are to:

- draw links with wider land-use planning, economic, social, health, and sustainability agendas
- detail how the national and local priorities for transport will be delivered in Nottinghamshire
- detail local objectives and indicators that will form the basis of the County Council's investment in transport, and
- demonstrate best value solutions to transport issues in the county.

The LTP3 consists of two separate documents:

- this document which is the local transport strategy detailing how transport improvements will be delivered in the county, and
- an implementation plan which sets out where investment will be prioritised to deliver the local transport strategy.

The LTP3 is also supported by numerous other documents including the LTP3 Evidence Base Report, the Strategic Environmental Assessment of the LTP3, individual strategies etc. Further

detail on the supporting documents is included within Section 1.5 – Supporting documents, of this chapter.

1.2 Plan duration

1.2.1 Local transport strategy

The local transport strategy element of LTP3 covers the fifteen year period 1 April 2011 to 31 March 2026 and will be reviewed at least every five years to ensure that:

- it considers any changes in transport conditions
- it considers the effectiveness of the strategy to deliver transport improvements in Nottinghamshire
- its priorities and focus are still relevant and address the transport issues in Nottinghamshire, as well as national and regional priorities, and
- it considers changes in corporate priorities such as those detailed within the Sustainable Community Strategy 2010-2020.

Transport plays an important role in delivering economic, environmental and social policies locally, regionally and nationally. The duration of the LTP3 with regular periodic reviews will help to ensure better alignment between transport and other delivery plans such as the Nottinghamshire Sustainable Communities Strategy (which expires in 2020) and the district planning authorities' local development frameworks (which will run until 2026).

1.2.2 Implementation plan

The measures detailed within the implementation plans will be dependent upon the levels of funding available to the County Council. The duration of the implementation plans will therefore run for the same period as Central Government's capital funding allocations to ensure they take account of realistic funding levels. The first implementation plan will cover the four year period 1 April 2011 to 31 March 2015. Implementation plans will be reviewed annually to ensure:

- the effective delivery of the local transport strategy and transport improvements in Nottinghamshire
- the effectiveness of the measures contained within it, and
- where necessary, measures that are ineffective or are not delivering value for money can be changed.

1.2.3 Annual programme of measures

The implementation plans will be underpinned by a programme of measures that will be developed annually. The annual programme of measures will detail the schemes that will be implemented during a financial year to provide transport improvements. These are included as an appendix to the Implementation Plan.

1.3 Spatial coverage

Previously the County Council produced two local transport plans, one for Greater Nottingham (which was produced jointly with the city of Nottingham) and one for North Nottinghamshire. For the first time this Plan covers the whole of the county but not the city of Nottingham (which will have a separate LTP3 produced by Nottingham City Council) and the Plan area is the area in white in figure 1 on page 2.

1.4 Partnership working

1.4.1 Development of the third Local Transport Plan

A whole range of bodies are continuously engaged on transport issues across the county and LTP3 has been developed to reflect the needs of the different communities in the county through three rounds of consultation:

1. To identify the local transport priorities and challenges
2. To determine the strategic measures that should be used to deliver transport improvements in Nottinghamshire, and
3. On the content of the draft strategy.

The consultation sought a range of views, including those of:

- local residents
- County Council elected members
- a range of stakeholders, such as district and parish councils, community representatives, local businesses, and transport operators
- interest groups, such as those representing cycling, walking, horse riding, public transport passengers, and car drivers
- minority groups, such as those relating to race, gender, sexual orientation, and those with a disability, and
- other organisations including the NHS, neighbouring transport authorities, and government agencies.

The results of the consultation are included in various sections of this document and the Implementation Plan, and have been used to help develop the local transport strategy and measures contained in the Implementation Plan. Full details of the consultation responses are included on the County Council's website at www.nottinghamshire.gov.uk/ltp3.

1.4.2 Other transport authorities

Transport does not follow administrative boundaries and successful joint working between neighbouring transport authorities is essential. Nottinghamshire has boundaries with six other local transport authorities – the city of Nottingham, Derbyshire, Leicestershire, South Yorkshire, North Lincolnshire and Lincolnshire – each of which is responsible for producing its own local transport plan.

A joint agreement has therefore been developed between the three local transport authorities that comprise the Nottingham Core Housing Market Area (Nottinghamshire County, Derbyshire County and Nottingham City councils). Nottingham City and Derbyshire County councils are also the two authorities with which Nottinghamshire has the largest numbers of cross-boundary commuter trips. The joint agreement therefore identifies the transport areas of common importance that cross administrative boundaries. These include passenger transport strategy (including information and ticketing); road safety campaigns; transport modelling; joint planning (including housing strategy); smarter choices promotion and measures; and the co-ordination of works.

We have also worked (formally and informally) with partners in the other neighbouring transport authorities for the purpose of sharing best practice and to ensure consistency between both the local transport strategies and their implementation plans in cases where there are shared areas of interest.

In addition to the neighbouring transport authorities, the Highways Agency is responsible for motorway and trunk road networks in the county; and Network Rail is responsible for the rail network in the county. Once again we have worked (formally and informally) with these partners to ensure consistency with their plans and programmes.

1.4.3 Localism agenda

The current Government's localism agenda will have a major influence on the way that decisions about local issues will be made in the future. The County Council undertakes local transport studies in partnership with local communities to identify transport improvements in their local area. This has been a successful approach adopted and refined over the last decade and therefore these studies will continue to be developed during the lifetime of this LTP3 to help ensure community involvement in local transport improvements (further detail is included in Section 6.1.6 – Local Accessibility Transport Studies, of this Plan).

A Local Enterprise Partnership (LEP) has been established between the counties of Derbyshire and Nottinghamshire, as well as the cities of Derby and Nottingham which will provide opportunities to develop the economy by co-ordinating economic development activity and maximising their academic and commercial strengths. The LEP will have a future role in aspects of transport planning related to economic development and growth across the whole of its geographical area.

Figure 2 below shows the variety of partners that the County Council works with in the development of transport strategy and transport improvements in Nottinghamshire.



Figure 2: Partners in developing transport improvements in Nottinghamshire

1.5 Supporting documents

The LTP3 plays a critical role in helping to deliver corporate economic, environmental and social strategies. The LTP3 therefore refers to and draws on information from a number of other County Council corporate documents that the LTP3 supports such as:

- Nottinghamshire's Sustainable Community Strategy 2010-2020 and its evidence base 'The State of Nottinghamshire 2009'
- Condition of Nottinghamshire 2009
- Nottinghamshire County Council Strategic Plan 2010-2014
- Nottinghamshire Headline Economic Assessment 2009
- Nottinghamshire County Strategic Assessment (Community Assessment) 2009
- Joint Strategic Needs Assessment (in partnership with the NHS) 2010
- Carbon Management Plan, and
- Climate Change Adaption Action Plan.

As detailed earlier, the LTP3 will be reviewed periodically to ensure that it reflects the objectives contained within corporate strategies.

There are also a number of supporting County Council transport related documents that could not be included in full in this Plan but support the LTP3, including:

- the LTP3 Evidence Base Report
- specific transport mode strategies such as walking, cycling, passenger transport etc.
- general transport strategies such as those relating to freight, smarter choices, sustainable school travel etc.
- improvement plans such as those relating to the Network Management Duty, road safety, Rights of Way etc.
- Highway Asset Management Plan (which details highways policy), and
- the highway design guide developed in partnership with neighbouring transport authorities.

As the LTP3 is a fifteen year document, having the individual transport mode strategies and improvement plans as separate documents to the LTP3 allows them to be reviewed more frequently, without the need to refresh the LTP3 as regularly. On publication of the LTP3, the transport mode and general transport strategies will all be reviewed to ensure they reflect the LTP3 objectives, whilst the improvement plans (such as those relating to Rights of Way and road safety) will be updated when they expire (all of the documents will be reviewed periodically to ensure they remain consistent).

Further details on each of the topics detailed above can be found in the full published documents. The most up to date versions of the documents are available from the County Council, including the County Council's website www.nottinghamshire.gov.uk.

The LTP3 also considers documents produced by external organisations to ensure consistency and effective delivery of common objectives, particularly:

- neighbouring transport authorities' local transport plans
- Highways Agency and Network Rail programmes and strategies
- district council's sustainable community strategies; local development frameworks; local investment plans; and economic improvement plans, and
- NHS health improvement plans.

How these documents all fit together to complement each other is shown below in figure 3.

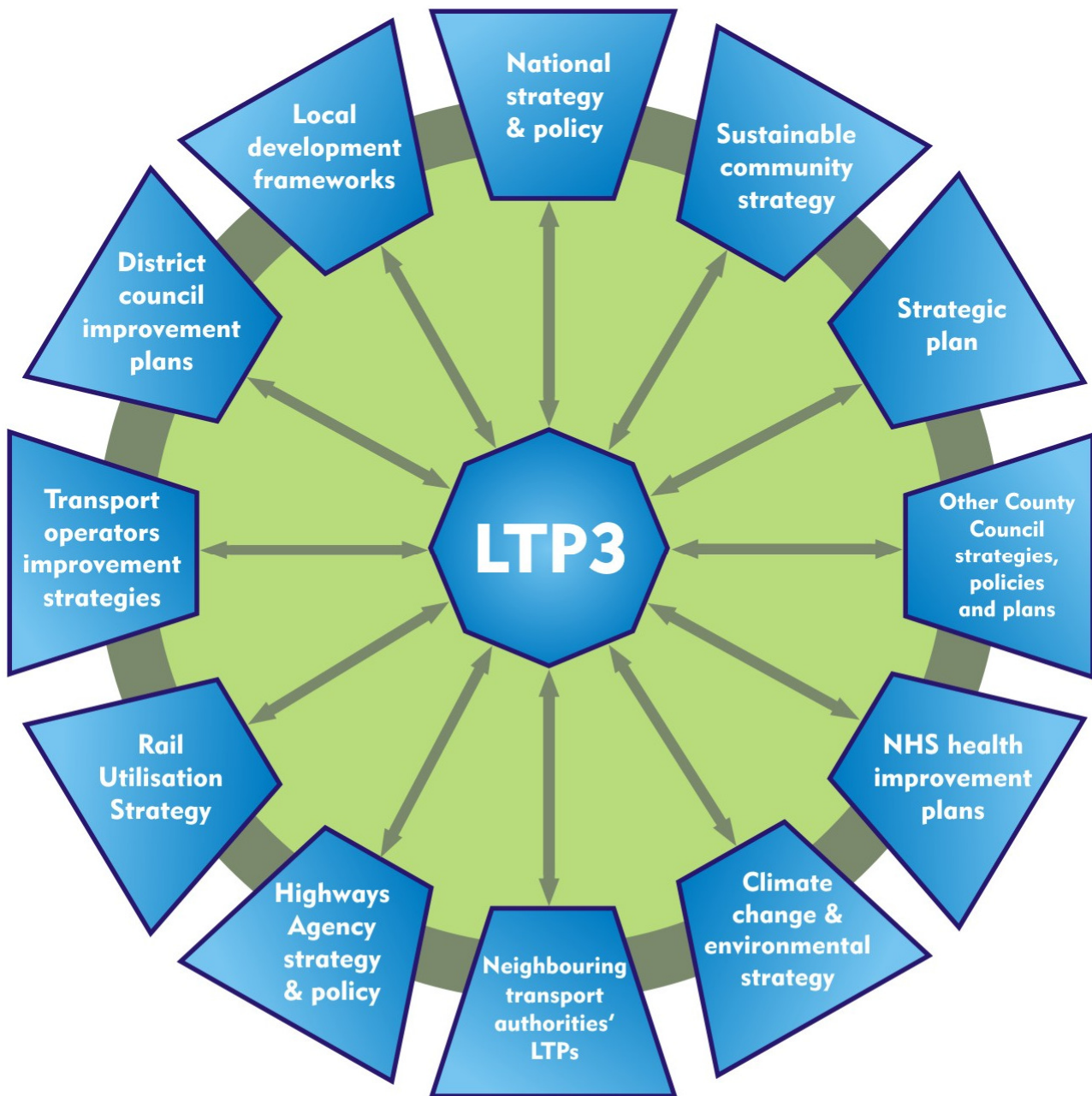


Figure 3: The Local Transport Plan's links with other strategies

1.5.1 Strategic environmental assessment

In accordance with the regulations implementing the European Directive 2001/42/EC 'on the assessment of certain plans and programmes on the environment' (the SEA Directive), an assessment of the LTP3 is required. This is called a strategic environmental assessment (SEA).

The purpose of the SEA is to help ensure the environmental consequences of the LTP3 are considered in the preparation and adoption of the Plan with a view to promoting sustainable development. The purpose of the SEA is therefore to inform decisions rather than make decisions.

Further details on the SEA of the LTP3 are included in the published reports which are available from the County Council, including the County Council's website at www.nottinghamshire.gov.uk/ltp3, which are summarised below.

There are five stages to the SEA that, to be effective, are undertaken alongside preparation of the LTP and these are shown in figure 4 below.

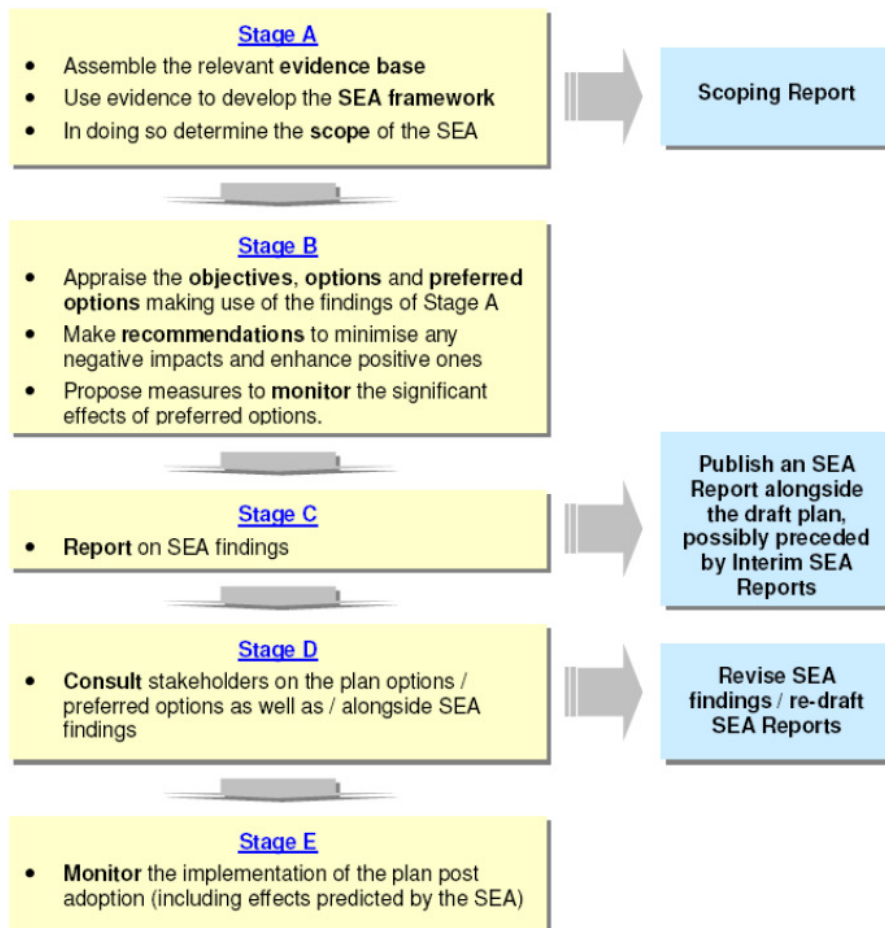


Figure 4: Stages of the strategic environmental assessment

Source: LTP3 Strategic Environmental Assessment Environmental Report

Scoping report

A variety of information was gathered on the environmental situation within which the Local Transport Plan would be developed. This evidence comprised:

- other relevant policies, plans, programmes and environmental objectives, and
- baseline information and the identification of environmental problems under the topics of landscape, townscape, heritage; biodiversity and soils, air quality, climatic factors and noise; water resources and quality; accessibility, public health, safer communities; and material assets.

This information was used to identify the key environmental issues, challenges and opportunities and a set of SEA objectives were then used to define the scope of the assessment. A Scoping Report was subsequently published in August 2010 and subject to consultation. The scoping stage identified a total of 50 topics some of which were considered not to be central to the Local Transport Plan and others that could be combined – as a result, 28 objectives were proposed.

Environmental report

An Environmental Report was produced and issued for consultation alongside the draft LTP3 strategy and Implementation Plan 2011/12-2014/15 in February 2011. The Environmental Report tested the objectives of the LTP3 against the SEA objectives to ensure compatibility of objectives.

Four strategic options to deliver the LTP objectives were then considered to identify the option that best met the LTP and SEA objectives:

- **without plan** – this option does not assume the delivery of any strategies or measures to deliver the strategy
- **do minimum** – this option proposes no new transport infrastructure to be delivered and that only a minimum amount of maintenance would be undertaken
- **asset management** – consultation identified maintenance of highway assets as a high priority among consultees. This option therefore places emphasis on maintaining the highway assets to at least its current standard and only additional measures required to meet statutory obligations, and
- **local improvements** – this option included a mix of infrastructure and non-infrastructure measures that would help deliver the local transport objectives identified through consultation.

The positive and negative effects of each option were examined using the SEA objectives identified. Following the County Council's internal appraisal process and drawing on the SEA findings of the four options, the County Council determined that the local improvements option was likely to best meet their challenges and achieve the LTP3's objectives.

Environmental statement

An environmental statement has also been produced and published alongside the LTP3.

Habitats Regulations Assessment

A separate Habitats Regulations Assessment (HRA) Screening Report was undertaken by the County Council to assess the effects of the LTP3 upon sites identified as being of European importance for biodiversity (designated as Special Conservation Areas or Special Protection Areas). A copy of the HRA is available from the County Council, including the County Council's website at www.nottinghamshire.gov.uk/ltp3.

Where schemes are detailed within the LTP3 or Implementation Plan it is the scheme promoter's responsibility to undertake the necessary HRA works. The County Council will consider environmental impacts/issues and mitigation as part of the feasibility considerations of aspirational schemes. A HRA will be undertaken on proposed schemes at the implementation stage with guidance from Natural England.

1.6 Structure of the document

Figure 5 below details the structure of this document and gives information on the content of each chapter. Chapters 1 to 3 put the document into context – giving background on the county; the vision for Nottinghamshire and how transport will contribute to this (the transport goals and objectives); and detail on the transport conditions in the county. Chapters 4 to 7 then outline the transport strategy that will be used to deliver the transport goals and objectives, and Chapter 8 details how the LTP3 will be monitored.

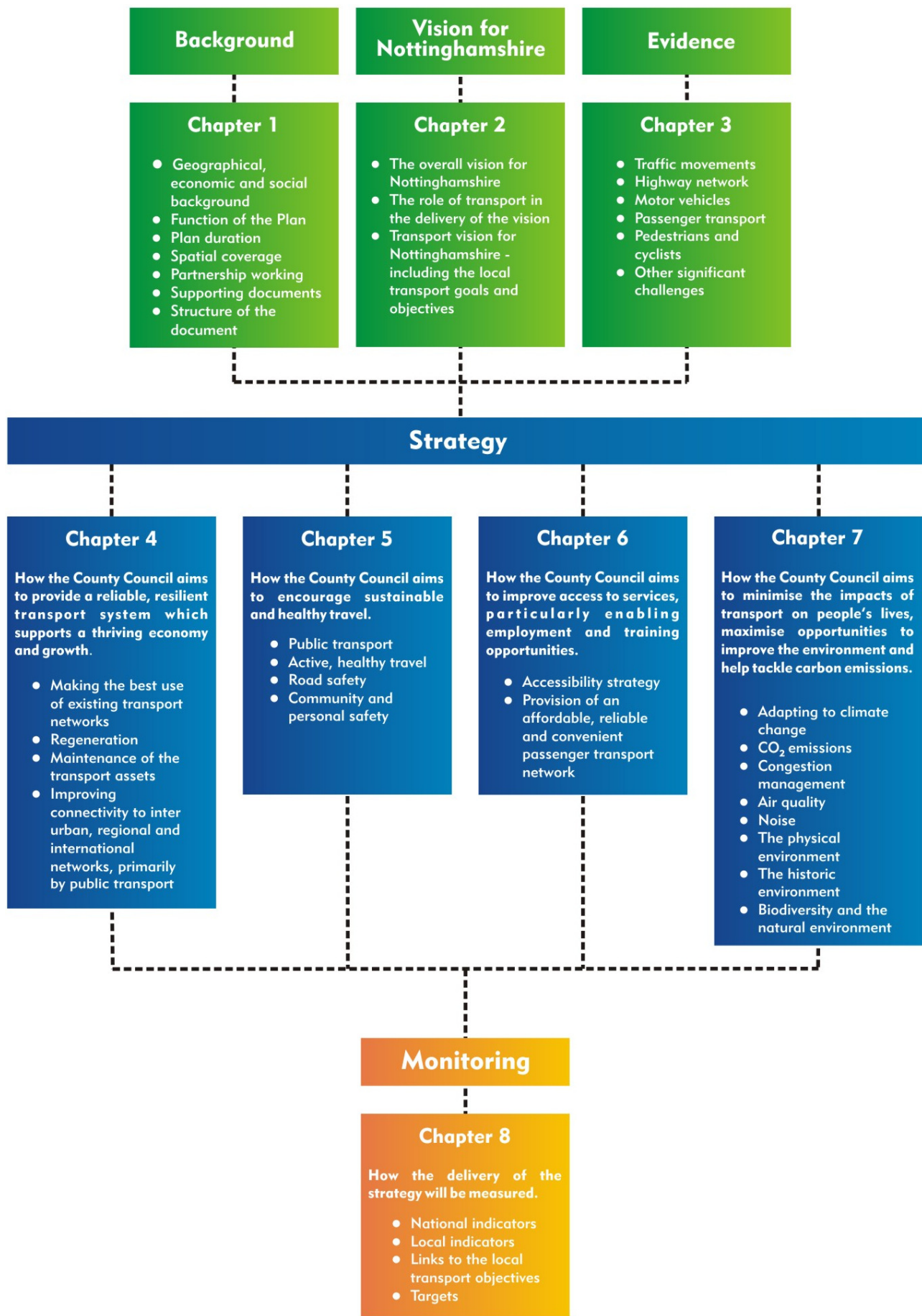


Figure 5: Structure of the third Local Transport Plan

2. The vision for Nottinghamshire

The Nottinghamshire Strategic Plan 2010-2014 sets out the County Council's promise to the people of Nottinghamshire; priorities for the next four years; and how we aim to support the people of Nottinghamshire to be aspirational, independent and to share with us responsibility for the future. The Strategic Plan sets out the County Council's vision for Nottinghamshire, it states:

“Our vision is for Nottinghamshire to be a county that is safe; economically prosperous; a place where businesses want to invest; and where we are proud of our past and ambitious for our future”.

Nottinghamshire Sustainable Community Strategy 2010-2020

The Strategic Plan complements the wider Nottinghamshire Sustainable Community Strategy 2010-2020 which is the collective plan that outlines how organisations in the county will work together to promote and deliver a better Nottinghamshire. The Sustainable Community Strategy identifies six priorities for the future:

1. **A greener Nottinghamshire** – this includes improving the environment, recycling, public transport, decent and affordable housing, the countryside, biodiversity, green space and cutting greenhouse gas emissions
2. **A place where Nottinghamshire's children achieve their full potential** – this includes education, safety, health, opportunities to enjoy sports, leisure and arts facilities, and economic issues affecting children and young people
3. **A safer Nottinghamshire** – this includes crime and anti-social behaviour
4. **Health and well-being for all** – this includes improving general health and life expectancy, tackling obesity, helping disabled people, as well as ensuring older people and vulnerable people are well looked after
5. **A more prosperous Nottinghamshire** – this includes helping businesses to start up, grow and flourish, making sure that there are enough jobs, and people have the right skills and qualifications
6. **Making Nottinghamshire's communities stronger** – this includes access to services, culture, heritage and sport, community life, and a sense of community belonging and identity.

Table 1 on page 15 shows how the LTP3 goals will help address these six priorities, whilst table 2 on page 17 shows how the local transport objectives will help deliver the six Sustainable Community Strategy 2010-2020 priorities.

2.1 The role of transport

Transport is not an end in itself but a means to enable people to access employment, training, health, shopping, leisure and other essential services. Similarly, transport infrastructure does not exist in isolation but as part of a wider pattern of land-use. Transport strategy must therefore be closely integrated with other national, regional and local plans and strategies designed to improve the quality of life for local people and to encourage sustainable communities. The LTP3 therefore has been developed to ensure that it supports the wider local, regional and national goals. This chapter looks at the role of transport set out in the LTP3 in delivering the vision for Nottinghamshire; addressing the priorities within the Nottinghamshire Sustainable Communities Strategy 2010-2020; as well as delivering national and regional transport priorities. Figure 6 below shows the general process for the development of the LTP3 strategy.

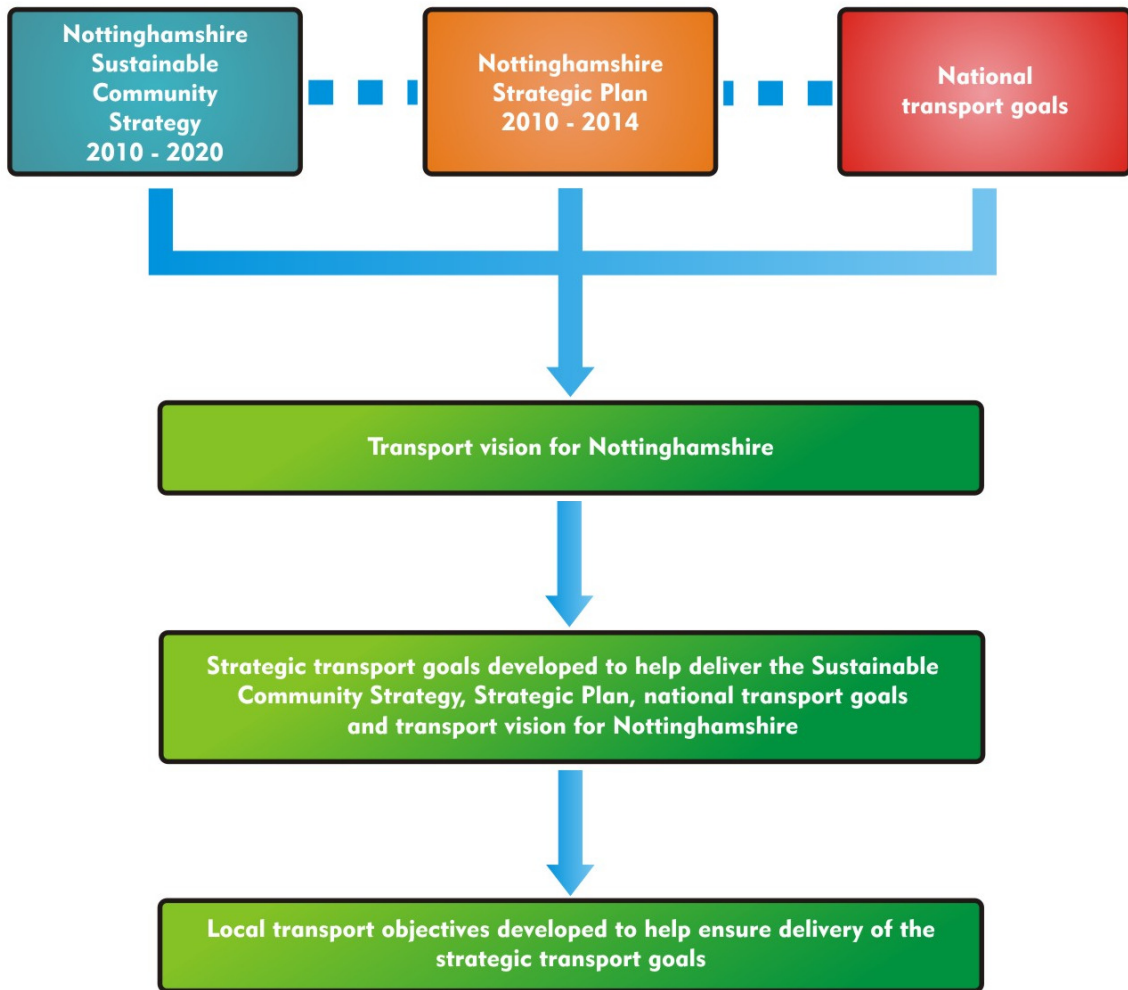


Figure 6: Process for development of the LTP3 strategy

2.1.1 National context

During the previous Government, as part of its Delivering a Sustainable Transport System (DaSTS) agenda, the Department for Transport (DfT) highlighted five national transport priorities that they wanted local authorities to address in their third local transport plans:

- **support economic growth** – for example, by managing congestion and the lost time this causes
- **tackle climate change** – for example, by reducing transport’s harmful emissions and ensuring effective flood risk management
- **contribute to better safety, security and health** – for example, by reducing road accidents and promoting healthy travel, such as cycling and walking
- **promote greater equality of opportunity** – for example, by helping people get to work, training or local services, and
- **improve quality of life** – for example, by minimising noise from transport and improving people’s experience of public transport.

These national goals featured significantly in the development of the LTP3. The existing Coalition Government has stated that in respect of the transport goals detailed above, the key overarching policies which they would like to be addressed in LTPs are those “**which help grow the economy and help tackle carbon emissions, while not neglecting other important priorities, including road safety, affordability, accessibility, and people’s health and wellbeing**”. This view is

Nottinghamshire Local Transport Plan 2011-2026

supported by the measures included within the DfT's Business Plan (2011-2015) as well as the recent White Paper, 'Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen'.

The White Paper details government's vision "**for a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in our communities**". It sets out how government sees the role of transport in helping create growth in the economy, and to tackle climate change by cutting our carbon emissions – through longer term and national transport improvements (such as high-speed rail). It also focuses on encouraging sustainable local travel and economic growth by making walking, cycling and public transport more attractive and effective; promoting lower carbon transport; and tackling local road congestion.

2.1.2 Regional context

Nottinghamshire County Council was engaged prominently in the development of regional policy, including the East Midlands Regional Plan 2009 and the regional response to 'Delivering a Sustainable Transport System' (DaSTS). LTP3 therefore reflects the various transport objectives of delivering sustainable, effective and efficient travel across the region, as outlined in documents prepared by the East Midlands region such as the soon to be abandoned East Midlands Regional Plan 2009 and Regional Transport Strategy; the regional response to DaSTS; Regional Funding Allocations; as well as delivering the economic objectives of the region, such as those pursued by the East Midlands Development Agency (emda).

2.1.3 Local context

In addition to supporting delivery of the Nottinghamshire Sustainable Community Strategy 2010-2020 and the Strategic Plan 2010-2014 vision and objectives, the LTP3 has been aligned with the local development frameworks drawn up by district councils, and integrates with various local policies and strategies including: planning developments and growth points across the region; statutory development plans; Highways Agency programmes/strategies; neighbouring authorities' local transport plans; as well as strategies relating to housing, economic development, education, health, social inclusion, crime and disorder, environment and social services.

2.2 Transport vision for Nottinghamshire

The transport vision for Nottinghamshire aims to address the issues and needs that have been identified and predicted for the future. These have been identified through the various national, regional and local strategies for transport, as well as those that transport impacts upon. Nationally and regionally, the 'Delivering a Sustainable Transport System' (DaSTS) agenda has played a significant role in developing the vision. Locally, the County Council's Sustainable Community Strategy 2010-2020 and Strategic Plan 2010-2014 as well as district council's local development frameworks have also played significant roles in developing the vision. The long-term transport vision for Nottinghamshire is at three spatial levels:

1. Within local neighbourhoods, to provide **safe and sustainable access to local facilities and services**, such as health, schools, colleges and local shops. This will include priority for pedestrians, cyclists and those with mobility difficulties
2. To provide everyone with **safe and sustainable transport options for movement within and between our towns and district centres**. This will include a fully integrated, high quality public transport network and appropriate parking provision for private cars
3. To **connect our towns, district centres and villages to other parts of the Plan area and beyond** (including regional and national trip generators). This will include safe and sustainable strategic links by road and rail for both people and goods.

2.2.1 Strategic transport goals

The strategic goals for the county have been developed locally through consultation with the public, County Council elected members, and other stakeholders. Particular consideration was made to the national transport priorities as identified through the DaSTS process (detailed above) and the Nottinghamshire Sustainable Community Strategy 2010-2010. The results of the consultation confirmed that all of the five national transport priorities are considered to be applicable to Nottinghamshire and did not identify any additional transport priorities. Supporting the economy was identified as the highest transport priority throughout the county. The overarching strategic transport goals for Nottinghamshire are therefore to:

- **provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel**
- **improve access to key services, particularly enabling employment and training opportunities, and**
- **minimise the impacts of transport on people’s lives, maximise opportunities to improve the environment and help tackle carbon emissions.**

Table 1 below demonstrates how delivery of the strategic transport goals will impact on delivery of the Sustainable Community Strategy 2010-2020 priorities.

Table 1: Links between the strategic transport goals and the Sustainable Community Strategy priorities.

		Major positive	Positive	Minor positive	No impact	Minor negative	Negative	Major negative
		Sustainable Communities Strategy theme						
		A safer Nottinghamshire	Making Nottinghamshire's communities stronger	A place where Nottinghamshire's children and young people achieve their full potential	A healthier Nottinghamshire	A more prosperous Nottinghamshire	A greener Nottinghamshire	
Strategic transport goals	Provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel							
	Improve access to key services, particularly enabling employment and training opportunities							
	Minimise the impacts of transport on people’s lives, maximise opportunities to improve the environment and help tackle carbon emissions							

2.2.2 Transport objectives

Consultation with the public, County Council elected members and other stakeholders also identified 12 local transport challenges to delivering the strategic goals. Addressing these transport challenges will play a major role in delivering transport improvements and the strategic goals in Nottinghamshire. The locally identified challenges have therefore become the transport objectives that we want to achieve during the lifetime of the LTP3. They are:

- Objectives related to **supporting economic growth**
 1. Tackle congestion and make journey times more reliable
 2. Improve connectivity to inter-urban, regional and international networks, primarily by public transport
 3. Address the transport impacts of planned housing and employment growth
 4. Encourage people to walk, cycle and use public transport through promotion and provision of facilities
 5. Support regeneration
- Objectives related to helping **protect the environment**
 6. Reduce transport's impact on the environment (air quality, buildings, landscape, noise etc.)
 7. Adapt to climate change and the development of a low-carbon transport system
- Objectives related to **improving health and safety**
 8. Improve levels of health and activity by encouraging active travel (walking or cycling) instead of short car journeys
 9. Address and improve personal safety (and the perceptions of safety) when walking, cycling or using public transport
- Objectives related to **improving accessibility**
 10. Improve access to employment and other key services particularly from rural areas
 11. Provision of an affordable, reliable, and convenient public transport network
- Objectives related to **maintaining and improving existing infrastructure**
 12. Maintain the existing transport infrastructure (roads, footways, public transport services etc.).

Table 2 below demonstrates how the local transport objectives helps to deliver the Sustainable Community Strategy 2010-2020 priorities; and the local strategic transport goals.

Table 2: Links between the strategic transport goals; the Sustainable Community Strategy 2010-2020 priorities and the local transport objectives

Major positive	Positive	Minor positive	No impact	Minor negative	Negative	Major negative
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3. Existing conditions and challenges

Identifying the existing transport conditions and the challenges that may be faced in the future (such as the transport impacts of new housing that will be required) has played an important role in developing how to make transport improvements in the future. The previous chapter identified the transport goals and objectives for Nottinghamshire. This chapter summarises the evidence base that has been gathered to help inform the local transport goals, objectives and transport strategy that has been developed to deliver the local transport objectives, as well as future programmes of work that are included within the Implementation Plan. The full transport evidence base is available to view on the County Council's website at www.nottinghamshire.gov.uk/ltp3 and will be updated annually to reflect the most up to date information available.

Nottinghamshire is considered an excellent authority for both transport planning strategy and delivery. This excellent performance gives the County Council a strong position and the LTP3 will build upon this success (and learn from past mistakes). Within each section of this chapter some of the key transport achievements that have already been made to deliver the goals and objectives are identified, along with the future challenges.

The transport evidence base should not, however, be read in isolation and the following reports have all been used to determine the transport needs of Nottinghamshire:

- The State of Nottinghamshire 2009
- Condition of Nottinghamshire 2009
- Nottinghamshire Headline Economic Assessment 2009
- Nottinghamshire County Strategic Assessment (Community Assessment) 2009
- Joint Strategic Needs Assessment (in partnership with the NHS) 2010
- district council core housing strategies, and
- Regional 'Delivering a Sustainable Transport System' studies.

Nottinghamshire, generally, has good longer distance transport links including the M1 and A1, the East Coast and Midland Mainline rail lines, as well as the close proximity of East Midlands and Robin Hood airports. Similarly, the county has good local east/west and north/south networks but there are still several challenges to delivering effective and efficient transport networks across the county.

The Highways Agency (HA) is responsible for what is called the national strategic road network (SRN), including its maintenance and improvements; monitoring the traffic levels, congestion and delays; and ensuring traffic flows freely along its routes. In Nottinghamshire the HA are responsible for the M1, A1, A453, A46 and A52. The County Council is responsible for the remainder of the roads in Nottinghamshire with the exception of 'private roads' and roads that are within the city of Nottingham.

Network Rail is responsible for the rail network infrastructure, whilst there are four train operating companies with services running through the county – Cross Country, East Coast, East Midlands and Northern trains.

3.1 Traffic movements

Successes

During the last LTP period the County Council has been successful in:

- limiting traffic growth across the county, reducing the vehicle kilometres travelled by 1% over the Plan period, and
- 83% of schools have travel plans and the numbers of children travelling to school by car has reduced by 9% (to 25%) over the Plan period.

Challenges

The challenges that we face over the LTP3 period include:

- changing travel behaviour, particularly for shorter journeys to help address health issues as well as congestion, and for other journeys by public transport
- funding programmes of work that influence travel behaviour, and
- people travelling further for work or training opportunities and ensuring they have realistic alternative choices to driving to their destination.

The county has several market towns and different employment centres which have significant transport implications concerning how people access jobs and training opportunities.

3.1.1 Travel to work areas

There are four travel to work areas in the county as determined by 2001 Census commuting patterns (as shown in figure 7 below):

- the Nottingham travel to work area which, in addition to Nottingham city, encompasses the whole of Broxtowe and Rushcliffe districts, the majority of Gedling district, as well as parts of Ashfield and Newark & Sherwood districts. It also includes parts of eastern Derbyshire and northern Leicestershire
- the Mansfield travel to work area which includes all of Mansfield district, the majority of Ashfield and Newark & Sherwood districts, as well as the south western tip of Bassetlaw and the north of Gedling district. It also includes parts of eastern Derbyshire
- the Worksop and Retford travel to work area which encompasses most of Bassetlaw (excluding the north eastern and south western tips of the district) as well as part of Derbyshire, and
- the eastern part of Newark & Sherwood as well as the north eastern tip of Bassetlaw are part of the Lincoln travel to work area.

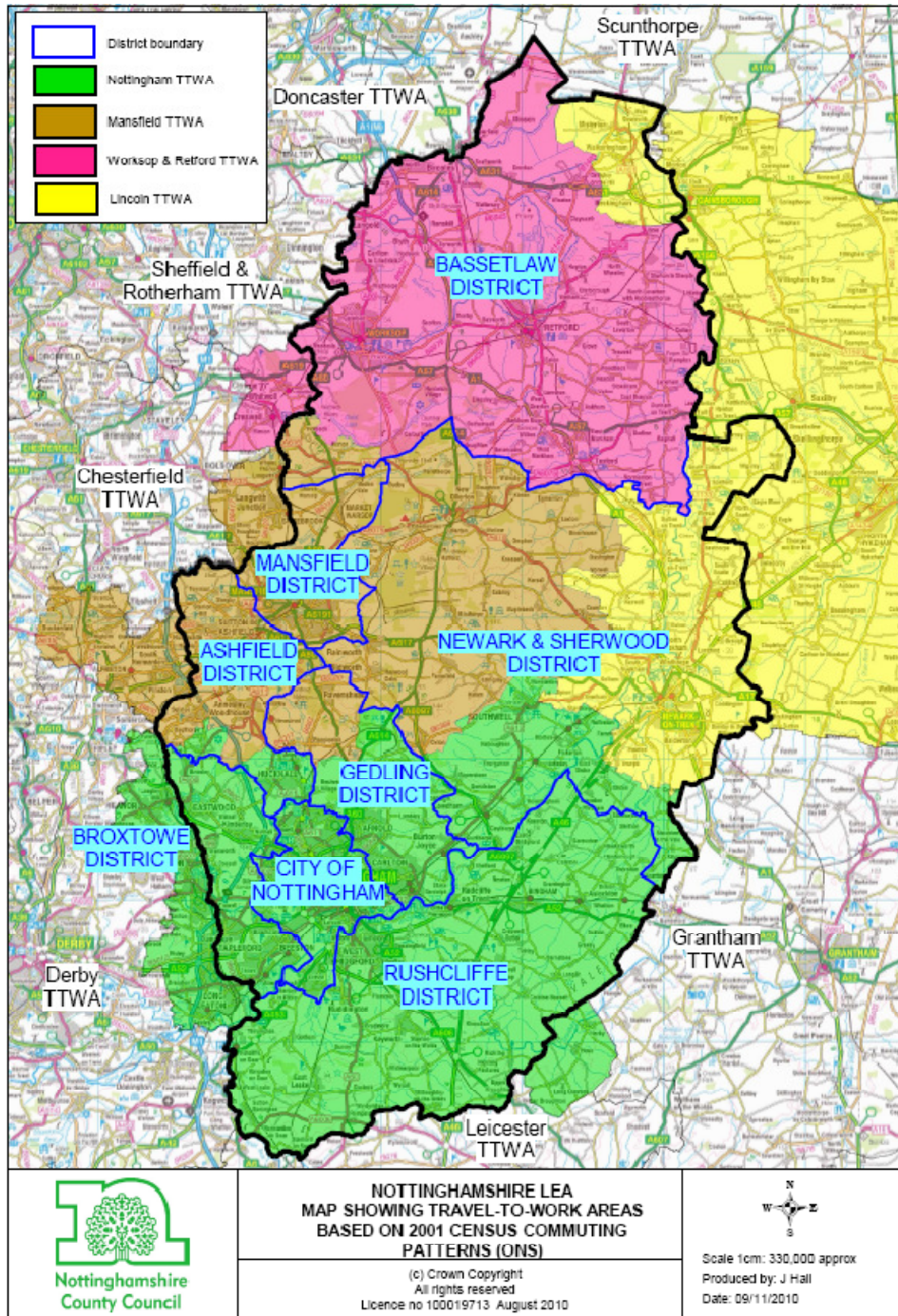


Figure 7: Travel to work areas in Nottinghamshire
 Source: 2001 Census data

3.1.2 Interaction between districts

Table 3 shows the percentage of the county and Nottingham city workforce that work in each of the Nottinghamshire districts and Nottingham city, whilst figure 8 shows the numbers of workers travelling between each district. In the south of the county the main employment attractor is the city of Nottingham. In terms of employment most people travel between districts or further afield for employment. Bassetlaw is the most self-sufficient of all of the districts with over 70% of its residents working within the district. Almost 70% of Mansfield residents work in either Mansfield or neighbouring Ashfield.

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Table 3: Where workers are travelling to/from within Nottinghamshire

Place of residence	Place of employment							
	Ashfield	Bassetlaw	Broxtowe	Gedling	Mansfield	Newark & Sherwood	Rushcliffe	Nottingham
Ashfield	51%	1%	3%	3%	8%	1%	1%	16%
Bassetlaw	1%	71%	0%	0%	1%	3%	0%	1%
Broxtowe	2%	0%	36%	2%	1%	0%	3%	34%
Gedling	3%	0%	3%	36%	2%	2%	4%	42%
Mansfield	15%	3%	1%	2%	55%	6%	1%	6%
Newark	3%	3%	1%	3%	7%	59%	2%	9%
Rushcliffe	1%	0%	3%	3%	0%	1%	40%	35%
Nottingham	2%	0%	4%	5%	1%	1%	5%	73%

Source: 2001 Census data

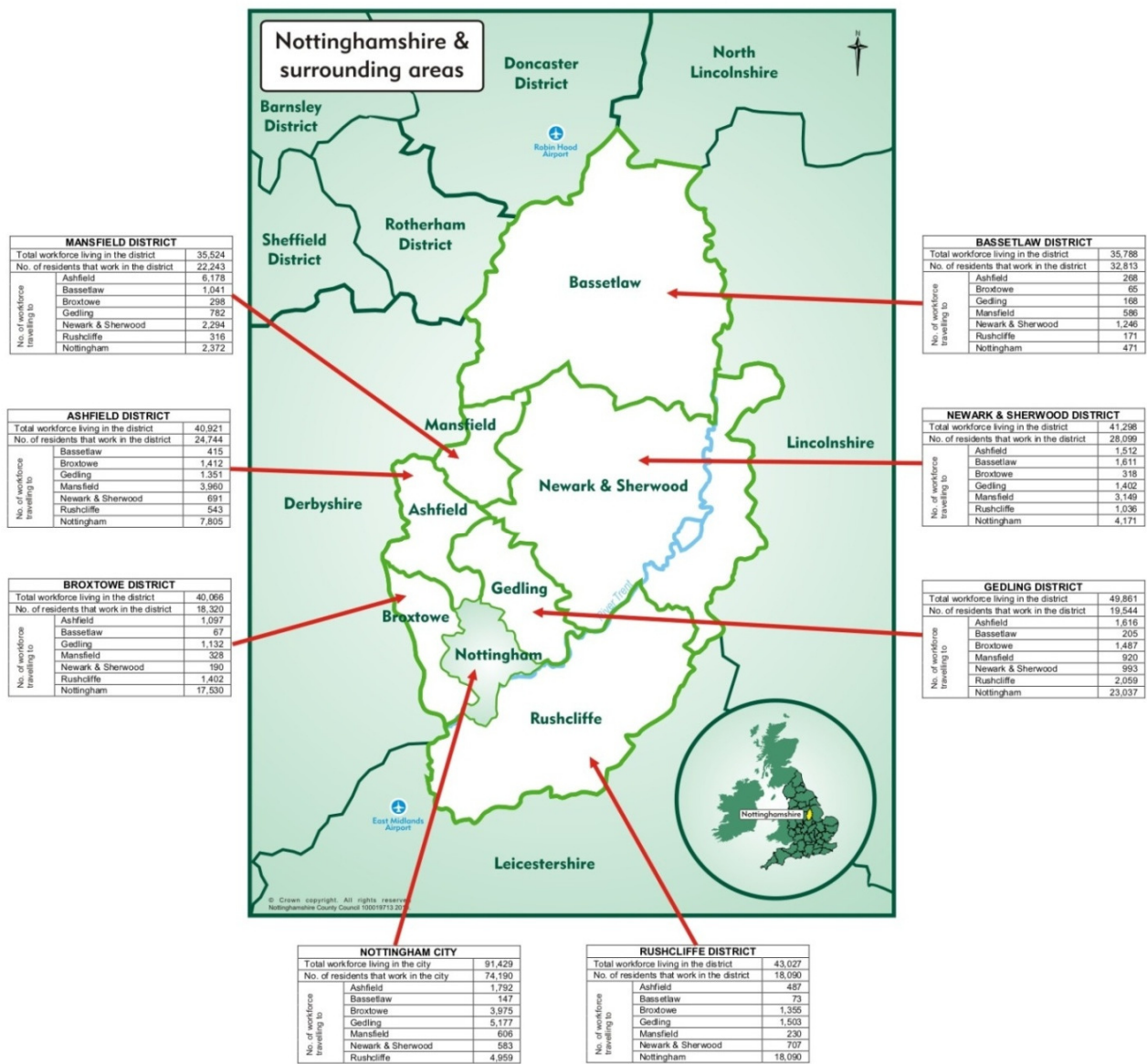


Figure 8: Where workers are travelling to (within the county area)
Source: 2001 Census data

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3.1.3 Interaction with neighbouring authorities

Nottinghamshire has important economic and employment, as well as leisure links, to other areas in the region and beyond. Figure 9 below gives detail on the numbers of people travelling to and from Nottinghamshire to work. The largest numbers of work journeys made across Nottinghamshire's administrative boundary are from workers travelling from the county (particularly the south of the county) into the city of Nottingham. There are also significant flows of workers travelling to or from Derbyshire in the west of the county. The majority of these movements are people travelling between Derbyshire and its neighbouring Nottinghamshire districts of Ashfield, Bassetlaw, Broxtowe and Mansfield for work.

Movement of workers across neighbouring authorities' boundaries is also evident (although to a much lesser degree) in the south of the county between Leicester/Leicestershire and the districts of Broxtowe and Rushcliffe; in the north of the county between Bassetlaw district and South Yorkshire; and in the east of the county between Lincoln/Lincolnshire and Newark & Sherwood district. With the exception of Leicestershire, the numbers of workers travelling into the county from each of the areas is similar to the numbers of workers travelling out of the county into each of the areas.

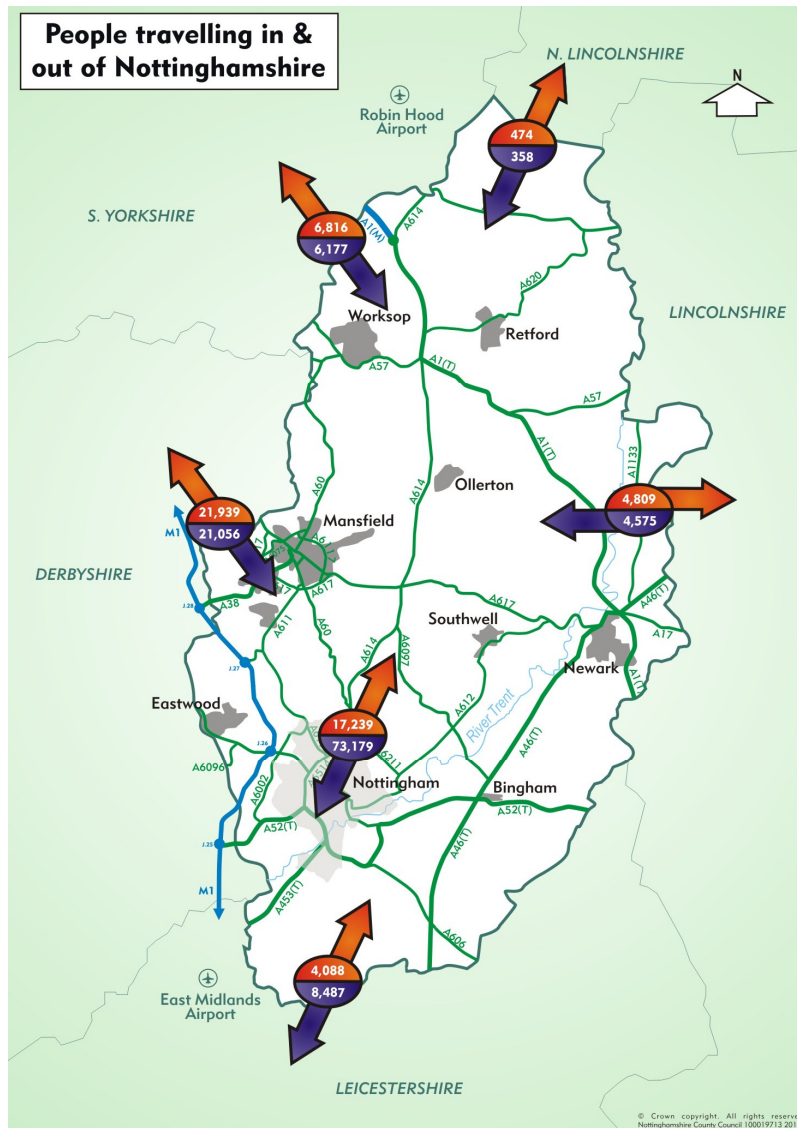


Figure 9: Workers travelling into and out of the county
Source: 2001 Census data

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In 2001, most of the county's workforce worked in the county (including the city of Nottingham). Only 16% of the county's workforce is travelling outside of the county (excluding the city of Nottingham), ranging from 22% in Bassetlaw and Broxtowe districts to only 8% in Gedling, as shown in table 4 below.

Table 4: Percentage of county workforce travelling outside the county for employment

Percentage of the workforce of each district travelling out of the county for employment							
Nottinghamshire	Ashfield	Bassetlaw	Broxtowe	Gedling	Mansfield	Newark & Sherwood	Rushcliffe
16%	16%	22%	22%	8%	12%	13%	17%

Source: 2001 Census data

These details can be investigated further as shown in table 5 below. This table shows that more workers travelling out of the county are travelling into Derbyshire than any other authority.

Table 5: Percentage of workers travelling out of the county to neighbouring areas

Percentage of workers travelling out of the county to neighbouring areas								
Travelling to	Nottinghamshire	Ashfield	Bassetlaw	Broxtowe	Gedling	Mansfield	Newark & Sherwood	Rushcliffe
Derbyshire	6%	12%	2%	15%	3%	8%	2%	3%
Leicestershire	3%	1%	0%	3%	2%	1%	1%	9%
Lincolnshire	1%	0%	4%	0%	0%	0%	5%	1%
S Yorkshire	2%	1%	12%	0%	0%	1%	1%	0%
Elsewhere	3%	2%	4%	3%	3%	2%	3%	4%

Source: 2001 Census data

In the north of the county, Bassetlaw district forms part of the Sheffield City Region. The Sheffield City Region also includes the Derbyshire districts of Bolsover, Chesterfield, Derbyshire Dales and North East Derbyshire along with the Yorkshire councils of Barnsley, Doncaster, Rotherham and Sheffield. In 2001, only 12% of the Bassetlaw workers, however, travel to South Yorkshire for work.

3.1.4 How workers are travelling to work

Tables 6 and 7 below show the distance people travel to work and how people usually travel to work respectively.

Table 6: Distance travelled to work

District	Distance travelled to work (percentage)					
	Under 2km	2-4.99km	5-9.99km	10-19.99km	20-29.99km	Over 30km
Ashfield	25%	21%	20%	13%	4%	4%
Bassetlaw	25%	15%	16%	18%	7%	7%
Broxtowe	23%	21%	19%	12%	3%	5%
Gedling	25%	19%	17%	13%	3%	3%
Mansfield	23%	27%	18%	11%	5%	3%
Newark & Sherwood	25%	16%	12%	16%	8%	5%
Rushcliffe	19%	14%	21%	15%	6%	5%
Nottinghamshire	24%	19%	17%	14%	5%	5%
East Midlands	22%	21%	18%	14%	5%	6%
England	20%	20%	18%	15%	5%	7%

Source: 2001 Census data

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Table 7: Usual mode of travel to work

District	Usual mode of travel to work (percentage)							
	Walking	Bicycle	Bus	Train	Motor-cycle	Car or van	Other	Work at home
Ashfield	11%	3%	7%	1%	1%	70%	0.5%	7%
Bassetlaw	11%	3%	3%	1%	1%	71%	0.5%	9%
Broxtowe	9%	4%	11%	1%	1%	66%	0.3%	8%
Gedling	8%	2%	15%	1%	1%	65%	0.3%	8%
Mansfield	10%	2%	7%	1%	1%	71%	0.4%	7%
Newark & Sherwood	9%	5%	4%	1%	1%	68%	0.4%	11%
Rushcliffe	7%	3%	10%	1%	1%	69%	0.3%	10%
Nottinghamshire	10%	3%	11%	1%	1%	64%	0.4%	8%
East Midlands	10%	3%	7%	1%	1%	68%	0.4%	9%
England	10%	3%	8%	4%	1%	62%	3.5%	9%

Source: 2001 Census data

The most recent complete data that is available is from the 2001 Census. Car use was by far the most popular form of transport. At that time 43% of work journeys were under 5km (or 3.1 miles), and 60% were under 10km (or 6.2 miles), yet 64% of people drove to work.

Since 2001 there has been a 43% increase in bus patronage in Nottinghamshire, set against an estimated 3.7% increase in population between 2001 and 2009. Therefore it is expected that the percentage of people usually travelling to work by bus will have increased. There were, however, considerable numbers of people travelling to work from some of the more urban districts by car. For example:

- 70% of workers resident in Broxtowe work in either Broxtowe or neighbouring Nottingham city which has a good bus network. 44% of workers travelled less than 5km to work; and 63% travelled less than 10km, yet 66% of workers travelled to work by car
- 78% of workers resident in Gedling work in either Gedling or neighbouring Nottingham city which has a good bus network. 44% of workers travelled less than 5km to work; and 61% travelled less than 10km, yet 65% of workers travelled to work by car, and
- 70% of workers resident in Mansfield work in either Mansfield or neighbouring Ashfield which has a good bus network. 50% of workers travelled less than 5km to work; and 68% travelled less than 10km, yet 71% of workers travelled to work by car.

3.1.5 How pupils are travelling to school

When comparing 2006/07 with 2009/10, the percentage of school pupils travelling to school by car in Nottinghamshire has decreased slightly, by 1.5%. This decrease, however, is amongst the 5-10 age group and hides an increase of almost 1% amongst the 11-15 age group. This reflects that 85% of pupils at primary schools have a travel plan, whereas only 67% of pupils at secondary school have a travel plan. How pupils travel to school is shown in table 8 below.

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Table 8: How pupils travel to school

	Usual mode of transport					
	Walking	Cycling	Public transport	Car (including vans and taxis)	Car share	Other
2006/07 data						
Aged 5-10	56.3%	1.0%	3.9%	35.9%	2.8%	0.1%
Aged 11-15	55.8%	2.9%	26.6%	13.6%	1.0%	0.1%
All Ages	56.1%	1.8%	13.3%	26.7%	2.0%	0.1%
2007/08 data						
Aged 5-10	57.2%	0.8%	3.5%	35.3%	3.0%	0.2%
Aged 11-15	53.3%	2.8%	30.0%	12.4%	1.1%	0.5%
All Ages	55.4%	1.7%	15.6%	24.9%	2.2%	0.3%
2008/09 data						
Aged 5-10	57.9%	0.8%	3.2%	34.6%	3.2%	0.3%
Aged 11-15	52.2%	3.0%	28.4%	14.1%	1.2%	1.2%
All Ages	55.3%	1.8%	14.9%	25.1%	2.2%	0.7%
2009/10 data						
Aged 5-10	58.5%	0.9%	2.8%	34.7%	3.0%	0.2%
Aged 11-15	52.6%	2.8%	27.3%	14.5%	1.2%	1.7%
All Ages	55.7%	1.8%	14.3%	25.2%	2.1%	0.9%

Source: DfES survey data

6.5% of pupils travelling to school by car are travelling less than 0.5 miles and a further 13% are travelling less than a mile by car. There is therefore scope for these pupils to travel to school on foot or by cycle.

3.1.6 Changes in area wide traffic mileage

Whilst the number of licensed vehicles in Nottinghamshire has increased by 3% between 2005 and 2009, traffic mileage in Nottinghamshire decreased by 1% over the same period, which compares favourably with regional trends (which showed no change); and national trends (which increased by 1%) over the same period.

Table 9: Changes in area wide traffic mileage when compared to 2005

Year	Changes in annual area wide traffic mileage		
	Nottinghamshire	East Midlands	Great Britain
2006	0%	2%	2%
2007	2%	3%	3%
2008	-1%	1%	2%
2009	-1%	0%	1%

Source: DfT and Nottinghamshire County Council traffic counts

When comparing 2005 with 2009, traffic mileage has only increased in Newark & Sherwood and has significantly decreased in the more urban districts of Broxtowe, Gedling and Rushcliffe. Traffic mileage on urban roads in Nottinghamshire in 2009 is 2% less than it was in 2005. Traffic mileage on rural roads in Nottinghamshire hasn't decreased at the same rate as urban mileage. In 2009 traffic mileage was at the same level as it was in 2005 which, whilst good, underlines the reliance on the private car for journeys from some rural areas due to a lack of alternatives.

Cordon data

Automatic traffic counts are undertaken around the four market towns in Nottinghamshire – Mansfield, Newark, Retford and Worksop – to determine the levels of traffic entering the town centres. Table 10 below details the changes in the numbers of vehicles entering the market towns when compared to 2005.

Table 10: Changes in traffic entering the market towns when compared to 2005

Changes in traffic entering the market town				
Year	Mansfield	Newark	Retford	Worksop
2006	-2%	0%	0%	-5%
2007	-3%	0%	-2%	-8%
2008	-4%	-3%	-5%	-8%
2009	-8%	-6%	-2%	-12%

Source: DfT and Nottinghamshire County Council traffic counts

Mansfield, Newark and Retford each have bus stations. As the volumes of traffic entering the market towns has decreased, public transport patronage at the bus stations in Mansfield and Retford has increased – 10% increase in Mansfield between 2004 and 2009; and 45% increase in Retford between 2005 (a new bus station was opened in 2007) and 2010. Newark bus station is currently being redeveloped and Worksop does not currently have a purpose built bus station facility.

3.1.7 Challenges

The most recent complete data set to determine usual travel patterns is 2001 and there will have been major changes in the way people travel during the last 10 years. The 2011 Census data will therefore be important to determine how travel patterns have changed and also to prioritise resources to affect the way people travel. It would appear, however, that there is still significant scope for people to reduce the numbers of short car journeys and undertake more healthy active travel for such journeys. Similarly, there is significant scope to further increase public transport patronage instead of car journeys where good bus services already exist.

The current recession may also have an impact on people's travel patterns, both in terms of the number and distance of journeys made. People may have to travel further for currently available jobs, or to take advantage of employment opportunities when the economy starts to recover.

3.2 Highway network

Successes

During the last LTP period the County Council has been successful in:

- reducing journey time delay on the road network
- significantly reducing the numbers of people killed and seriously injured in road accidents (25% reduction in all age groups and 50% reduction in children injured)
- reducing prohibited parking in town centres following the introduction of Civil Parking Enforcement, and
- maintaining the condition of A, B and C roads in the county at a high level; and the condition of other transport assets, such as lighting columns and bridges has improved.

Challenges

The challenges that we face over the LTP3 period include:

- although journey times have improved there remain congestion hotspots along routes into the urban centres
- managing the impacts of employment and housing growth to ensure that they do not negatively impact on the highway network
- ensuring that increased numbers of private car journeys do not cause journey time delays as the economy recovers
- influencing travel behaviour, particularly for shorter journeys by active travel and other journeys by public transport
- addressing specific road safety issues (whether specific road users or geographic locations), and
- maintaining the highway network and ensuring that it is resilient to predicted pressures.

There are over 4,000km of road network in Nottinghamshire; as show in table 11 below.

Table 11: Nottinghamshire's road network

	Road type							Total
	Motorway	A(M)	A(Trunk)	A	B	C	Unclassified	
Length of roads in Nottinghamshire	12	5	129	559	272	765	2554	4296

Source: Nottinghamshire County Council

The County Council monitors traffic flows at 200-300 sites across the county each year to help identify existing, and predict future, traffic conditions. The County Council uses this information to identify its strategic road network based on trip generators across the county (eg, market towns and local centres) and the numbers of vehicles travelling along routes. Figure 10 below details the strategic routes in Nottinghamshire – the identified routes have, on average, traffic flows of over 15,000 vehicles per day, and/or over 500 heavy goods vehicles (HGVs) per day.

Nottinghamshire core road network 2011

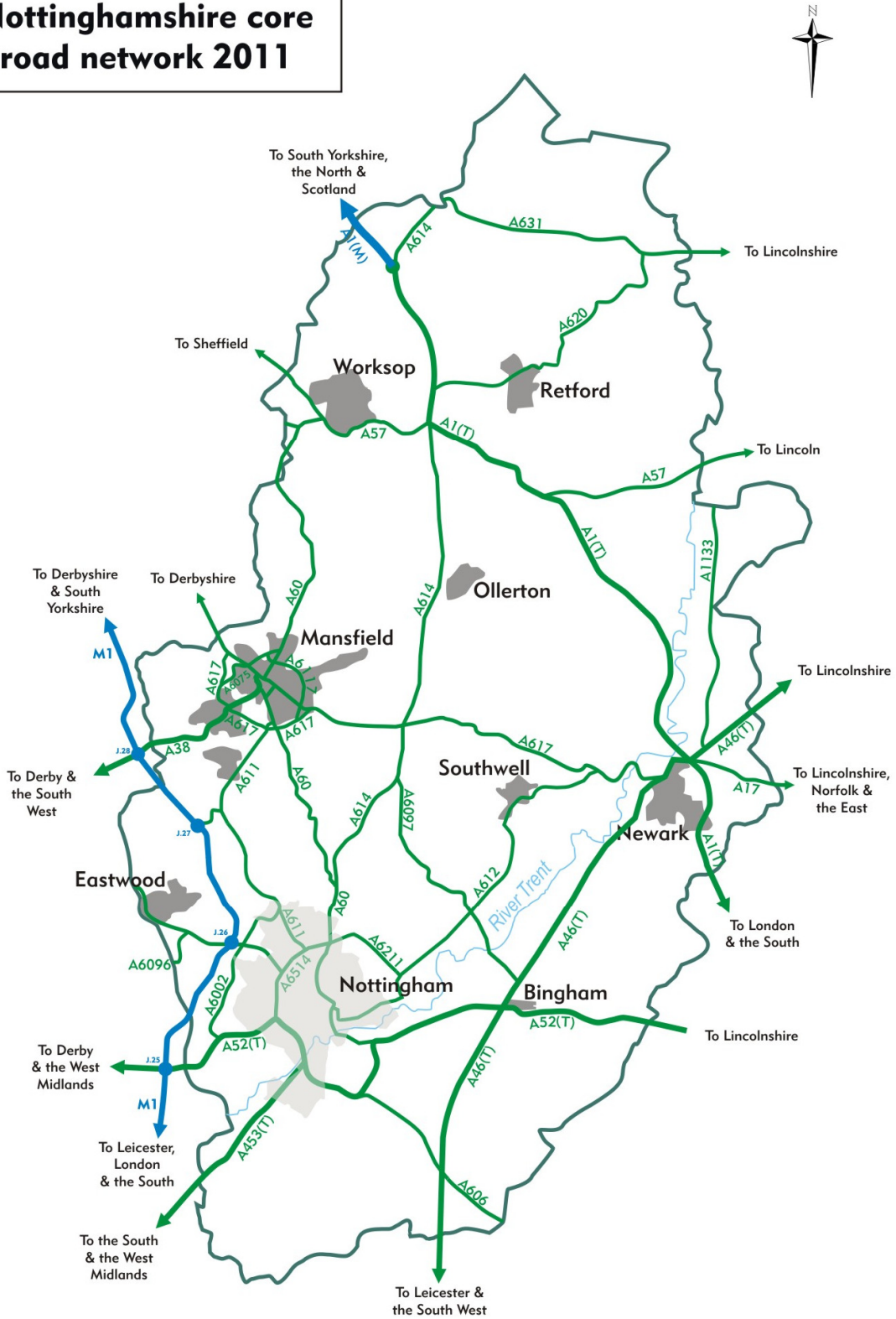


Figure 10: Nottinghamshire strategic road network
Source: Nottinghamshire County Council

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3.2.1 Condition of the road network

The road condition in Nottinghamshire is monitored annually and is detailed below in table 12. In 2009/10:

- the percentage of the County's A road network where maintenance should be considered has remained at 1.5% of the network, although the condition is slightly worse in Broxtowe, Gedling and Mansfield districts
- the percentage of the County's B & C road network where maintenance should be considered has remained at 8.4% (although deterioration has been seen in Newark & Sherwood and Rushcliffe; and the condition has improved in Ashfield district), and
- the County's unclassified road network has worsened, particularly in the more rural districts.

The condition of the A road network in Nottinghamshire is better than the average shire authority, the East Midlands region's average and the average in England. The condition of the B&C road network in Nottinghamshire is the same as the average shire authority, the East Midlands region average and slightly better than the average in England. The condition of the unclassified road network in Nottinghamshire is slightly worse than the average shire authority and the average in England.

Table 12: Percentage of the road network where maintenance should be considered

Road type	Percentage of the road network where maintenance should be considered			
	2006/07	2007/08	2008/09	2009/10
A	2%	1.5%	1.6%	1.5%
B and C	6%	7.3%	8.4%	8.4%
Unclassified	15%	15.7%	17.0%	19.5%

Source: Nottinghamshire County Council

3.2.2 Capacity on the network

The level of congestion, commonly called the level of link 'stress', is measured by comparing the level of observed traffic against the maximum amount of traffic that could travel along the road in an hour, i.e. the capacity of the road. Some roads are more congested than others and for longer than just the busy morning and evening rush hours. When the ratio of flow to capacity is less than 90% the link operates within capacity. Between 90% and 100% stress, the link is approaching capacity and the traffic flows are susceptible to flow breakdown. At greater than 100% stress the link operates over capacity and experiences stop-start traffic flows, queuing traffic and delays.

Capacity along the County Council's network

Stress maps have been produced by organisations on behalf of Ashfield, Bassetlaw and Newark & Sherwood district councils during the development of their local development frameworks. This work has only identified two locations on the County Council's road network that currently operates over capacity – the B6026 Huthwaite Road, and a section of the A38 in Ashfield district.

A transport model has been produced to help predict traffic flows within the Nottingham Core Housing Market Area (HMA), which includes the Broxtowe, Gedling and Rushcliffe districts as well as Hucknall. The model has been used to produce stress maps for the Nottingham Core HMA which has identified a small number of short sections of road that currently operate over capacity in each of these districts (generally on routes into the city and district centres).

The stress map assessments and modelling shows that the number of roads in the county at or above capacity would increase considerably if the proposed housing and employment growth goes ahead without any mitigation, with each of the districts being affected. The stress map assessments are included within the LTP3 Evidence Base Report.

Capacity along the Highways Agency's network

An analysis of the observed conditions and delays in 2006 was reported in the Highways Agency's (HA's) 'Regional Network Report for the East Midlands 2008'. This report identified the following locations as having high daily stress (over 90%) levels in 2006:

- M1 between junctions 26 and 27
- A453 between the M1 and Nottingham
- A46 between Saxondale (A52) and Newark
- A52 between Wheatcroft roundabout (A606) and Saxondale (A46).

Since the report was published the HA has undertaken widening along the M1 between junction 26 and 27; and is undertaking improvement works along the A46 between Saxondale and Newark. Future observations may therefore show significant improvements along these routes.

3.2.3 Delay on the network

In 2007, the East Midlands Development Agency commissioned a study to identify the economic costs of congestion to the East Midlands region's economy. The report identified that the 'direct' and 'indirect' costs of congestion to the regional economy amounted to approximately £935m per year. This figure excludes congestion costs incurred on the East Midlands region's national strategic road network (including some motorways and trunk roads within the study area) which amounted to a further £185m per year. The direct costs of congestion were identified for each of the housing market areas in the region and table 13 below shows the estimated direct costs of congestion on non-trunk routes for the relevant housing market areas in Nottinghamshire.

Table 13: The economic costs of congestion in the Nottinghamshire housing market areas

Housing market area	Total (£m)	Per capita (£)
Nottingham core (Broxtowe, Gedling and Rushcliffe districts; Hucknall; Nottingham City; and the Derbyshire district of Erewash)	152	209
Nottingham outer (Mansfield and Newark & Sherwood districts; and the Ashfield district except Hucknall)	3	12
Northern (Bassetlaw district)	10	26

Source: The economic costs of congestion in the East Midlands Region, emda June 2007

To monitor delay on the network, journey time surveys have been undertaken. The results of these surveys are detailed in the sections below but where there is delay, it is generally located at hotspots linked to traffic control such as traffic signals.

Journey time surveys in market towns

Journey time surveys utilising GPS technology were undertaken during 2008, 2009 and 2010 in each of the four largest market towns in the north of the county – Mansfield, Newark, Retford and Worksop. Surveys were undertaken in the morning peak; the evening peak; and during the inter-peak period. Table 14 below details the results of the inbound journey time surveys during the morning peak (0730-0930) in each of the market towns between 2008 and 2010. The figures show that the average speeds have not got worse in any of the market towns, with increases in speeds in Mansfield, Retford and Worksop when compared to 2008.

Journey time surveys into Nottingham city centre

In 2008, a congestion management study looked at the patterns of congestion in the 'Three cities' sub-region and their surrounding areas – Derby, parts of Derbyshire, Leicester, Leicestershire, Nottingham and part of Nottinghamshire (Broxtowe, Gedling and Rushcliffe districts as well as Hucknall). The results of the congestion survey showed significant morning peak congestion inbound on many of the radial routes into the 'Three cities'.

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During the second Local Transport Plan period the County Council, jointly with Nottingham City Council, were required to monitor congestion within the Greater Nottingham conurbation. A total of 18 routes (13 of which travelled through the county) were monitored through journey time surveys utilising GPS technology. The overall results of the surveys along these 13 routes in the morning peak are included in table 14 above, whilst the morning peak results along individual routes are shown below in figure 11. Between 2007 and 2009 (2010 data was not available at the time of writing) the overall journey speeds have not got any worse in Greater Nottingham. There is, however, significant variance in the journey time between the routes, ranging from 2.5 minutes per mile on the A612 to around 4.7 minutes per mile on the A611. There have been reductions in the journey times along most of the routes but journey times have increased on several sections in the county including B684, A606, A6005, and A609.

Table 14: Average journey times during the morning peak

Location	Route length (miles)	Morning peak (0730-0930) inbound							
		Average speed (mph)				Average journey time per mile (minutes)			
		2007	2008	2009	2010	2007	2008	2009	2010
Mansfield	26.1		18	18	19		3:23	3:26	3:11
Newark	7.2		20	20	20		3:08	3:00	3:07
Retford	6.0		15	17	17		4:01	3:41	3:38
Worksop	10.7		19	20	20		3:02	2:55	3:05
Greater Nottingham	30.8	19	19	19	N/A	3:11	3:30	3:13	N/A

Source: Nottinghamshire County Council

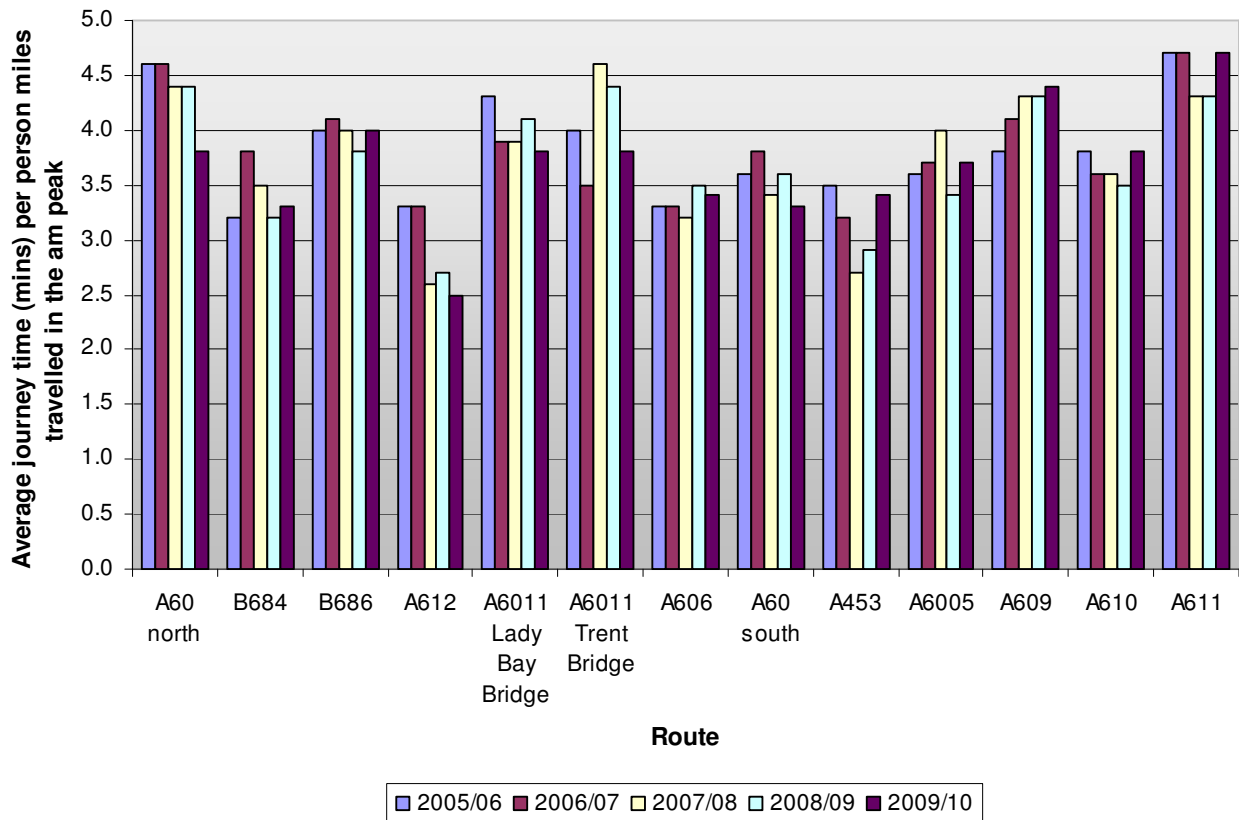


Figure 11: Average journey times in Greater Nottingham

Source: Nottinghamshire County Council

Inter-urban journey times

The Department for Transport has provided the County Council with 2009/10 Trafficmaster GPS data for the county. The Trafficmaster data has been mapped to show the journey time speeds on the network in the county (including inter-urban routes) during the morning peak and this shows that there is currently no inter-urban delay. Unfortunately, the County Council do not hold earlier year's data so no trends can be analysed but this data will be useful in future years to determine whether or not journey times between the local centres, market towns and the City are improving or worsening.

Vehicle delay on the Highways Agency's network

The 'Regional Network Report for the East Midlands 2008' produced by the Highways Agency (HA) analysed observed delays in 2006 on the HA's national strategic road network. The roads in Nottinghamshire identified as having the greatest delay per vehicle and peak hour vehicle delay were:

- A453 between Nottingham and the M1
- A52 east and west of Nottingham
- A1 particularly Newark to Grantham.

Improvement works have been undertaken along the A1 since 2006 and therefore vehicle delay is likely to have reduced along the A1.

3.2.4 Casualties on the highway network

There have been significant reductions in the numbers of all types of road casualties in Nottinghamshire when compared to both the 1994-98 average and the numbers injured in 2005.

Killed and seriously injured casualties

The numbers of killed and seriously injured (KSI) casualties has decreased year on year and in 2009 the number of casualties had fallen by over 46% when compared to the 1994-98 average (from 826 to 446); and by 25% when compared to 2005 (from 593 to 446). When comparing 2009 with the 1994-98 average, Nottinghamshire has seen more significant decreases in the number of KSI casualties than the regional and national averages.

Due to increased casualties in 2009, when comparing 2009 with 2005, the numbers of KSI casualties increased in Broxtowe (8% increase – although almost a fifth of these are on motorway and trunk roads) and Mansfield (6% increase) districts. It should be noted, however, that these districts had the lowest numbers of casualties in the base year.

Child killed and seriously injured casualties

The numbers of child KSI casualties has decreased year on year and in 2009 the number of casualties had fallen by just over 68% when compared to the 1994-98 average (from 129 to 40); and by 50% when compared to 2005 (from 80 to 40). Despite starting from a low base, the numbers of child KSI casualties decreased in each of the districts between 2005 and 2009. When comparing 2009 with the 1994-98 average, Nottinghamshire has seen more significant decreases in the number of child KSI casualties than the regional and national averages. But the actual number of casualties is higher than all the other authorities in the East Midlands region, although it should be noted that the number of child casualties in Nottinghamshire also started from a higher base figure.

Slightly injured casualties

The numbers of slight injuries has seen significant reductions and in 2009 the number of casualties had decreased by just over 21% when compared to the 1994-98 average (from 3,387 to 2,668); and by 15% when compared to 2005 (from 3,157 to 2,668). When comparing 2009 with the 1994-98 average, the reduction in slight casualties in Nottinghamshire is the same as the regional average but less than the national average. The actual number of casualties remains higher than most other

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authorities in the region, again it should be noted that the number of slight casualties in Nottinghamshire also started from a higher base figure.

Between 2005 and 2009 the numbers of slight casualties decreased in each of the districts except Rushcliffe. The numbers of casualties in Rushcliffe has, however, decreased year on year since 2006.

Casualty details on specific road user groups are detailed in the relevant sections below.

3.2.5 Challenges

Virtually the whole of the County Council highway network operates within capacity but the Council cannot be complacent. Whilst there have been improvements in journey times on the roads during the last LTP period, there are still hotspots across the county where delays occur, primarily due to traffic management such as traffic signals. Other challenges relating to the bus network (detailed below in Section 3.4 – Public transport) and future growth (detailed below) will almost certainly have an impact on the highway network if they are not managed effectively. The County Council will therefore need to continue its work to limit the vehicle kilometres travelled and increase its work to influence the transport choices people make to prevent the worsening of congestion and delay on the highway network. Such measures are, however, predominantly funded through revenue funding which historically has been difficult for the County Council to fund.

Significant improvements have been made to address capacity issues on the Highways Agency managed roads but there are still major issues on parts of its network, particularly the A453. The Guardian newspaper reported on 28 April 2010 that the A453 has the worst delay on all of the Highways Agency network except for a single section of the M25 (J23-16) which is currently being improved by a widening scheme.

Future housing and employment development could have a significant negative impact on the operation of the highway network, both in terms of delay and capacity. It is therefore vital that the district councils only allow development in suitable locations (i.e. in locations that are already served by good bus, cycle and walking networks). Similarly, any new development should have nil detriment to the existing highway network. The district councils will therefore also need to ensure that any development that takes place does not have any impact on the existing network through ensuring that developers make sufficient contributions to negate the transport impacts of the development; releasing such contributions so that the necessary improvements can be delivered by the County Council; as well as effective monitoring and enforcement of travel plans.

The current recession may also have an impact on people's travel habits as unemployment will reduce the numbers of journeys particularly at peak times. As the economy starts to recover there may be increases in the numbers of private car journeys as people return to work.

Whilst the numbers of killed and seriously injured road casualties has decreased significantly, there are still variances across the county and the County Council will need to continue to monitor casualty trends and causes to continue to effectively prioritise the remedial measures in the areas that need them most.

Maintaining the highway network at its current levels will remain a challenge over the LTP3 period. In addition to funding pressures, the County Council must also contend with the increased cost of materials. Recent years have seen increased rainfall; flooding; and more severe winters across Great Britain. If the predicted impacts of climate change occur the County Council will need to ensure that its transport networks are more resilient to potentially harsher winters; longer hotter drier summers; more intense rainfall; and greater levels of flooding.

3.3 Motor vehicles

Successes

During the last LTP period the County Council has been successful in:

- limiting the number of newly licensed vehicles to less than the regional and national averages
- meeting targets to limit CO₂ emissions from road vehicles, and
- maintaining the levels of air quality so that no further air quality management areas have been declared.

Challenges

The challenges that we face over the LTP3 period include:

- a lack of alternatives to the private car to make some journeys from rural areas, particularly for those without access to a car
- poor air quality due to transport conditions at specific locations
- addressing specific road safety issues (whether specific road users or geographic locations)
- changing travel behaviour, particularly for shorter journeys by active travel and other journeys by public transport, and
- noise at specific locations could also potentially be a challenge.

3.3.1 Vehicle ownership

Between 2005 and 2009 the number of licensed vehicles in the county increased by 3%. The numbers of vehicles continued to increase year on year until 2009 when there was a slight decrease in the numbers of licensed vehicles. The East Midlands and Great Britain both saw increases in licensed vehicles each year and the increases were higher than seen in Nottinghamshire (4.6% and 4.1% respectively). Table 15 below details the numbers of each type of motor vehicle in Nottinghamshire

Table 15: Number of licensed vehicles

No. of licensed vehicles (thousands)									
Nottinghamshire								East Midlands	Great Britain
Year	Cars	Motor cycles	Light goods	Heavy goods	Buses and coaches	Other vehicles	Total	Total	Total
2005	360	17	38	7	1	8	431	2,534	32,897
2006	363	19	37	7	1	8	435	2,566	33,369
2007	368	19	38	8	1	7	441	2,617	33,957
2008	372	19	38	8	1	8	445	2,654	34,206
2009	371	19	37	7	1	8	444	2,655	34,258

Source: 2010 vehicle licensing statistics

The percentage of households in the whole of Nottinghamshire without a car is lower than the national average. The number of household in Ashfield (28%) and Mansfield (29%) districts, however, have higher than the county and national average, meaning that they are more reliant on public transport, walking and cycling. The percentage of households in each of the districts with no car and with two or more cars is shown in table 16 below.

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Table 16: Car ownership levels

District	No. of households	Percentage of households with no car	Percentage of households with two or more cars
Ashfield	46,600	28%	26%
Bassetlaw	44,690	24%	31%
Broxtowe	45,445	23%	30%
Gedling	47,556	23%	30%
Mansfield	41,601	29%	26%
Newark & Sherwood	44,465	22%	33%
Rushcliffe	43,670	17%	40%
Nottinghamshire	314,027	24%	31%
England	20,451,427	27%	29%

Source: 2001 Census data

These figures disguise some wide variations between some inner urban areas (up to 50% of households without a car) and some of the more rural areas (up to 94% of households with a car). Generally, car ownership in the urban areas is lower than that in the district as a whole, reflecting the lack of a real alternative to the car outside some of the urban areas.

3.3.2 Environmental factors

Carbon emissions

Transport accounts for a high proportion of CO₂ emissions in the county, 31% of the total CO₂ emissions in Nottinghamshire, ranging from 37% of emissions in Broxtowe borough to 19% of emissions in Gedling borough. The proportion of CO₂ emissions from transport in Broxtowe borough is higher than those from domestic and industry/commercial purposes. Similarly, in Bassetlaw and Newark & Sherwood districts, the proportion of CO₂ emissions from transport is higher than those from domestic purposes and almost as high as those from industry/commercial purposes. It should be noted, however, that the districts with the highest CO₂ emissions from transport in the county all have major nationally strategic roads running through them (Bassetlaw - A1; Broxtowe - M1 and A52; and Newark & Sherwood - A1 and A46).

Air quality

There are currently six transport related air quality management areas (AQMAs) in the county, all of which are due to exceedences of levels of nitrogen dioxide (NO₂). Five of the AQMAs relate to the Highways Agency's managed motorway and trunk road network and are located at:

- M1/A6007 closest houses to east of M1 in Iona Drive and Tiree Close, Trowell
- M1/A609 closest houses to west of M1 on Derbyshire Avenue, Trowell
- M1/A609 closest house to west of M1 on Nottingham Road, Trowell
- M1/B600 houses on the Nottingham Road and Back Lane, Nuthall closest to the M1, and
- houses adjacent to the A52 (trunk road) from Nottingham Knight roundabout northwest to the borough/city boundary.

There is also one AQMA on the County Council's managed highway network which is located at:

- properties adjacent to the approaches to Trent Bridge and Lady Bay Bridge.

Monitoring has, however, shown that air quality is improving at each of the locations with NO₂ levels decreasing.

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Monitoring of air quality across the county has also identified two further locations where the borough councils may have to declare an AQMA. These sites are located at:

- A52, Stragglethorpe (a Highways Agency managed road)
- A60 Mansfield Road, Daybrook (a County Council managed road).

The LTP3 Evidence Base Report gives further details of locations that are close to annual mean objectives but do not require an AQMA to be declared.

Noise

Noise from transport networks can affect large numbers of people. The DEFRA 'Noise Action Plan for major roads outside agglomerations' identifies 'Important Areas' with respect to major road and rail noise where 1% of the population is affected by the highest noise levels. Locations where noise mapping indicates levels of at least 76 dB $L_{A10,18h}$ are to be investigated as a priority. There are an estimated 7,300 dwellings to be investigated due to noise from major roads across the East Midlands with 2,100 to be investigated as 'First Priority Locations' outside the first round agglomerations. The Noise Action Plan requires the County Council to investigate 'Important Areas' (giving priority to those containing 'First Priority Locations'). The following locations are identified as part of the 'First Priority Locations' identified in the First Round Agglomerations:

- sections of the M1 (Highways Agency managed road)
- sections of the A52 (Highways Agency managed road)
- sections of the A46 (Highways Agency managed road)
- rail line at Attenborough (managed by Network Rail), and
- A60 Trent Bridge and Loughborough Road, West Bridgford.

The following locations are identified as 'First Priority Locations' outside agglomerations in Nottinghamshire (excluding the M1, A52 and A46):

- Awsworth Lane, Awsworth
- A6002 Nuthall
- A606 Tollerton
- A6097 Gunthorpe/Lowdham
- A608 Annesley Hall
- A611 Annesley
- A38 Sutton in Ashfield (3 sections)
- A6075 Mansfield (3 sections)
- A60 (5 sections between Leapool and Ravenshead)
- A614 Rufford Country Park
- A6075 New Ollerton
- A617 Kelham
- A57 Worksop, and
- A619 Worksop.

3.3.3 Driver and rider casualties

Car drivers and passengers killed and seriously injured casualties

The numbers of car driver and passengers killed or seriously injured (KSI) casualties has decreased significantly and in 2009 the number of casualties had fallen by 47% when compared to the 1994-98 average (from 405 to 203 casualties); and by 27% when compared to 2005 (from 292 to 203 casualties). The reductions in casualties in Nottinghamshire between 2005 and 2009 far exceeds the 1% reduction in annual traffic mileage and the increase of 3% in the number of licensed cars in Nottinghamshire during the same period.

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When comparing 2009 with 2005, the numbers of car driver and passenger KSI casualties has decreased in each of the districts except Mansfield, where the number of casualties has increased in each of the last two years. The numbers of car driver and passenger KSI casualties in Mansfield (21 in 2009), however, remains low when compared to other districts.

Killed and seriously injured casualties involving young drivers

When comparing 2009 with 2005, the numbers of young driver KSI casualties has fluctuated but has ultimately increased by 12% (from 49 to 54 casualties). The proportion of young driver KSI casualties has also increased – in 2009, young driver KSI casualties accounted for over a third (37%) of all of the car driver KSI casualties in Nottinghamshire, compared to 29% in 2005.

Motorcyclist killed or seriously injured casualties

The numbers of motorcycle KSI casualties has decreased by 15% when compared to the 1994-98 average (from 133 to 113 casualties); and by 10% since 2005 (from 126 to 113 casualties). This decrease is significantly lower than all other road users but in line with the national picture on motorcycle casualties.

Motorcycles continue to represent significant numbers of road casualties, despite their low proportion of overall traffic. In 2009 motorcyclists accounted for 1% of traffic on Nottinghamshire's roads but 25% of all of the KSI casualties.

The greatest numbers of KSI motorcycle casualties involve riders of larger bikes over 500cc; whilst the largest numbers of slight casualties involve riders of smaller bikes up to 125cc. Historically, the majority of accidents have involved older riders on higher powered bikes but accidents involving teenagers riding mopeds and bikes up to 125cc now feature more significantly. This is reflected in the fact that between 2005 and 2009 the more urban areas of Broxtowe and Gedling have seen increases in the numbers of KSI motorcycle casualties.

Killed or seriously injured casualties where speed was a contributory factor

The numbers of KSI casualties where speed (either excessive speed or driving too fast for the conditions) was a contributory factor to the accident has decreased by 24% when comparing 2009 with 2005 (from 87 to 66 casualties). The number of killed and seriously injured casualties where speed was a contributory factor has significantly decreased in rural areas but has slightly increased in urban areas.

The number of fatal casualties where speed was a contributory factor to the accident, however, has doubled between 2005 and 2009 (from 9 to 18 fatalities); and in 2009 speed was a contributory factor in 43% of all of the fatal casualties in Nottinghamshire.

3.3.4 Vehicle crime

All of the districts have seen year on year decreases in the rate of theft of vehicles between 2007 and 2009. Bassetlaw has the highest rate of thefts of vehicles (4.1 per 1,000 population) although this has dropped from 6.5 per 1,000 in 2007.

All districts have shown year on year decreases in thefts from vehicles between 2007 and 2009 except for Rushcliffe which dropped from 11.0 per 1,000 in 2007 to 6.9 in 2008 but then increased to 7.7 per 1,000 in 2009. The rates of theft from vehicles in Rushcliffe have, however, seen decreases when comparing 2009 with 2007. Mansfield experienced the highest rates of thefts from vehicles both in 2007 (16.8 per 1,000) and in 2009 (9.3 per 1,000) although there has been a steady decrease in the rates of this crime.

The rate of vehicle interference and tampering has reduced in each district with the 2009 rate ranging from 0.8 per 1,000 in Mansfield to 1.3 per 1,000 in Bassetlaw.

3.3.5 Challenges

The percentage of households without a car varies significantly between districts, as well as by wards within those districts. The households without a car are much more reliant on public transport as well as walking and cycling for their everyday journeys and therefore it will be important to make sure that these people continue to be able to access essential services.

Whilst air quality in the county is generally good there remain problem areas due to transport. On the County Council managed roads these are due to queuing traffic at 'bottle necks', namely Trent Bridge and Lady Bay Bridge (as well as potentially on the A60 in Daybrook). The 'First Priority' location on the County Council managed highway that needs to be investigated due to noise levels from transport is also located on the approach to Trent Bridge. The nature of these locations makes it difficult to remedy the problems with infrastructure and therefore smarter choices measures are more likely to provide the solution. Smarter choices are, however, predominantly funded through revenue funding which historically has been difficult for the County Council to fund.

Further investigation of noise issues on a number of routes in the county also needs to be undertaken. The scale of the issues at these locations is yet to be determined but it is worth noting that this may become a higher priority during the lifetime of the LTP3.

Casualties amongst car drivers, riders and passengers have decreased significantly across the county but some issues remain. Young drivers and passengers accounted for over a third (37%) of all the car driver and passengers killed and seriously injured (KSI) casualties in Nottinghamshire and this number has increased during the period of the last LTP. Speed continues to be an issue in that it is a contributory factor in over 40% of fatal accidents and this percentage doubled during the last LTP period. Whilst motorcycle KSI casualties have decreased the KSI casualties are still disproportionate to their numbers in that they represent only 1% of the road users but account for 25% of all of the KSI casualties in the county.

3.4 Passenger transport

Successes

During the last LTP period the County Council has been successful in:

- increasing the numbers of people using buses (by 8%) as well as trains over the Plan period
- maintained our high levels of access to services by public transport, with the County Council awarded Beacon Status for 'improving accessibility' in 2008
- worked in partnership with operators to provide quality services that people are satisfied with through improved bus and 'at stop' infrastructure
- securing investment to improve journey times and frequency of services on rail routes, and
- working with operators to improve surface access to airports.

Challenges

The challenges that we face over the LTP3 period include:

- maintaining the existing levels of the bus network
- addressing the lack of alternatives to the private car for some journeys from rural areas
- working with operators to monitor and improve bus punctuality
- the development and introduction of multi-operator and multi-mode smart card ticketing, and
- addressing the historic under investment in the rail network that serves Nottinghamshire.

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3.4.1 Passenger transport network

Nottinghamshire has an extensive passenger transport network made up of commercial and County Council supported services.

Bus

Buses are the major provider of passenger transport across the county. The most recent survey of public satisfaction with local bus services (2010) found that over 70% of people in Nottinghamshire are satisfied with their local bus services, the highest rate of all the shire counties.

Access to bus services is good across most of the county, although there are fewer services in some of the more rural parts of the county, especially in the evenings and on Sundays. To supplement the commercial bus network, the County Council currently spends approximately £7m per year to provide additional services. Without the County Council providing support through subsidising services, many households would find it difficult to access services. Table 17 below shows the percentage of people in Nottinghamshire in 2010 with access to an hourly or better bus service, with and without the County Councils' support.

Table 17: Accessibility of public transport networks in 2010

Percentage of households within 800m of a bus stop with an hourly or better bus service Monday to Saturday (0600-1800)		Percentage of households within 800m of a bus stop with an hourly or better bus service Monday to Saturday (1800-2400)		Percentage of households within 800m of a bus stop with an hourly or better bus service Sunday (1000-1800)	
All services	Without County Council supported services	All services	Without County Council supported services	All services	Without County Council supported services
96%	91%	83%	71%	85%	76%

Source: Nottinghamshire County Council

Locations where buses have frequent delays because of highway conditions (such as queuing traffic or parked cars) are identified in partnership with operators. Work has been undertaken to improve conditions at many locations but there are still a number of sites across the county that have not yet been investigated to determine the reality of the problem, the length of delay or the feasibility of a solution.

Community transport

Community minibus and social car schemes play a key role in providing transport to help older people, people with mobility difficulties, or those without access to conventional public transport to access key services and destinations. A number of services are provided across the county, some of which are subsidised by the County Council. There are, however, shortfalls in the services available, particularly in parts of Broxtowe, Gedling and Rushcliffe districts.

Light rail

The light rail system, Nottingham Express Transit Line 1, provides services between the city centre and the northern local centre of Hucknall. Line 1 is extensively within the city but serves two stops in the county, and provides opportunities to access employment areas along its route. Two further lines are proposed which would serve the areas south (to Clifton) and west (to Beeston) of the city.

Rail

Rail services provide important connections both within the county and between Nottinghamshire and elsewhere. The coverage of the rail network (as shown in figure 12 below) is relatively good.

Several improvements to the rail network and services are already planned, including:

- renewal of the track at Nottingham rail station to allow trains travelling through it to run more quickly and reliably. The station itself will also be upgraded to provide improved facilities, and
- improvements to the Midland Mainline to improve journey times between London and Leeds.

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Relatively slow journey times and frequency of services along several routes are issues that make services less attractive than they could be and include:

- services from Nottingham to London, Sheffield and Leeds due to historical under investment in the Midland Mainline (it has received only 2% of the total spent on the inter-city routes in the last decade)
- services from Nottingham to Newark and Lincoln
- services from Newark and Retford to London
- services from Nottingham to Grantham and Skegness, and
- services between Lincoln, Retford, Worksop and Sheffield.

Time savings from higher journey speeds could also allow for selected stations to get improved frequency of services along some of the above routes.

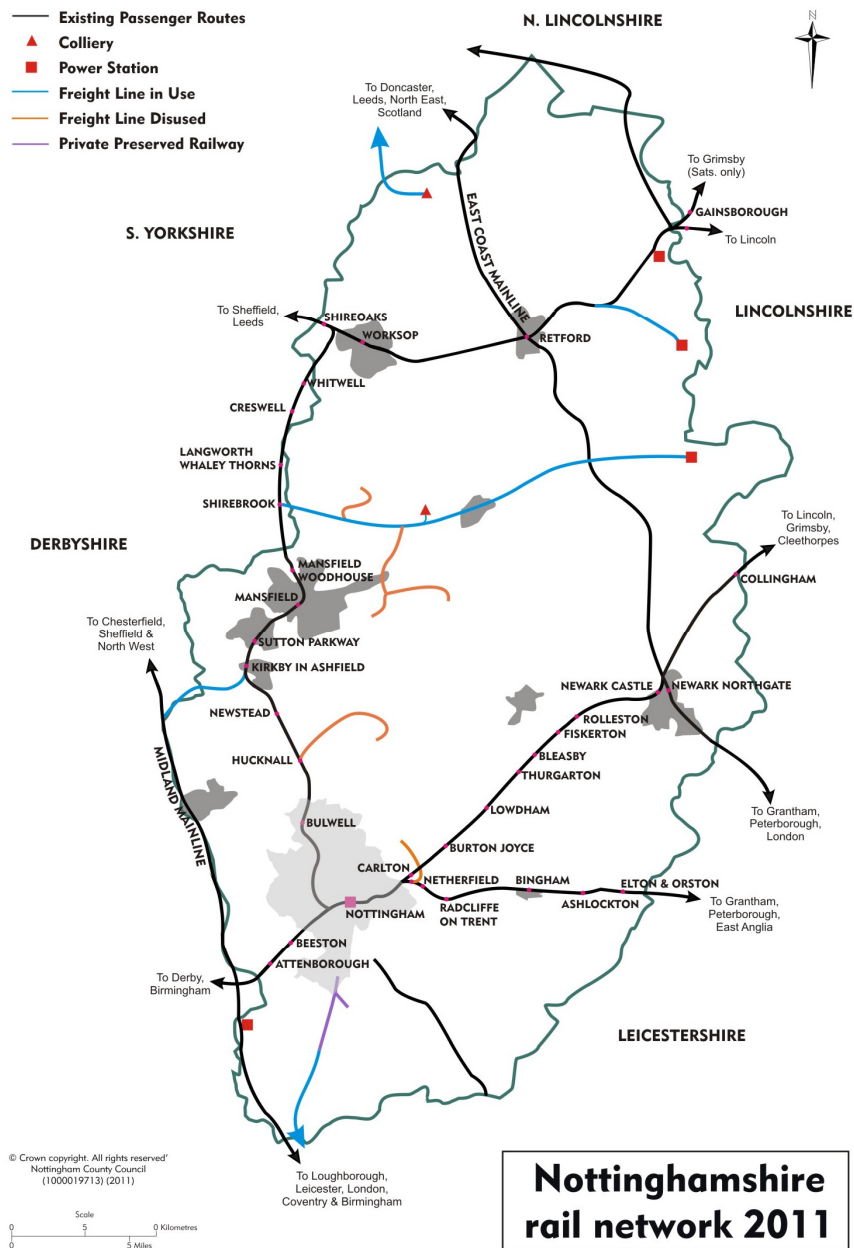


Figure 12: Nottinghamshire rail network
Source: Nottinghamshire County Council

3.4.2 Passenger transport infrastructure

Nottinghamshire County Council's Transport & Travel Services has its own fleet of over 180 vehicles. The average age of these vehicles is 4.5 years and 81.7% of the vehicles have Euro 3 engine type or better. A survey of commercial operators undertaken in 2009/10 found that:

- 76.4% of respondents' vehicles are aged under 10 years
- 60.3% of respondents' vehicles have Euro 3 engine type or better (Euro 3 - 37.1%; Euro 4 - 15.2%; Euro 5 - 7.8%)
- 66.9% of respondents' vehicles are fully accessible (compared to 28.95% in 2006).

There are approximately 6km of bus lanes; and 61 traffic signals with bus priority along well used bus routes in the county. Such measures help to ensure the punctuality of buses and consistency of their journey times to make the services more attractive to the public. 'Real time' information at bus stops (telling you the actual length of time until the next bus arrives rather than timetable information) is being introduced across the county. Further information on bus infrastructure is included in Section 6.2 – Provision of an affordable, reliable and convenient passenger transport network, of this Plan.

Each of the train operators has refurbished or upgraded its rolling stock during the lifetime of the second LTP.

Despite the very strong business case for the electrification of the Midland Mainline this has not been prioritised in the recent Government announcements on electrification of rail services.

3.4.3 Patronage

In 2009/10 over 35 million passenger bus journeys originated in the county, an increase of almost 8% since 2005/06 and an increase of 43% since 2000/01. Rail patronage has also significantly increased in Nottinghamshire; between 2005/06 and 2008/09 the numbers of rail journeys increased by 37%, and by 64% since 2001/02. The rate of patronage growth on both buses and rail in Nottinghamshire exceeds levels of national patronage growth.

There are currently 26 rail stations in Nottinghamshire. Whilst most stations have seen increased usage, substantial patronage growth has been seen at stations in Beeston, Newark, Retford and Worksop. Large reductions in rail patronage occurred at Newstead, and Sutton Parkway stations. Newark to London is the 6th largest flow of passengers on the East Coast Mainline and has seen higher rates of growth than much larger catchment areas such as Leeds, Newcastle or Edinburgh. Similarly, considerable increases in patronage have been seen at Mansfield, (10%), Retford (45%) and Sutton in Ashfield (27%).

Whilst there is currently limited information on passenger load factors, the information available identifies overcrowding:

- on peak services between London, Nottingham and Leicester
- on peak services between Nottingham and Birmingham via Derby, and
- all day on the Norwich-Liverpool service on the section between Nottingham and Liverpool.

3.4.4 Punctuality of services

Recorded punctuality of bus services during the last four years has fluctuated significantly, although an audit of the monitoring of punctuality measurements highlighted several errors in the data and therefore this data should be viewed with caution. At the end of 2010, 85% of buses were recorded as being on time; and waiting times for buses along frequent service routes are, on average, within $\frac{3}{4}$ of a minute of their scheduled arrival time.

Over 90% of all trains arrive within 10 minutes of their scheduled arrival time, with the exception of East Coast Mainline services (87%). East Midlands Trains (EMT) has significantly improved

punctuality since taking over the franchise in November 2007. EMT has improved the local services from being the worst performing regional operator to being the third best (out of 10). Punctuality on the East Coast Main Line has also improved, albeit from a much lower starting point.

3.4.5 Ticketing and concessionary fares

A range of ticket types are available in the county, including daily, weekly, monthly, three and six monthly, as well as annual tickets. Three of the 25 operators in the county currently offer smartcards (NCT, NET and Trent Barton) although these are not wholly transferable across operators or on trains.

Approximately 82% of those eligible to a concessionary pass due to age have taken up the pass, equating to over 165,000 passes. The age criteria for entitlement to a concessionary pass is now in line with the increase in state pension age for women and therefore there will be a growing proportion of the 60-64 age group who are not entitled to a pass. In addition to this there are approximately 10,000 passes issued to people on the grounds of disability.

3.4.6 Surface access to airports

Whilst there are no airports within Nottinghamshire there are two airports close to the county – East Midlands Airport located close to the south of the county; and Robin Hood Airport located close to the north of the county. Both of the airports have frequent bus services to them from the county; and patronage of the services to both East Midlands and Robin Hood airports has grown massively since they commenced.

3.4.7 Challenges

Maintaining the existing levels of bus services in the county will be a major challenge. The reduced levels of Central Government funding available to the County Council will undoubtedly impact on the amounts of funding the Council has available to subsidise bus services. Reductions in funding may result in some communities facing a reduced level of service or potentially no services at all. In some areas there may also be an increase in the distance walked to the nearest bus stop with a suitable frequency.

There are several challenges regarding public transport infrastructure to ensure that bus and rail remain easy to use and attractive to users. Punctuality of services is essential yet the monitoring of bus services shows that 16% in 2010 were late. Closer working with operators is therefore required to firstly monitor the services more accurately and also to identify the locations where services are delayed. Seamless smartcard ticketing across different operators and modes (bus and rail) is critical to delivering a first class public transport system and therefore the Council will work closely with passenger transport operators to develop such a system. Several of Nottinghamshire's neighbours have different 'real time' systems, which are not necessarily compatible with each other. The County Council will therefore need to ensure that any 'real time' infrastructure introduced in the county is compatible with all of the relevant cross-boundary bus services.

On the rail network, the historical under investment in the Midland Mainline routes has caused significant challenges to the delivery of improved journey times and frequency. If rail patronage continues to grow at its current rate over-crowding (as seen in South East) may also occur if rolling stock is not increased in line with patronage growth.

3.5 Pedestrians and cyclists

Successes

During the last LTP period the County Council has been successful in:

- improving the condition of footways in district and local centres
- maintaining the Rights of Way network to a higher standard than both regional and national levels, and
- reducing the numbers of pedestrian casualties by 37%; and pedal cycle casualties by 22%.

Challenges

The challenges that we face over the LTP3 period include:

- increasing the levels of active travel by promoting walking and cycling (and the associated funding issues surrounding this)
- addressing the gaps in the cycle network
- ensuring value for money on new footway and cycleways (particularly in rural areas)
- effectively monitoring and maintaining the Rights of Way network, and
- addressing the standards of all of the footways in the county could potentially be a challenge.

3.5.1 Footways

The County Council is currently undertaking an audit to determine the full extent and condition of its footways. This work will be completed during 2010/11 and will be used for prioritisation of footway repairs and maintenance. The condition of the category 1, 1a and 2 footways (which are footways with medium to high usage – generally in local shopping areas) is currently monitored and shows improvements as detailed below in table 18.

Table 18: Condition of the category 1, 1a and 2 footways in Nottinghamshire

	2005/06	2006/07	2007/08	2008/9	2009/10
Percentage of category 1, 1a and 2 footways where maintenance should be considered	26%	26%	22%	27%	24%

Source: Nottinghamshire County Council

3.5.2 Rights of Way network

There are over 4,000 designated Rights of Way in the county totalling over 2,500km in length. The number of footpaths far outweighs each of the other categories, which highlights that the network is much more accessible on foot than by any other means, although 31% of the network length is available to equestrians and cyclists, which is higher than both the national (22%) and regional (20%) averages. These figures, however, assume that all of the routes are usable but the fragmentation and maintenance issues of the bridleway network means that routes are frequently not available to all users. There is no formal mechanism for recording and measuring the condition of the Rights of Way network. Until recently English and Welsh highway authorities used the national indicator (BVPI 178) to record and monitor performance. The national performance indicator, however, was found to be inadequate and inconsistent due to the methodology used to record data, particularly the random nature of the surveys which did not take into account strategic and targeted improvements.

3.5.3 Local cycle network

There are over 350km of cycle routes in Nottinghamshire, as detailed in table 19 below, of which 17% is lit. In addition to the formal cycle network detailed above there is also a suggested network of signed and unsigned advisory quieter roads to cycle on which avoid roads with large volumes of traffic. These are often used as an alternative where formal facilities cannot be provided because it is not feasible to do so.

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Table 19: Length of cycle network in Nottinghamshire

Length of cycle network (km) in Nottinghamshire			
On-road cycle lane	Off-road shared use	Off-road cycle track	Total
21	158	175	354

Source: Nottinghamshire County Council

Despite sustained expenditure on the cycle network in Nottinghamshire, mapping has identified that there are gaps in the network that could have the impact of discouraging (or in the worst case scenario – preventing) people from cycling to their required destination.

3.5.4 Cycling levels

Table 20 below shows the changes in cycling levels in Nottinghamshire when compared to 2005 levels. Poor summer weather in 2008 and 2009 has impacted on cycling levels, and in 2009, levels of cycling in the county have decreased slightly when compared to 2005 levels. Some districts have seen significant fluctuations in the levels of cycling during the period 2005 to 2009 but cycling levels have increased in the districts in the south of the county and Ashfield, whilst cycling levels have decreased in the districts in the north of the county.

Table 20: Changes in cycling levels in Nottinghamshire when compared to 2005

Changes in levels of cycling in Nottinghamshire when compared to 2005 levels			
2006	2007	2008	2009
0%	+2%	-3%	-2%

Source: Nottinghamshire County Council

When comparing 2009 with 2005, cycling levels in rural areas of Nottinghamshire (including leisure routes) have increased by 11%, whereas cycling levels in urban areas has decreased by 5%.

3.5.5 Killed and seriously injured casualties

Pedestrian killed or seriously injured casualties

The numbers of pedestrian killed or seriously injured (KSI) casualties has seen steady decreases and in 2009 the number of casualties had reduced by 58% when compared to the 1994-98 average (from 143 to 60 casualties); and by 37% when compared to 2005 (from 95 to 60 casualties). Despite starting from a low base, the numbers of pedestrian KSI casualties have decreased in each of the districts when comparing 2009 with 2005, except Ashfield where there has been no change.

When comparing 2009 with the 1994-98 average, Nottinghamshire has seen more significant decreases in the number of pedestrian KSI casualties than the regional and national averages.

Pedal cyclist killed or seriously injured casualties

The numbers of pedal cyclist KSI casualties has decreased year on year and in 2009 the number of casualties had fallen by almost 56% when compared to the 1994-98 average (from 86 to 38 casualties); and by over 22% when compared to 2005 (from 49 to 38 casualties).

When comparing 2009 with 2005 the numbers of pedal cyclist KSI casualties has decreased in each of the districts except Broxtowe and Rushcliffe. Whilst there have been increases in the number of cyclist KSI casualties in Broxtowe and Rushcliffe, the actual numbers of casualties in 2009 are still small, 12 and 7 respectively. Both Broxtowe and Rushcliffe districts also started from a very low base (4 and 3 casualties respectively) and have seen significant increases in cycling levels (5% and 12% respectively) during the same period.

When comparing 2009 with the 1994-98 average, Nottinghamshire has seen more significant decreases in the number of pedal cyclist KSI casualties than the regional and national averages. But

the actual number of casualties is higher than all the other authorities in the region, although it should be noted that the number of casualties in Nottinghamshire also started from a higher base figure.

3.5.6 Cycle theft

The rate of thefts of pedal cycles is highest in Newark & Sherwood (3.2 per 1,000 population in 2009) despite decreases in the rates of theft. The rates of thefts of pedal cycles has, however, increased in Ashfield, from 1.5 per 1,000 in 2007 to 1.7 per 1,000 in 2009 and has shown no improvement in Broxtowe between 2007 and 2009.

3.5.7 Challenges

The historical lack of data on the length and condition of the majority of the footway network in the county means that we are currently unable to determine an acceptable condition level or the amount of investment required to bring the footway network up to this level. The County Council are, however, completing this work and will soon be able to determine the severity of any work required.

The current design standards for footways and cycleways make it difficult to justify the costs of provision in rural areas where usage may be low. Such footways can provide essential links to services and therefore still need to be considered. A review of the existing footway standards will need to be undertaken to ensure that accessibility improvements can be delivered in rural areas.

Although there is an extensive public Rights of Way network in the county it is assumed that all of the routes are usable whereas the fragmentation and maintenance issues of the network means that routes are frequently not available to all users. There is also no formal mechanism for recording and measuring the condition of the Rights of Way network. The County Council will therefore need to continue to review the mechanisms of monitoring the network effectively. It is also important that the existing Rights of Way network is better integrated into the wider highway network to maximise its usage.

Increasing walking and cycling levels will be a major challenge during the lifetime of the LTP3, as it is vital to deliver the objectives of the LTP3 (particularly those relating to journey times and health) and will require a reversal of current trends in some districts. A crucial element of this will be promotion of facilities and the benefits of undertaking active travel. The promotion of cycling and walking is funded primarily from limited County Council revenue funding. The reductions in funding from Central Government mean that this funding will be constricted even further and therefore it will be essential that other funding sources are secured to fund promotional measures in order to maximise the walking and cycling networks.

3.6 Other significant challenges

3.6.1 Peak oil production

It is predicted that oil production will plateau in the near future, possibly as early as 2013. It is anticipated that costs of transport (as well as highway maintenance and improvements) will become more expensive following this date and therefore it will be important to investigate alternative fuel sources, as well as promoting and providing for alternative forms of transport other than the private car.

3.6.2 Economic factors

Current economic climate

Commentators on the economy are cautious that the current economic situation is uncertain and that there is the possibility that the economy could worsen again and experience a double-dip recession leading to further job losses, putting further pressure on employment opportunities. The reductions in public sector funding announced on 20 October 2010 will almost certainly result in significant job

losses, possibly resulting in people having to travel further for employment opportunities. The reductions in public sector jobs could affect Nottinghamshire particularly harshly given that seven of the ten largest employers in the county are public sector organisations. It is therefore important that people are able to access alternative employment and training opportunities and have transport choices to enable them to access such opportunities.

Funding

On 20 October 2010 it was announced that as part of Government's Comprehensive Spending Review, the Department for Transport's funding for the period 2011-2015 would be reduced by 15% in real terms. The subsequent capital allocations for local transport measures were announced in December 2010. The integrated transport block for Nottinghamshire in 2011/12 represents a reduction in funding of £5.73m or 46% in comparison to the initial 2010/11 funding allocations (before the Government delivered a 25% in-year cut in June 2010). Nottinghamshire's highways capital maintenance resources, however, have increased by £0.65m or 6% in comparison to 2010/11 funding allocations (which included a separate revenue allocation for de-trunked roads). The reductions in integrated transport block funding will result in the County Council being unable to deliver the range of transport improvements seen in the last 10 years.

Deprivation

There are considerable variations in the deprivation levels across the county. Deprivation levels are highest in the urban parts of north west Nottinghamshire, particularly in Ashfield, Mansfield and Worksop. Mansfield is the most deprived district in Nottinghamshire and is within the 10% most deprived districts in England. Ashfield and Bassetlaw are in the most deprived third of English districts.

The spatial variation in employment rates and qualification levels correlates closely with other socio-economic indicators for the county, with higher levels of performance in the south of the county, and lower levels in the north and west. Qualification levels in the worst performing districts are significantly below the regional and national averages. In December 2009 the employment rates in the county ranged from 64% in Mansfield to 77% in Rushcliffe compared to the national average of 71% and regional average of 72%. Employment rates were also below the national average in Ashfield (67%).

The median gross weekly earnings of Nottinghamshire full-time workers is £446.00 per week, compared to £456.60 for the East Midlands and £488.70 for the UK. Full-time workers in Mansfield are the poorest paid in Nottinghamshire with median gross weekly earnings of £404.30, whereas workers in Rushcliffe are the highest paid, earning £470.80 per week.

3.6.3 Growth

Population changes

Between 2008 and 2026 the population of each district except Bassetlaw and Mansfield are expected to increase at a rate higher than the national average. Growing numbers of people are choosing to live in the rural or semi-rural areas of the county which has implications on how people choose to travel to access key services.

Nottinghamshire, like most areas of the country, has an ageing population. Increases in the number of people of pensionable age and over are projected in each district between 2008 and 2026 – the lowest being a 33.5% increase in Broxtowe with the highest in the rural districts of Bassetlaw (52.2%), Newark & Sherwood (49.6%) and Rushcliffe (46.0%). The proportion of older people compared to the whole county population is also projected to increase in each district. As people get older, independent travel often becomes more difficult and if public transport is not available or accessible this can present problems of isolation, particularly in rural areas where the largest increases of older people are expected in Nottinghamshire.

Housing

The recent dismantling of the regional bodies and abandonment of regional strategies has resulted in uncertainty on the numbers of new housing in the whole region. This has delayed the progress of the district council local development frameworks in most districts in Nottinghamshire, which impacts on the ability to effectively plan for growth. At the time of publication only Newark & Sherwood district have been to Examination in Public on their housing plans.

3.6.4 Health and disability

The 2001 Census shows that 20% of the population of Nottinghamshire has a limiting long-term illness, which is above both regional (18.4%) and national (17.9%) averages – only Rushcliffe district (15.6%) is lower than the national average.

Mansfield has the highest proportion of 'disabled' people with a rate of 26.7%. This is followed by Bassetlaw (23.9%), Broxtowe (22.7%) and Ashfield (21.9%). These four districts all have rates well above that of the East Midlands (19.2%) and the UK (18.6%). A similar pattern is evident when looking at the figures for 'Disability and Discrimination Act (DDA) and also work limiting disabled' but the pattern for 'DDA only disabled' is quite different with only Broxtowe (5.6%), Bassetlaw (5.4%) and Ashfield (4.4%) being marginally above the regional figure of 4.3%. The districts with the most numbers of people on the Visual Impairment Register in 2007 were Gedling, Bassetlaw and Ashfield, whilst those with the fewest were Rushcliffe and Mansfield. In Nottinghamshire in March 2008 there were 140 dual sensory impaired people over the age of 18 although the majority of these were over 65 years of age.

When comparing the 2006-08 figures with 2003-05 figures, the percentage of obese adults (aged 16 and over) has decreased in each of the districts in the county, compared to a slight increase in England. The percentages of obese adults in Ashfield and Mansfield, however, remain higher than the average in the East Midlands and England. Child obesity levels in Ashfield, Bassetlaw and Mansfield are higher than the average in England, Rushcliffe has the lowest child obesity levels in the county.

Sport England's Active People Survey results indicate that there has been a slight increase in adult participation in sport and active recreation each year at the national and regional level whilst in the county the rate fell in 2008/09 (the most recent results). At the district level participation in sport and active recreation increased in Bassetlaw and Newark & Sherwood each year. Conversely, Ashfield experienced decreases each year resulting in Ashfield's adult participation rate being the lowest in the county. When comparing 2008/09 and 2005/06 decreases were also seen in Broxtowe and Rushcliffe. Rushcliffe, however, maintains the highest activity rate in the county (despite significant fluctuations in each of the years), just ahead of Bassetlaw. It is currently unsure whether the information gathered through this survey will be available in the future.

4. Provide a reliable, resilient transport system which supports a thriving economy and growth

The County Council's approach to delivering a reliable, resilient transport system which supports a thriving economy and growth will focus on:

1. Making best use of our existing transport networks
2. Transport's role in regeneration initiatives
3. Maintenance of the transport assets, and
4. Improving connectivity to inter-urban, regional and international networks, primarily by public transport

1. The strategy to make best use of our existing transport networks (which is detailed in section 4.1) will involve:

- managing disruption on the network caused by street works, incidents and other activities
- reducing the need to travel through effective land-use planning
- effective parking strategy for on-street and off-street parking provision for all road users, including parking provision for new developments
- delivery of a programme of 'smarter choices' measures such as travel plans, promotion and marketing of sustainable travel and better use of technology
- safety and training to enable people to make the best use of the transport networks
- supply-side solutions, such as traffic management; as well as the provision of public transport services and cycling and walking facilities, and
- the effective management of freight.

2. The way that transport will be used to support regeneration initiatives (which is detailed in section 4.2) will involve:

- improving accessibility and transport choice to key destinations but particularly employment and training opportunities
- effective spatial planning and development control
- helping to improve the character, vitality and viability of local centres, including infrastructure improvements where necessary
- securing strategic transport improvements through the Local Enterprise Partnership and Regional Growth Fund
- helping to make rural areas attractive and accessible to maximise their economic potential
- maximising transport funding potential, and
- managing the regeneration impacts of transport on local communities.

3. Maintenance of all the transport assets, including all of those associated with the highway and Rights of Way networks (which is detailed in section 4.3) will involve prioritised programmes of improvements through:

- utilisation of the transport asset management plan (TAMP) and highway asset management system (HAMS)
- more effective life-cycle planning and whole-life costing, and
- flood risk management.

4. Improving connectivity to inter-urban, regional and international networks, primarily by public transport (which is detailed in section 4.4) will involve:

- working with partners to improve longer distance services by rail and coach (including frequency and journey time improvements)
- working with partners to improve infrastructure, and
- input into the development of the high-speed rail to affect its impact on Nottinghamshire.

Nottinghamshire Local Transport Plan 2011-2026

The transport sector is a vital component of the economy, impacting on the development of local, regional and national growth. Efficient transport systems provide economic, social and environmental benefits that help deliver employment opportunities, accessibility to wider markets, time and cost savings through journey time reliability, and can help attract inward investment.

In 2007, the East Midlands Development Agency (emda) study to identify the economic costs of congestion to the East Midlands region's economy determined that the 'direct' and 'indirect' costs of congestion in the three Nottinghamshire housing market areas totalled £165m.

Transport modelling and studies undertaken as part of the development of district council local development frameworks has assessed the 'stress' of the network. Several Highways Agency managed roads (such as the A453) suffer considerable stress leading to delays. There are very few locations on the County Council managed network in the north of the county that suffer stress, although several routes into Nottingham suffer stress during the morning and afternoon peaks.

Journey time surveys undertaken across the county show that congestion is being constrained. Within the market towns (Mansfield, Newark, Retford and Worksop) comparison of 2008 and 2010 congestion shows that conditions have improved and average speeds have increased. Localised problems do exist though, particularly in the morning peak. In Greater Nottingham, the average speeds along the combined monitored routes have increased between 2008 and 2009 (analysis of 2010 surveys has not been completed yet). There have, however, been increases in the journey times along some of the routes into Nottingham.

The Department for Transport (DfT) has provided the County Council with 2009/10 Trafficmaster GPS data for the county. Analysis of this data shows that there is no identifiable delay outside the main conurbations.

Congestion is very closely linked with levels of traffic flows. Traffic mileage (vehicle kilometres travelled) is monitored annually across the county. Although there has been a 3% increase in the number of licensed vehicles in the county between 2005 and 2009, during the same period traffic mileage has decreased by 1%. Traffic mileage has only increased in Newark & Sherwood district (+3%) and has significantly decreased in the more urban districts of Broxtowe, Gedling and Rushcliffe.

More detail on the transport conditions and highway assets in Nottinghamshire is included within Chapter 3 – Existing conditions and challenges, of the LTP3, and within the separate Evidence Base Report which is available from the County Council's website at www.nottinghamshire.gov.uk/ltp3.

A significant side effect of increased traffic levels is 'rat-running' along inappropriate routes that can adversely impact on both urban and rural communities, as well as being a serious road safety concern. Congestion can also impact on accessibility, air quality, regeneration and quality of life.

Managing and addressing existing traffic levels, as well as the impact congestion has on other objectives, therefore places a great importance on delivering the strategy detailed within this chapter. The County Council will proactively manage congestion so as to prevent congestion issues becoming more serious in the future despite the predicted growth in traffic levels.

The County Council will work to ensure that transport supports economic progress by providing the infrastructure to move people and goods efficiently. The strategy to manage congestion will look to address both existing and predicted congestion/traffic growth across the whole county, as well as to help meet the various other priorities detailed within this Plan. The emphasis of the strategy will be to manage existing and predicted traffic levels to prevent congestion occurring, making the most efficient use of the existing transport network and ensuring that air quality is within exceedence parameters. The strategy will therefore involve a balanced mix of demand-side solutions, such as travel plans, land-use planning, and parking enforcement; as well as supply-side solutions, such as intelligent transport systems and improved public transport, walking and cycling facilities.

Whilst not anti-car, the County Council intends to manage congestion by managing traffic growth; reducing the need to travel; and by encouraging greater use of public transport, walking and cycling across the whole county. Traffic management improvements will be undertaken where possible and if necessary, targeted engineering improvement measures will be utilised to make the network more efficient. Where required, additional resources will be allocated to reduce congestion at known hotspots, particularly where this congestion also has a detrimental impact on public transport services.

In order to ensure that the strategy (as well as programmes to deliver it) is able to respond to changes in congestion levels during the course of the LTP3, regular monitoring of vehicle flows along the radial routes into Nottingham City and each of the main district centres of Mansfield/Sutton-in-Ashfield, Newark, Retford and Worksop will be undertaken. The County Council has policies in place (originating in various departments, teams and sections) that are monitored and reviewed regularly to ensure that they meet the requirements of the LTP3. The impact that policies have on congestion, as well as their contribution to meeting the traffic level targets will therefore be considered as part of this process.

4.1 Making the best use of our existing transport networks

To maximise resources, the main focus of the strategy to address congestion and make journey times more reliable, and the subsequent delivery of many of the local transport objectives, will be on getting the most out of our existing infrastructure. This will have a particular focus on addressing issues at peak times to help ensure the efficient and effective movement of people and freight. The measures detailed below all aim to make the most effective use of our infrastructure.

4.1.1 Network Management Duty

The introduction of the Network Management Duty in 2005 requires the County Council to do all that is reasonably practicable to keep traffic moving on its highway network, as well as those of adjoining authorities. It places an emphasis on the importance of the active and co-ordinated management of the road network. This could be through actions carried out by the County Council and its partners by adjusting traffic signals, amending operations, better co-ordination of street works and highway works etc., as well as by those using the network through altering journey times and routes or using alternative methods of travel.

Although not mandatory, the Council recognises the need for a formal plan to develop systems and procedures which will provide both proactive and reactive responses to network management. The County Council will therefore produce a Network Management Duty Plan (NMDP) and keep it under review during the period of the LTP3. The NMDP will focus on measures to relieve congestion (delay due to traffic volumes and capacity on the network) and disruption (delay due to planned incidents such as street works and unplanned incidents such as accidents). This will include the development, improvement and enhancement of the highway and changes in its use through a variety of measures including: traffic management such as new works, signing improvements, and traffic regulation orders; public transport provision; the introduction of smarter choices measures; and the promotion of walking, cycling and public transport use.

The NMDP will promote a continuation of the proactive approaches to the co-ordination of street and road works and other temporary activity on the highway, as well as to parking management. It will also establish the appropriate measures required to respond to unplanned events through incident management, enforcement, media broadcasting, interactive signing and sharing network information in the region. It will identify activities on the highway; methods to minimise congestion and disruption; document diversionary routes; and where possible specify how incidents will be managed.

The County Council is fully engaged in seeking ways of managing demand on the highway network in order to manage congestion and deliver reliable journey times by working to get the best out of the network and to encourage motorists to use alternative modes of travel (as detailed in this Plan in Section 4.1.5 – Smarter choices, of this chapter; Chapter 5 – Encourage sustainable healthy

travel; and Section 6.2 – Provision of an affordable, reliable, and convenient passenger transport network). The NMDP will complement the LTP3 in this area and seek to ensure that policies achieve the balance between the competing demands on the network and reflect the changing use of the network, including those arising from changes in land-use or other development.

Information strategies

The provision of timely and accurate information to road users is an essential part of the Network Management Duty and as such the County Council continues to develop existing systems and explore new technologies. The County Council and Nottingham City Council jointly fund the Traffic Control Centre that monitors traffic movement and provides real-time traffic control over many traffic signal installations countywide. Real-time information is conveyed onto the local media and disseminated via the councils' websites.

The County Council was one of the founding proactive authorities responsible for the development of the award winning EMPreSS website, now named ELGIN, that enables road users to look at road works data seamlessly across authority boundaries. Information related to longer term works co-ordination is available via the East Midlands HAUC website which enables utilities providers, developers and other authorities to view works programmes.

The County Council will continue to be involved in the national roads information framework, a joint initiative involving the Highways Agency, DfT and local authorities. The framework opens up greater opportunities for sharing information between the different agencies, thereby aiding intelligence based network management across the whole East Midlands region. The Council will input into future reviews to improve the data that is collected on the highway network; how this information is analysed; and how the information is used to inform both decision making and the general public.

At a local level the County Council will continue to work with neighbours and other transport authorities, such as the Highways Agency, to improve the better co-ordination and sharing of information relating to the traffic management for special events.

Road hierarchy

The road network is defined by both classification and hierarchy. Classification being the road number, for example A614 or B6031, which is a historically based system that has not been modified over the years and only applies to roads. Road hierarchy is a similar system but is defined based on usage and applies to both roads and footways.

As road hierarchy is more rigorously defined, the County Council has chosen this method as a basis for all of its policy issues. A review of road hierarchies has been undertaken throughout the county and has now become an ongoing process of review. This has been done in conjunction with maintenance of the street gazetteer and associated street data which includes traffic sensitive designations. Hierarchy gives the Council an opportunity to prioritise the different routes, and the hierarchy will continue to be reviewed to help ensure that traffic is influenced to take the most suitable route so that it intrudes as little as possible into the area through which it passes. The hierarchy also enables priorities for road safety, road maintenance, traffic management etc. to be determined accordingly. Where discrepancies are highlighted by the review process (for example, where road usage has changed due to new developments, or new bus routes have been introduced) the hierarchy maps are changed accordingly. The hierarchy is then utilised within the Council's highway asset management system to help manage its assets efficiently and effectively. Although the data held predominantly relates to the County Council's own network, care will be taken to ensure that designations and other hierarchy decisions are not taken in isolation but are considered in conjunction with other authorities to ensure that there is consistency and continuity across the region, and particularly with neighbouring authorities.

The road hierarchy will form the basis of developing a much more detailed hierarchy that is fully reflective of the overall importance of particular roads within the network and is also related to the class of road user.

Partnerships and cross boundary working to deliver the Network Management Duty

The County Council acknowledges that, in addition to a countywide approach to the planning and delivery of its Network Management Duty, there is a need to work in partnership with adjoining authorities and the Highways Agency to deliver a seamless service. The Council has for many years continually developed cross-boundary protocols and relationships with neighbouring authorities and organisations. The Council works very closely with Nottingham City Council and has excellent working relationships with it and other adjacent authorities. This has led to several service improvements, such as reciprocal winter maintenance agreements, where neighbouring authorities salt each others' adjoining roads to make winter maintenance routing more efficient, as well as the joint operation of the Traffic Control Centre with Nottingham City Council.

Other examples are the County Council's membership and proactive work in the Nottinghamshire Bus Punctuality Improvement Partnership, the Bus Quality Partnerships, and the Nottinghamshire Road Safety Partnership. The Council also holds co-ordination meetings as detailed below. Outside of the Plan area, the Council is fully involved in the East Midlands Highway Authorities and Utilities Committee, and the Midlands Service Improvement Group, as well as being involved in the Joint Authorities Group (UK) and HAUC(UK). The County Council is also the chair of the East Midlands Traffic Managers Forum and continues to organise and host these successful meetings in pursuance of regional working.

4.1.2 Managing disruption on the network

It is recognised that, irrespective of the level of congestion, journey time reliability is very important and disruption to travel has a significant impact on many aspects of life and the local, regional and national economy. In order to make best use of the existing transport networks, particular attention will be given to the management of planned and unplanned works, events and other occurrences; taking proactive steps to minimise disruption to the network, including being prepared to respond to incidents. Developing contingency plans for responses to unplanned events and improving communications with other authorities and the public are also essential.

Management of works and other activities

The County Council will incorporate best practice in co-ordination of activities on the highway, as well as reviewing procedures and protocols to ensure that disruption is managed effectively across the network. The County Council will continue to make full use of the provisions of the Traffic Management Act to manage activities more effectively, thereby minimising disruption and reducing congestion. Co-ordination of works and other activities on the highway is carried out at a number of levels under the umbrella of the joint co-ordination meetings involving the County, neighbouring city and county councils, the Highways Agency (HA), utilities companies and emergency services. The Council will also continue to work collaboratively in co-ordinating works and other activities and in developing strategies for dealing with planned and unplanned events across the county. A corridor approach will be used on cross-boundary routes in partnership with the HA and neighbouring transport authorities to ensure effective management. The co-ordination meetings will help ensure that works and other events are well planned and managed and that long-term programmes are shared between works promoters to provide greatest opportunity for joint, sequential or phased working to minimise disruption.

Similarly, the County Council will continue to work closely with the key works promoters to ensure that works are planned to reflect the priority given to the more strategic parts of the highway network, and the conditions that apply to them. This will ensure that promoters are able to develop working methods which will complete works in the most appropriate manner to minimise disruption, whether this be through night, off-peak or shift working or the adoption of alternative construction methods.

The County Council will also explore the opportunity to introduce measures to control activities in a more prescriptive manner than has been possible in the past, such as charging works promoters when works overrun; using powers to direct when works can and cannot be undertaken more extensively; and examining the provisions relating to permit schemes, including whether to introduce such a scheme. The Council will identify areas for improvement in the proactive approach to the management of works in progress and enforcement of conditions. For example,

the Council is currently working with the cities and counties in Derbyshire, Leicestershire and Nottinghamshire to investigate the benefits and costs of introducing a joint permit scheme.

The way that the range of activities is managed will continue to be reviewed during the LTP3 period to ensure that parity is applied irrespective of works promoter.

Incident management

No matter how comprehensive and detailed forward planning of events may be, the occurrence of unplanned incidents cannot be avoided. The County Council therefore has policies and procedures in place for the effective and efficient twenty four hour management of incidents on the highway network. This is carried out in partnership with other organisations such as the emergency services, the emergency planning authority and the Environment Agency, as well as other traffic authorities. Further work, however, will be undertaken to identify the nature of such incidents and establish a prioritised assessment process to determine policies for dealing with them. The Council holds incident debriefs with adjacent authorities, the HA and other stakeholders to identify ways to improve the response to unplanned events.

Contingency plans will be established for responses to unplanned events, including emergency diversion routes for key locations to ensure that pre-established arrangements are in place to keep traffic moving in the event of incidents. The Council will also investigate ways to improve communications to other authorities and the public by examining the processes used to provide and receive information concerning events impacting on the highway network, including that provided by and to the HA through their traffic control centres.

Accidents are just one type of unplanned occurrence which can disrupt the highway network and strategies are in place to reduce road casualties and their consequences, including the resultant delays on the network. Further detail on this is included in this Plan in Chapter 5.3 – Road safety, and in the Cross-Service Road Safety Improvement Plan.

4.1.3 Reducing the need to travel

Land-use planning

Sensitive but effective control of land-use planning is vital in delivering a successful sustainable development strategy and consequently ‘sustainable communities’. If and where it is possible to cut out congestion at source, by removing or reducing the need to travel, this is preferable and more beneficial than dealing with the problem when it has occurred – thus land-use planning is imperative to the Council’s overall aims. The County Council will, through control of land-use planning, seek to:

- reduce the need to travel, thereby reducing traffic growth
- promote a step change in the level of public transport, and
- only deliver highway capacity when all other measures have been exhausted.

Nottinghamshire supported the ‘sustainable’ approach adopted in the East Midlands Regional Plan which looked to distribute development to the main urban areas in the region, such as Nottingham and Lincoln as the main focus for growth and sub-regional centres such as Newark, Mansfield and Worksop to be a secondary focus for growth in the region but a primary focus within the sub-region. Beyond this the development needs of other settlements must be catered for, as well as those of the rural areas. This hierarchical approach should ensure development is located in the most sustainable locations and contribute to:

- maintaining the distinctive character and vitality of rural communities
- shortening journeys and facilitating access to jobs and services, and
- strengthening links between settlements and their hinterlands.

The County Council will promote sustainable development through adopting the sequential approach to the location of development set out in the East Midlands Regional Plan and by encouraging:

- a range of quality employment land to promote economic growth and appropriate employment opportunities; and residential development of a type and in locations which meet the needs of the community
- an integrated transport network to support new development whilst reducing the need to travel, especially by private car
- a range of services and facilities to support business and to meet the needs of communities, and
- as a priority, development to improve the economy, services and the environment in disadvantaged areas and those with high levels of social need.

Developer Contributions

The increased emphasis on re-using 'brownfield' land places more stress on overcoming constraints to development, such as a lack of infrastructure and/or access problems. Developers are required to meet the costs of access and infrastructure directly relating to the development in question. However, to seek to hasten modal shift, a 'Planning Contributions Strategy' is in place whereby financial contributions are collected to support LTP schemes promoting walking, cycling and the use of public transport in the vicinity of the development. This policy has already been incorporated in a number of local plans and the County Council will press for its inclusion in emerging local development frameworks (LDFs).

The County Council will continue to develop this policy to seek to maximise developer contributions, so that the real impacts of any such development are mitigated by the developer and not just passed to the County Council to pick up in due course at the direct expense of the taxpayer.

The County Council has an understanding with its district partners over the need to mitigate the impacts of any new developments, with general long standing agreements over both transport and education contributions. The County Council will continue to work with its partners to maximise opportunities to improve the localised transport network through the LDF process. This will not be on a consistent basis across the county though – as Newark & Sherwood are actively seeking to introduce a strategic infrastructure tariff based on the Community Infrastructure Levy (CIL). This process will be the subject of an independent examination in public later this year (2011). The Levy will be used to specifically fund strategic infrastructure improvements to the strategic highway network, potentially including a southern link road (if this is not funded directly by one of the developments), that are required as a result of cumulative growth in the district up to 2026 but cannot be attributed to the development of any one site. It is still intended that there will need to be localised section 106/section 278 agreements to deal with site specific issues, particularly sustainable measures. Newark & Sherwood are ahead of the other districts in the local development framework (LDF) process and have already had the examination in public on their LDF core strategy. The remaining districts will follow with the examination in public of their LDFs starting in Summer 2011, but no decisions have yet been made as to their individual stances on the CIL.

A hierarchical approach will be taken to ensure the delivery of sustainable transport networks to serve any new developments provide (in order of preference):

- area wide travel demand management (measures to reduce travel by private car and incentives to use public transport, walking and cycling for appropriate journeys)
- improvements to public transport services, and walking and cycling facilities
- optimisation of the existing highway network to prioritise public transport and encourage walking and cycling, and
- major highway capacity enhancements to deal with residual car demand.

4.1.4 Parking

The control of car parking has a significant role in delivering the local transport objectives as it is an important influence on the way people choose to make their journeys. In fact, Planning Policy Guidance (PPG) 13 states that, “*the availability of car parking has a major influence on the means of transport people choose for their journeys. Some studies suggest that levels of car parking can be more significant than levels of public transport provision in determining means of travel.*” Controlling parking in order to have an effect on motorists’ destinations can therefore have a large impact on the types of journeys made, particularly to traffic generators in congestion hotspots. District councils, as part of the development of their LDFs, are reviewing existing parking standards at new developments. The County Council will work with the district councils to help ensure that appropriate parking standards are adopted for all modes of transport and will continue to keep the standards under review. Parking restraint, as a method of encouraging modal shift, has been greatly assisted by the implementation of civil parking enforcement (CPE) which allows the County Council to manage on-street parking and make more efficient use of the highway network.

Integrated Parking Strategy

Parking provision and enforcement in town centres has a particularly important role to play in demand management. The County Council and district councils are working in close partnership to deliver parking enforcement which will have a significant impact on the use of parking in Nottinghamshire, and will consequently allow the effective development of further co-ordinated policies to influence parking and travel patterns. Such policies complement and support land-use policies designed to reduce the need to travel.

The County Council has a range of policies relating to parking, including:

- on-street parking restrictions (including cars, cycles, motorcycles and taxis)
- public off-street parking
- parking provision for new developments
- park and ride
- cycle and motorcycle parking provision
- civil parking enforcement, and
- extended controlled zone parking and residents’ parking schemes.

Within these policies particular emphasis is given to the guidance in PPG13 (Transport) and PPS4 (Planning for Sustainable Growth). The guidance seeks to balance demands for parking in ways which maintain the economic viability and attractiveness of the town/district centres, whilst helping to reduce congestion and encourage sustainable travel. Consideration will also be given to PPS5 (Historic Environment) which also supports the use of parking zones etc. to enhance the 'character' of town centre conservation areas. This may include 'sensitive design' (e.g. narrow yellow lines or thoughtfully located and designed signage) and 'decluttering' to aid in simplicity of enforcement but also to preserve and enhance the protected character of town centre conservation areas.

A balance between on-street and off-street parking facilities is required to ensure the vitality of town centres, recognising the need for using the car whilst encouraging the use of alternative modes when practicable. The vitality of each town centre will continue to be monitored as part of ongoing monitoring of civil parking enforcement, district planning exercises (such as town centre master planning) and the County Council’s programme of Local Accessibility Transport Studies (as detailed in Section 6.1.6 – Local Accessibility Transport Studies, of this Plan).

On-street parking restrictions will be used to serve two purposes – reducing obstructions to pedestrians and other road users; and by reducing parking supply, thereby providing an incentive for car users to consider other modes. Indiscriminate on-street parking will be tackled by a combination of simple waiting restrictions, controlled parking zones and/or residents only parking, as appropriate.

Peak period parking and loading restrictions, including bus stop clearways, will also be introduced on key routes to maximise the efficiency of public transport and to help meet the Network Management Duty, reduce congestion and thereby help improve air quality. The criteria for the

introduction of these are detailed in the County Council's Traffic Regulation Order Manual.

Civil parking enforcement

The County Council recognises that there are considerable traffic management opportunities offered by civil parking enforcement (CPE). Many of the initiatives detailed within the LTP3, such as bus priority schemes and safety outside schools, cannot be achieved without the effective enforcement of supporting Traffic Regulation Orders (TROs). Having introduced CPE in 2008 the County Council are now able to actively enforce traffic violations to support the strategies to deliver the local transport objectives set out in the LTP3. A single countywide scheme was introduced. The Council will continue to review the current CPE arrangements to help ensure they deliver a consistent approach to parking management which supports the delivery of the local transport objectives; and delivers a value for money scheme. This will be achieved through exploring examples of national best practice and through close liaison and consultation with district councils, Nottinghamshire police, the Highways Agency, neighbouring authorities and all other interested external parties.

Whilst there are no immediate plans to extend the scope of the CPE scheme, extensions to the scheme, such as the enforcement of moving traffic violations (and the level of any such undertaking), will be considered as part of the future development of CPE.

Ongoing monitoring of the impacts of CPE will be undertaken periodically to ensure that it does not impact on local residents too significantly.

Extended controlled zone parking

It was anticipated that the introduction of CPE would alter the existing pattern of parking around town centres but this has not significantly occurred. Where this does occur, however, as well as where non-residential parking occurs regularly, the County Council will consider the introduction of appropriate controlled zone parking (or residents' parking schemes) to prevent any displaced parking. Such schemes effectively protect residents from the inconvenience of commuter parking whilst allowing the Council greater control over parking patterns. Such schemes will only be introduced following consultation with residents, and other stakeholders when appropriate (e.g. where there are environmental considerations in conservation areas or adjacent to listed buildings). Work will also be undertaken to ensure the consistency of such schemes across the county.

On-street pay and display

It is hoped that with effective enforcement of on and off-street parking and protected residential areas there will be the opportunity to encourage modal shift amongst commuters to town centres. In turn, the availability of short-term parking for shoppers will improve, thus assisting the retail trade. Future impacts of transport schemes, such as the introduction of workplace parking charges in Nottingham City may, however, significantly impact on parking patterns in the county. Parking patterns will therefore continue to be monitored and the County Council will consider its policy for the introduction of on-street 'pay and display' in the light of any such changes.

Public off-street parking

Off-street parking in Nottinghamshire is managed by the district councils. Public off-street parking is heavily influenced by parking charges, and the County Council will encourage the district councils to adopt charging structures in their car parks to work in tandem with on-street restrictions to favour short-term parking. The County Council will also act to improve the relative cost of bus travel to that of the car by working with district councils on parking issues. The aim is to progressively increase charges for longer term parking in parallel with development of alternatives to the car, an approach consistent with the advice given in PPS4.

Parking provision for new developments

A guide for developers on parking provision in new developments – 'The Sustainable Developer Guide for Nottinghamshire' – has been produced based upon advice contained within PPS3 (Housing), PPG13 (Transport), the now abandoned RPG8 (Regional Planning Guidance for the East Midlands), and the now expired Joint Structure Plan (2004), as well as County Council

policies. The Guide was produced in conjunction with the district councils so that it could be used as a basis for development control by planning authorities. The Guide will be reviewed and updated as necessary during the lifetime of the LTP3.

The overall aim of the Guide is to ensure that developers fully consider the implications of parking and the positive effects this can have on other modes of transport. Although the guide gives details of national, regional as well as local maximum parking provision, it stresses that these figures are not targets, and that developers should seek to provide the appropriate provision for the location of the development.

The Guide promotes alternative modes of transport and the introduction of measures, such as travel plans, so that a much reduced parking provision can be successfully introduced, although on-street parking restrictions may be required to ensure that the potential for overspill is minimised. It is hoped that the guide will also, by encouraging non-car modes of transport, ensure that road safety problems are not created by overspill car parking.

To help developers consider these issues, the guide includes an innovative Transport and Parking Appraisal in which the developer can detail how non-car modes of transport (as well as car sharing) are to be encouraged/included as part of the development.

District councils, as part of the development of their LDFs, are reviewing existing parking standards at new developments. The County Council will work with the district councils to help ensure that appropriate parking standards are adopted for all modes of transport and that standards are kept under review.

Park and ride

High quality park and ride facilities associated with efficient public transport services have proven successful in attracting car users to use public transport for at least part of their journey. They improve accessibility to urban centres and contribute to reducing traffic on congested radial routes.

The County Council will therefore consider the development, and use, of park and ride facilities in appropriate locations to reduce car borne journeys into the principal urban areas and along strategic corridors. The County Council will monitor the effectiveness of its pilot 'pocket' park and ride schemes – at existing car parks on frequent bus service routes – with a view to further provision. Large scale park and ride facilities will also be considered in conjunction with large new housing developments with potential developer funding. It is also recognised that the provision of well designed and accessible park and ride facilities can reduce the need for long stay public car parking in urban areas, whilst maintaining the competitiveness of urban town centres.

The provision of car parking facilities at rail stations outside urban areas can also assist in the modal shift from road to rail. The County Council will therefore work in partnership to ensure adequate car parking provision at appropriate rail stations where it is considered that such provision will assist in reducing congestion at key locations.

Cycle parking

Cycle parking in town centres and at passenger transport interchanges will be provided on a countywide priority basis as part of the integrated parking strategy, along with adequate directional signing to these resources. Provision is also encouraged at other key attractors such as leisure facility sites. A balance of short-term, visible parking and longer term secure parking are provided depending upon the likely type of journeys to the particular destination. Cycle parking and storage facilities are also often a key feature of both workplace travel plans and school travel plans. The standard of cycle parking provision is detailed within the County Council's Cycle Design Guide.

Freight and coach parking

There is currently only one official lorry parking facility in the county. The provision of freight parking facilities will be considered as part of any future freight quality partnerships and strategy that are developed during the lifetime of the LTP3.

Coach parking will be considered as part of new and existing bus facilities when feasible to help enable people undertake longer distance journeys by coach.

4.1.5 Smarter choices

The Department for Transport (DfT) document 'Making Smarter Choices Work' proposed that smarter choices measures could reduce traffic congestion at peak times locally by up to 21% and make life more pleasant for local people. The 'Sustainable Travel Towns' project which ran from 2004 to 2009 showed the benefits of applying high profile smarter choices programmes where they reported that within the three towns where the project was undertaken:

- car driver trips by residents fell by 9% per person, and car driver distance by 5-7%
- prior to the economic downturn, the volume of traffic observed in all three towns reduced by approximately 2% across the whole urban areas, with reductions of 7-8% observed in the inner areas
- bus trips per person grew considerably by 10-22%
- the number of cycle trips per head grew substantially in all three towns by 26-30%, and
- the number of walking trips per head grew significantly by 10-13%.

Whilst these sorts of reductions are highly aspirational, the County Council strongly believes that a package of smarter choices measures will certainly provide benefits, especially if they are supported with the necessary infrastructure. The County Council therefore recognises the major role that smarter choices measures can make towards helping to get the most out of our existing transport infrastructure. As well as reducing congestion, the smarter choices agenda can help promote economic regeneration; improve accessibility, road safety and air quality; and aims to give people real travel choices and promote active travel.

The County Council intends to actively promote smarter choices through both local transport plan and other funding sources. Whilst this will generally include measures that are already highly developed, the County Council will continue to investigate best practice to determine if it is appropriate for introduction in the county.

To promote the longer term future of smarter choices, the County Council will:

- investigate the potential for and pursue means of supporting the costs of smarter choices and travel plans through sponsorship; research grants; developer contributions; and charging for County Council services
- promote the links between sustainable transport and other sustainable development objectives, and
- promote the aims, objectives and actions of the smarter choices strategy to businesses and organisations across the county, including the potential cost savings for businesses by undertaking smarter choices.

Travel plans

Working with businesses, schools, organisations and service providers to deliver effective travel plans will be a critical way of promoting cycling, walking and public transport as an alternative to the private car. The Council will therefore promote the development of effective sustainable workplace, school, residential, leisure event, and town centre travel plans. Travel plans have a particular role in improving accessibility by providing people with the information they need to make a range of journeys. Further details on travel plans is included in Section 5.2.2 – Promotion, of this Plan.

Car sharing and car clubs

Maximising the occupancy of vehicles on the network will help make better use of the limited road capacity available. The County Council has established an online county and city wide car share website. Since January 2009 car sharing established through the website, reduced CO₂ levels by over 650 tonnes; and reduced traffic mileage by 2million miles; saving £450k for members. The County Council will evaluate the success of the existing car share scheme with the aim of providing a system that effectively delivers a scheme that covers the whole of the county. Promotion of car sharing will also be a key element of future travel awareness campaigns as well as travel planning

with businesses, organisations and individuals. Car sharing amongst parents of school children is also promoted on an informal or formal basis through the work undertaken with schools as part of the school travel plans process.

A study to determine the feasibility of a car club in the county was undertaken in 2007. The study concluded that the County Council should wait until after a car club had been established in Nottingham City, to monitor its effectiveness, and to be undertaken as part of any expansion of the Nottingham City scheme. The County Council will therefore wait until a car club is developed and established in Nottingham City before determining if it is appropriate to expand the car club to the county.

Technology

The County Council will look to maximise the use of new technology to help reduce the need to travel. The Council therefore supports Government's strategy to introduce high speed broadband across the country.

Analysis of usage in Nottinghamshire shows that there is less take-up of broadband in the more rural areas of the county and amongst older people. Promotion of broadband usage in these areas and amongst this age group offers significant opportunities to reduce the need to travel and improve accessibility. This is particularly the case in more rural areas as public transport services are often not as frequent as in urban areas resulting in the need to use a car to access services. Broadband, would however, enable people to access some goods and services they need without having to travel.

The promotion of home shopping and local collection points (such as local post offices and libraries) will also be investigated and considered for promotion where appropriate as a means of reducing the need to travel and improving accessibility.

Using technology can transform the way people work and enable people to undertake duties without the need to travel. The Council will continue to implement the use of 'smart working' within its own functions and will continue to promote the benefits of them to other businesses and organisations. The Council will investigate the barriers it has encountered when introducing smart working measures and identify best practice. This work will then be used to develop an educational guide for businesses on smart working practices, including the use of:

- teleworking, giving employees the opportunity and facilities to work remotely, often from home or from other more local bases using telephones or computers, and
- teleconferencing and video conferencing, to replace the need for face to face meetings.

The Council currently offers financial support to businesses to assist with the setting up of such working practices through the travel planning process and this scheme will be reviewed to assess its value for money.

Water based transport

The potential for river and canal transport will be explored and where feasible and safe will be promoted to encourage modal transfer from the private car.

Promotion and marketing

The promotion of cycling, walking and public transport plays a vital role in encouraging people to undertake walking and cycling, or use public transport rather than use the car. A wide ranging programme of promotion is undertaken by the County Council's media and publicity specialists supported by the various teams throughout the Council. The County Council will continue to support travel awareness campaigns at a national, regional and local level and will establish a yearly campaign of events across Nottinghamshire. The campaigns will be developed in consultation with neighbouring transport authorities to ensure the effective use of resources and their maximum impact. To make certain of the most effective use of resources, where appropriate, analysis will be undertaken to identify the most appropriate target audience for campaigns. Promotional campaigns will therefore include targeted marketing that may be area-wide or mode specific. The Council will work to ensure that high quality promotional information is developed

and available throughout the county to businesses, organisations and the public.

Further detail on the promotion and marketing of cycling and walking is included in Section 5.2.2 – Promotion, of this Plan. The smarter choices programme of promotion and marketing will also be supported by the work undertaken to promote public transport which is detailed in Section 6.2 – Provision of an affordable, reliable, and convenient passenger transport system.

Complementary infrastructure

In support of smarter choices it is important to implement complementary infrastructure measures to lock in the benefits. These will include a programme of walking and cycling schemes, bus priority measures, traffic calming and stringent parking control measures, as detailed elsewhere in the LTP3; within the implementation plans to deliver the strategic objectives of the LTP3; and in accompanying strategies.

Partnership working

The County Council recognises the need to work at a local, regional and national level to deliver seamless, consistent and effective programmes of work and will therefore work with a variety of partners. Locally, the Council will work particularly with the City Council, building on the partnership work already undertaken with the City Council and business groups to ensure effective programmes are delivered across the Nottingham Core Housing Market Area. A memorandum of understanding has been drawn-up between Nottinghamshire, Derbyshire and Nottingham City councils to help ensure alignment of strategy and work programmes to deliver transport improvements and a joined-up service to the public. The Council will also continue to work with the local planning authorities and development control teams to ensure that travel plans, car parking standards and transport impact assessment issues are addressed. In addition to development control, the County Council will work with district councils, along with operators and interest groups to promote new and enhanced facilities or services to maximise their usage. The Council will liaise with sub-regional and local partnerships on travel plans and travel awareness initiatives. Regionally, the County Council will work with transport authorities to develop best practice and maximise resources for programmes of work. At a national level, the Council will consider its role as an active board member of the Association of Commuter Transport (ACT) and a member of the National Travelwise Association.

More detail on the smarter choices measures to be delivered is included in the Smarter Choices Strategy which will be reviewed following the completion of LTP3.

4.1.6 Safety and training

A programme of accident remedial schemes and safer routes to school schemes are carried out each year to not only reduce the number of casualties occurring on the county's roads but also to reduce the fear of accidents, particularly among pedestrians and cyclists. Promotion of schemes, particularly safer routes to school schemes, can then play a vital role in encouraging more people to walk and cycle.

It is important to make people feel confident enough to make smarter travel choices and therefore the provision of publicity and training is essential to help people make the transition to walking and cycling, or continue to do so. Child pedestrian training is carried out across the county. Similarly, cycle training is available to both adults and children. Publicity on safer walking and cycling activities is also provided to other age groups, such as the elderly and young adults.

More details on safety and training are detailed within Section 5.3 – Road safety; and within the Cross-Service Road Safety Improvement Plan.

4.1.7 Supply-side solutions

Intelligent transport systems

Within the urban areas there is scope for improving the efficiency of the existing network through the installation of intelligent transport systems. The County Council will therefore continue to investigate and prioritise the locations where such measures will make an improvement to the operation of the transport network.

Traffic signals can be controlled using SCOOT (Split Cycle and Offset Optimisation Technique) and MOVA (Microprocessor-Optimised Vehicle Actuation), which can theoretically bring increases in junction capacity of up to 15% as well as enable greater bus priority to be achieved. Both of these systems are able to respond to fluctuations in traffic flow and patterns as they happen whilst retaining the links necessary for the successful operation of a co-ordinated network of traffic signalled junctions. MOVA has been shown to reduce average delays by up to 13% at isolated junctions (TRL Report RR279) whilst SCOOT has been shown to reduce delays by up to 15% in linked traffic systems. There is additional evidence that MOVA can reduce accidents at sites with high speeds if installed in appropriate locations.

Junctions are selected for improvements using capacity modelling to determine those that would currently benefit from SCOOT or MOVA, as well as identifying those which may require upgrading in the future (given traffic forecasts).

Real-time CCTV linked to traffic control rooms is also used to monitor and manage traffic flows into town and city centres. The use of the traffic control centre and expansion of CCTV to assist in its functions will be expanded as necessary to help meet our Network Management Duty.

Public transport

The design of new, and improvement to existing, bus stops, shelters, stations and interchange provision is important in encouraging public transport use. New or improved bus stations have been delivered in Retford and Sutton in Ashfield and designs have been developed for Mansfield and Newark. The County Council will investigate further improvements to existing and potential bus stations as development and funding opportunities arise. Such schemes will look to improve integration between all modes of transport and also support economic regeneration of the local centres that they serve. Improvements to rail stations will also be investigated and developed in partnership with Network Rail, such as the major improvement scheme of Nottingham Station as well as enhancements to the more rural stations in the county. Enhancements to all bus stops across the county, to provide improved timetable and journey information, are also planned.

Working in partnership with local operators, the County Council will strive to improve:

- reliability and speed, by re-allocating road space to provide dedicated bus lanes, using off-bus ticketing where feasible and the punctuality improvement plans
- the bus network where feasible
- waiting facilities, by providing new, improved and well maintained stations, interchanges, bus shelters, raised kerbs, lighting and CCTV
- integrated ticketing, and
- public transport information.

Further detail on improving public transport is included within Section 6.2 – Provision of an affordable, reliable, and convenient passenger transport network, of this Plan; and within the Integrated Passenger Transport Strategy.



Walking and cycling facilities

The provision of facilities to provide for, and encourage walking and cycling will continue throughout this LTP3 period through capital, revenue and external funding (such as funding secured from external organisations and developer contributions). More detail on the use of external funding and the types of measures that will be provided to meet the objectives of the Plan during its lifetime are included within the LTP3 Implementation Plan.

Measures to encourage cycling and walking for all vulnerable road users (cycling, walking, horse riding and motorcycling) are essential to encouraging modal change. The health benefits of walking and cycling are well known and these modes can make a significant contribution towards the establishment of a more sustainable local transport system, reducing congestion, and improving accessibility. The measures that will be considered are detailed within this document in Section 5.2.1 – Provision of facilities.

The County Council has produced a Cycle Design Guide that utilises a combination of government guidance, best practice ideas adopted from other local authorities and the requirements as specified by interest groups. This ensures that all new cycle facilities are of a high standard that meet the needs of users and enable the introduction of new ideas as and when they are developed. New facilities will also be subject to value for money checks.

Signing

Effective road signing can play an important role in helping to keep traffic flowing; helping to avoid traffic from getting lost and circulating unnecessarily; encouraging traffic to use preferred routes; and guide vehicles to parking locations away from busy areas. Clear directional signing is therefore essential. Variable message signs will be considered where appropriate to help identify car parks and available spaces to help with the issue. Signing of freight routes will also be considered when appropriate to encourage the use of preferred routes and to avoid identified areas.

The County Council's road signing standards are detailed within the Highway Network Management Plan, which will continue to be reviewed as appropriate to ensure that the standards meet the needs of the network.

Local Accessibility Transport Studies

Many of the types of facility detailed within Section 5.2.1 – Provision of facilities, have been installed as part of the Local Accessibility Transport Studies (LATS). This programme is being continued into LTP3 in order to assist with reducing town centre congestion by improving access to and within town centres by public transport, on foot and by bike.

Localised congestion in district centres (including rural centres) can be tackled through the programme of LATS. In these locations congestion can greatly inhibit accessibility to local services and can encourage shoppers to patronise out of town superstores rather than local shops. The LATS aim to encourage use of local district centres by improving and promoting sustainable access and reducing delays. Not only will this reduce the need to travel to non-local centres and supermarkets but will also reduce the need to use private motor transport. Further detail on the LATS is included within Section 6.1.6 – Local Accessibility Transport Studies, of this Plan.

4.1.8 Freight

The importance of effective and efficient movement of freight on the economy is recognised, as is its potential impacts on transport networks, the environment and quality of life. The County Council will therefore seek to work in partnership with freight operators to help make best use of the existing transport network through the provision of a network that serves both commercial traffic, as well as the local public's requirements. Further information on freight is detailed throughout this document relating to parking (Section 4.1.4); signing (Section 4.1.7); encouraging the transfer of freight to lower carbon vehicles – including rail and water (Section 7.2.4); education on lower carbon transport issues (Section 7.2.5); and noise (Section 7.5 and 7.5.4). This strategy will evolve with the development of a Freight Strategy following completion of this LTP3.

4.2 Regeneration

History shows that an over-reliance on traditional industries can create serious difficulties. In the early 1990s Nottinghamshire experienced major shocks due to the structural economic changes affecting coal, textiles, clothing and other manufacturing industries. These changes had a very serious impact on some communities, particularly in the west of the county.

The fallout from Nottinghamshire's declining industrial heritage, particularly past reliance on mining and textiles, continues to hamper economic activity. Although progress has been made to bring unemployment rates down to match national figures, the quality of these new jobs has been low. Educational aspirations and attainment of school leavers is poor, creating a pool of unskilled people seeking low paid work – with the consequence that low value industries are encouraged to invest in these areas. Towns and villages, predominantly in the west of the county, continue to under perform in terms of business activity, environmental appearance and inward investment – reflecting the low disposable income of the surrounding community.

To help determine regeneration requirements, the County Council uses an approach based on the 'Local Futures Audit', a policy tool developed in collaboration with the Audit Commission and the Local Government Association. The Audit compares a range of selected benchmark indicators of economic, social and environmental well-being to help inform policy and strategy development. The Audit compares the performance of Nottinghamshire (and each of its seven districts plus Nottingham City) against the other sub-regions in Britain (there are 53 in total), as well as against regional and national benchmarks. The most recent Local Futures Audit, 'The State of Nottinghamshire' was undertaken in 2009 to be used as an evidence base for Nottinghamshire's Sustainable Community Strategy and utilised information available up to 2006.

The Audit determined that the performance of Nottinghamshire's economy is mixed, being close to the national average in terms of scale and productivity, but below the national average in terms of growth rates. The skills and qualifications profile of the workforce and labour market conditions also signify an under performing economy. Nottinghamshire, however, performs slightly better than the national average on two key measures, its business and enterprise profile and its industrial structure, suggesting a mixed economy with potential for growth and dynamism not yet captured and reflected in the economy's overall performance. Its industrial structure score indicates the presence of knowledge driven businesses, although these tend to be clustered in the south of the sub-region. It also performs above the national average on business and enterprise score, with higher than average formation rates and healthy growth in business stock.

Social conditions in the sub-region are a cause for concern, with some areas performing well below the regional and national average. Nottinghamshire faces a range of social challenges. Whilst there are substantial variations within Nottinghamshire, the occupational profile reveals a disproportionately large number of people working in semi-skilled and unskilled occupations; and a small number of people working in higher-end managerial and professional occupations. Related to this, income levels are low and deprivation levels are above the national average.

Nottinghamshire's environmental conditions compare favourably with the rest of the country. The quality of its natural environment is on a par with the national average, as is its score for local amenities, suggesting a pleasant cultural and natural environment as a whole. The overall score, however, masks considerable variation across the sub-region, as the districts adjacent to Nottingham City and districts in the north of the county have very different characteristics. The 'Heritage at Risk' register also show that the county has above average levels of heritage in poor condition ('heritage at risk' levels are directly reflective of rural and urban deprivation issues).

The development of modern, efficient communications infrastructure should be seen in the context of wider regeneration initiatives. The transport strategy will help support the creation and safeguarding of jobs, as well as helping to attract inward investment, by supporting regeneration in four main areas:

- removing transport barriers to work by providing access to jobs and employment opportunities, and to open up employment sites
- removing transport barriers to access to education and skills training; thereby helping people improve their skills and support them back to work
- helping to create economically vibrant and attractive local centres, towns and villages, and
- providing support for local partnerships to develop action plans to address the needs of communities.

4.2.1 Improving accessibility and transport choice

Accessibility planning can play a significant role in helping regeneration throughout the county by improving people's access to both new and existing employment and training opportunities. Transport choice is a key element in improving accessibility. Improving and promoting transport choices also plays a key role in contributing towards reducing congestion through the provision of bus services, bus priority, walking and cycling measures; and will thus increase the overall competitiveness of the areas. Other features of this work will include working with employers on travel plans on a targeted basis to provide appropriate public transport, walking and cycling access and facilities. Good access to local centres by walking or cycling can also play a key role in encouraging people to use them, thereby helping to keep them vibrant and encourage business to invest in them. Demand-side solutions, particularly the smarter choices programme of work (detailed in this chapter within Section 4.1.5 – Smarter choices) offer similar opportunities to aid regeneration.

More detail on improving accessibility as well as improvements to existing public transport networks to ensure access to jobs and training can be found in this document in Chapter 6 – Improve access to key services, particularly enabling employment and training opportunities, within the Accessibility Strategy, and within the Integrated Passenger Transport Strategy.

4.2.2 Spatial planning and development control

The development of brownfield sites as opposed to edge of town greenfield development will be encouraged. Constraints on the existing transport networks are often the biggest obstacle to development. The Council will continue to work with the district councils to align local development frameworks and transport strategy to help ensure they complement one another. Where appropriate, and where funding allows, new or improved transport links will be provided to make such previously used sites more



attractive for investment and more sustainable. In opening up these areas for investment, transport provision is often necessary in the form of new infrastructure and public transport service provision. The provision of such facilities will be sought through developer contributions and support for appropriate sites will continue to be offered through the development control process.

4.2.3 Local centres

The County Council acknowledges the essential role played by the local (district, town and village) centres in providing the services and jobs necessary for a prosperous and sustainable community. In the same way that town centres reflect the general economic well-being of the local community, they can also drive forward economic recovery and prosperity in an area by being the centre of

new enterprise. Towns are the focus for local employment, services, retail, education and training, as well as cultural heritage. They are the natural hubs for public transport systems and provide the hub for extensive travel to work areas. The vitality of the market towns and urban centres in the county is essential to the sustainability of those communities. A vibrant town centre will attract inward investment from business, creating jobs and security for its community. The LTP3 aims to revitalise the district centres, as necessary, in order to maintain their character, competitiveness and economic viability.

The accessibility planning process will also concentrate on the development of better access to these district centres to ensure that all sections of the community served by the centre have the ability to access local services, jobs, education, training, health and recreational facilities (as detailed within Chapter 6 – Improve access to key services, particularly enabling employment and training opportunities). A number of centres have already benefited from Local Accessibility Transport Studies (LATS) undertaken in collaboration with local residents, business and stakeholders and these will be continued during the lifetime of LTP3. The community involvement approach to LATS will also help complement and integrate with wider social, economic and physical action in communities (with a focus on access and mobility). The LATS have helped identify environmental improvements, promotional activity and access improvements to be integrated to help meet the needs of businesses to revitalise local centres; making them more pleasant places to shop and work; encouraging civic pride and making them easier to access. Making the local centres more attractive and vibrant also encourages inward investment.

During the LTP3 period, LATS will continue to place a great deal of emphasis on regeneration issues in local centres, specifically:

- promoting their role as shopping/service centres
- promoting leisure and tourism
- encouraging sustainable access
- adding to the attractiveness of the centres
- promoting a local partnership approach, and
- supporting the development of local area action plans as required by the local development framework.

4.2.4 Infrastructure improvements

Investment in local centre infrastructure, such as public transport or pedestrianisation, may be required to assist in the regeneration of areas. Opportunities to invest in larger transport schemes that provide significant regeneration benefits will be explored. Such schemes will be developed where feasible, when funding opportunities arise and where they can be developed at little risk to the County Council. Supporting the economy and regeneration will also be key factors in the prioritisation of smaller scale transport improvements to be developed during the lifetime of this Plan.

The County Council has long recognised that a continuous programme of investment is needed in many areas of Nottinghamshire to create desirable, attractive places to live and has a proven track record over the last 30 years of undertaking improvement schemes aimed at complementing local transport initiatives. The County Council will continue to support such schemes through initiatives such as the Local Improvement Scheme (as detailed in Section 7.6.1 – Local Improvement Scheme, of this Plan).

The creation of a high quality public realm together with attractive access points and gateways into local centres are important to their overall impression and appeal, particularly in appealing to investment. The Council will continue to work in partnership with the private sector and other agencies to secure an improved public realm particularly where such collaboration will help unlock further private sector investment. The LTP3 programmes of work will also help to promote added value to urban parks, play areas etc. where appropriate.

Work will also be undertaken to develop measures that will support 'master plan' visions for redevelopment opportunities and economic improvement plans. Active discussion with the needs of businesses to help deliver employment growth will also be undertaken as necessary through the LATS and as part of larger scheme development.

4.2.5 Local Enterprise Partnership

A Local Enterprise Partnership (LEP) has been established between the counties of Derbyshire and Nottinghamshire as well as the cities of Derby and Nottingham which will provide opportunities to develop the economy by co-ordinating economic development activity and maximising their academic and commercial strengths. The LEP will have a future role in aspects of transport planning related to economic development and growth across the whole of its geographical area. Although the LEP is still in its infancy, it is likely to have a role in agreeing strategic transport priorities across the LEP area that maximise economic growth; and will have a crucial role in collective lobbying for strategic infrastructure improvements that support economic growth.

4.2.6 Rural areas

In the rural areas of the county, Local Accessibility Transport Studies (LATS) will promote the local market towns and larger villages as foci for economic growth, particularly as service centres and transport hubs for their hinterlands. Continued investment in creating high quality public transport interchanges and improving access to these centres through accessibility planning will aid this process. Transport improvements undertaken as a result of LATS will have regard to the preservation and enhancement of the special historic character of the county's market towns and larger villages which is crucial to their attractiveness and vitality.

Promoting tourism can also assist rural regeneration, and Nottinghamshire has a number of tourist attractions, particularly around Clumber Park and Sherwood Forest. Increased tourism brings employment opportunities and income to rural areas but needs to be carefully managed in order to ensure that damage is not done to the environment. The County Council's Rights of Way Improvement Plan will also offer the chance to exploit the economic potential of these and other rural areas by promoting tourism in the countryside and improving access to it.

The County Council recognises that LTP3 measures alone are insufficient to make a significant impact on rural regeneration. The Council is keen to ensure that these measures are supported and integrated with other initiatives to add value to the programme. The countywide Local Improvement Scheme (LIS) programme has therefore been designed to not only add substantial capital funds for the improvement of the local environment, but also to link in with the LTP3 programme. The LIS programme is 'rural proofed' in that it ensures that all wards, and particularly deprived wards, benefit from this investment.

The County Council has also recognised that many of the rural areas suffer from the poorest quality road and footway maintenance. The Council has therefore prioritised maintenance improvements on unclassified roads to help address this issue, but recognises the need to preserve the special rural character of villages and avoid the over urbanisation of such areas.

4.2.7 Maximising funding potential

To supplement additional County capital funding, such as Local Improvement Scheme funding detailed above and in Section 7.6.1 – Local Improvement Scheme initiative, the County Council has been particularly active and successful in attracting external funding to supplement projects that meet wider objectives. The linkage of schemes to meet wider objectives has in itself ensured that projects are developed in a holistic way to meet broader objectives. External funds have come from a variety of organisations including the East Midlands Development Agency, European Regional Development Fund, Single Regeneration Budget, Waste Recycling Environmental Ltd and others. This has supported a number of joint schemes and it is the intention of the County Council to continue to seek external funding when possible to add value to the LTP3 programme.

4.2.8 Regeneration impacts

Regeneration can change the nature of travel (for example, longer or slower journeys). Successful regeneration can also lead to more profitable transport services (such as bus services) through increased demand thereby reducing the need for the County Council to subsidise services. The County Council will therefore continue to monitor the transport impacts of its regeneration work to make sure that the transport networks continue to cater for need.

4.3 Maintenance of the transport assets

The County Council's transport assets (including roads, footways, bridges, structures, signs etc.) are key community assets. They have a vital role in supporting both the local and national economy as well as contributing to the environment of the areas they serve, thereby contributing to residents quality of life.

The County Council has responsibility for delivering highway maintenance to the people of Nottinghamshire and those travelling through it on its highway network. Nottinghamshire has a highway network totalling 4,296 kilometres (detailed below) for which the County Council, as highway authority, is responsible for its management and maintenance, and provision of new enhanced infrastructure. In addition to roads, there are over 350km of formal cycle network across the county; almost 3,000km of Rights of Way network; almost 91,000 street lights; and 715 bridges over 1.5m span; as well as lit and un-lit signs, traffic signals and street furniture etc.

The County Council is also responsible for the maintenance and upkeep of the footways adjacent to local authority managed roads in the county. The Council is currently undertaking an audit to determine the full extent and condition of its footways. This work will be completed during 2011 and will be used for future prioritisation of footway repairs and maintenance.

A key challenge to ensuring the highway assets are resilient to future pressures will be the consideration and planning for the predicted impacts of climate change. The adaptation responses to climate change that have been developed are detailed within Section 7.1 – Adapting to climate change, of this Plan.

4.3.1 Transport asset management plan and highway asset management system

The development and implementation of a transport asset management plan (TAMP) for the County's highway network is a key opportunity to deliver a safer, improved network service for all road users. The development of a TAMP will also help the County Council to make better use of its transport assets through improved asset management, ensuring they meet current and future requirements of the network. The production of the TAMP and the processes involved in its development should also clearly set out the financial requirements of the network. This in turn will assist in efficient management of budgets as well as the implications for depreciation of the asset if it is under resourced. The introduction of the principal of life-cycle planning and whole-life costing to schemes whether new build or maintenance schemes, should lead to economic improvements, together with effective and efficient use of the network.

The TAMP will continue to be developed and reviewed with the main objectives being to:

- review current practice
- review existing inventory provision, identify gaps and prioritise a data collection programme to build an inventory of items that comprise the highway assets, and ensure maintenance of the data itself. Strategies have been developed to make improvements in data management and use, as these will be required to support a greater use of asset management. These strategies cover the collection and replacement of missing/unreliable data and work is underway to collect/replace this data
- identify the current condition of the assets, taking into consideration life-cycle planning and whole-life costing
- determine an accurate valuation of the whole asset and ensure processes are in place for updating this whenever required
- identify the levels of service appropriate to the key assets and the likely available funding. Future levels of service will be developed as required, to ensure these assets meet current

- and future requirements and to put in place performance measures
- develop an integrated forward work programme to cover all assets, ensuring they support LTP3 objectives as well as ensuring any proposals are appropriate to the existing conditions. The TAMP will define current and desired levels of service and the corporate risks associated with these. Once these have been established, an integrated renewal and maintenance programme can be developed, and
- reduce the number of claims against the County Council. In an increasingly litigious society the aim is to limit the risk of accidents through risk reduction by ensuring a high standard planned maintenance regime is in place, together with appropriate inspection regimes and records of defects and repairs.

Highway asset management system

A key aspect of the production, and delivery of the principles, of the TAMP is the development and implementation of a highways asset management system (HAMS), which is a fully integrated system for the management of all highway assets. The County Council has therefore implemented a HAMS as part of its development of the TAMP. Historically, the County Council has had many different systems used to manage various asset types but the HAMS, where possible, integrates these data sets together. This offers a number of benefits including consistency of approach, increased efficiency in viewing and manipulation of multiple data sets, improved data for defence of insurance claims, and improved responses to customer enquiries. It also offers value for money through the reduction in staff time preparing works programmes.

Modules implemented (or in the process of implementation) are:

- customer relations management
- new roads and street works
- bridge management system
- street lighting management system
- pavement management system
- inventory (signs, signals, safety fencing etc.)
- inspections (including mobile working)
- works ordering
- arboricultural
- drainage, and
- traffic signals.

Whilst most modules are now fully integrated, the population of data and system development is an ongoing process. The technical survey data collected on all of the highway assets is input into the HAMS. This is then supplemented with local engineering knowledge/judgement, customer enquiry information, inspection history, reactive maintenance costs, details of utility works and any other relevant information to add value to the technical information. Further modules will be considered for inclusion in the HAMS as appropriate (such as the implementation of a financial interface) to secure efficiencies in service delivery.

The HAMS will be used to:

- inform the asset valuation process and provide data to assist in the calculation of depreciated replacement cost
- setting service levels for different classes of road
- determine funding levels required and assist in the allocation of funds between road classes and operational areas
- inform and support the production of annual work programmes and multi-year programmes on the road network, and
- provide data to support performance management monitoring.

Life-cycle planning and whole-life costing

Utilising the principles of the TAMP and the information contained within the HAMS, work on life-cycle plans will be undertaken for individual highway assets (for example carriageways, footways, bridges, street lighting, signals, signs and lines). This will help make sure that the best possible value for money is achieved. Whilst this is not a new concept to the Council, as it has been used for a long time to make decisions on measures such as carriageway surfacing, this principal is now being developed for all assets in a more formally recorded manner. Each life-cycle plan will document current practice, identify standards and levels of service, thus enabling performance gaps to be identified. In addition, each life-cycle plan will identify the cost and the anticipated life of treatment options, as well as detailing the methods used to assess the relative cost effectiveness of different treatment strategies. By developing a long-term strategy, options will allow for consideration of not only the most cost effective treatment at a single point in time but also the timeliest intervention. Resources will be directed towards identifying preventative maintenance treatments that have minimal whole-life cost but at the same time halt the deterioration of the asset's condition.

Whilst whole-life costing is not as easily applied to highways as other assets, there is a need to establish what the valuation of the asset is to evaluate how much it will cost to replace using asset valuation guidance and timings. For different types of construction techniques, the County Council can then determine whether it makes financial sense to invest more at the outset to save funding in the longer term and manage the asset with regards to best value and customer expectation.

Long-term planning for maintenance will facilitate the analysis of the timing of maintenance interventions and the programming of preventive maintenance treatment, thus leading to better whole-life cost solutions. An integrated forward work programme will also facilitate the co-ordination of planned maintenance schemes with major and other integrated transport schemes, and potentially improve co-ordination with utility works, as required by the Transport Management Act. Once long-term programmes have been developed for all assets (as a result of the development of life-cycle plans for each asset) and for each service area (as an output from other LTP3 strategy development) it will be possible to identify conflicts and the possibility for developing hybrid schemes (i.e. schemes that meet two or more purposes concurrently).

4.3.2 The highway network

The highway network is a key community asset that supports the national and local economy and contributes to the character and environment of the areas it serves. Roads are an important part of everyday life for all sections of the community. The local road network is central to the integrated movement strategies, contributing to the delivery of wider economic, social and environmental objectives. Its effective management and maintenance therefore has the potential to aid regeneration, accessibility and community safety programmes and strategies.

Table 21: Road lengths in the county

Road type	Length of the road network (km)							TOTAL
	Ashfield	Bassetlaw	Broxtowe	Gedling	Mansfield	Newark	Rushcliffe	
Motorway	0	0	12	0	0	0	0	12
A(M)	0	5	0	0	0	0	0	5
A(Trunk)	0	19	6	0	0	42	62	129
A	39	170	65	38	48	146	53	559
B	56	84	27	26	21	55	3	272
C	45	178	24	41	14	244	219	765
Unclassified	289	488	298	331	328	516	304	2554
TOTAL	429	944	432	436	411	1003	641	4296
% of network	10%	22%	10%	10%	10%	23%	15%	

Source: Nottinghamshire County Council

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60% of the County's network is classed as being in the urban built-up environment with the remaining 40% in the rural environment. Almost three quarters of the County's A roads and C roads are rural, whereas over three quarters of the County's unclassified roads are urban.

The County Council is responsible for all maintenance of the highway asset – planned structural maintenance, reactive maintenance, as well as winter maintenance (such as salting the roads). Effective management of the asset has helped the County Council preserve the condition of its A, B and C roads, whilst the condition of unclassified roads has worsened slightly. The current condition of the principal roads (A roads) is in the top quartile nationally; the condition of non-principal roads (B and C roads) is in the top 50% nationally; and the condition of unclassified roads is in the third quartile nationally, slightly worse than the national average.

The service standards (the percentage of the network where maintenance should be considered) will continue to be reviewed in the light of the condition, future impacts (such as weather), and levels of available funding.

The main objective of the County Council is to manage the highway network in order to provide for the safe, efficient and effective movement of people and goods whilst preserving and enhancing the environment. Highway maintenance will be undertaken by means of a systematic logical approach. The main aims of the maintenance strategy are to:

- deliver the statutory obligations of the Council
- be responsive to the needs of users and the community
- provide effective management of the highway network asset and ensure effective allocation of resources
- support highway network management strategy and integrated transport objectives (such as those detailed within the LTP3) as well as supporting and adding value where possible to wider policy objectives
- further develop best value and asset management planning in the maintenance of the County's highway infrastructure
- contribute to the reduction in road accidents and casualties as part of the County's overall strategy for casualty reduction, and
- provide clear statements of highway maintenance policies, standards and procedures, reviewing them on a regular basis.

These principles are incorporated into a network management regime with the following core objectives:

- **network safety**
 - complying with statutory obligations
 - meeting users' needs
- **network serviceability**
 - ensuring availability
 - achieving integrity
 - maintaining reliability
 - enhancing quality
- **network sustainability**
 - minimising cost over time
 - maximising value to the community, and
 - maximising environmental contribution.

Assessment of the condition of road and footway networks

The County Council carries out technical surveys of its road network to provide information used for a variety of tasks to maximise value for money, including to:

- provide detailed performance data to monitor year on year performance and assess the effects of how work in individual areas contributes to the overall indicator
- assist in the decision making for budget allocation between the different budget headings and areas
- provide data for scheme selection and maintenance treatment selection, and
- provide information to inform the transport asset management plan and asset valuation requirements.

A number of survey techniques are used to assess the condition of Nottinghamshire's roads and a summary of the technical surveys completed is shown in table 22 below.

Table 22: Road condition survey techniques

Road Class	Survey type				
	SCANNER	SCRIM	CVI	DVI	FNS
A	✓	✓			
B	✓	✓			
C	✓	✓			
Unclassified			✓	✓	
Footways				✓	✓

Source: Nottinghamshire County Council

The technical survey data is input into a 'pavement management system' in the County Council's HAMS and used, alongside other factors to prioritise future spending on the maintenance and upkeep of the highway assets.

The Council is also undertaking a 'footway network survey' (FNS) of its entire footway network. This will include an inventory and condition survey that will enable the Council to better prioritise the maintenance and repair of the footways in the county.

The County Council will continue to monitor the use of latest technology to help ensure the relevance and reliability of data collection and to consider value for money and affordability.

4.3.3 Rights of Way network

A number of initiatives will be employed by the County Council to maintain its Rights of Way network to ensure that it remains available for all sections of the community to use. This will include signing and waymarking projects; replacing stiles for easy access kissing gates; the biannual 'ploughing and cropping' awareness campaign; refurbishment of bridges; surfacing (particularly utility paths serving local communities for accessing local services); and within available resources, a strategic whole parish approach to improvements (working and identifying priorities with parish councils).

Inspections and targeted surveys will be regularly undertaken by officers and a number of volunteers. Defect reports will also be collated through email, phone calls and written communication. Service levels will be determined based on the available resources and defects and reports will be prioritised by public safety and strategic and local importance.

4.3.4 Bridges and structures

Bridges form an integral and often critical part of the highway network and there are 715 bridges with a span of over 1.5m in the county as detailed in table 23 below.

Table 23: Bridges with a span of over 1.5m

	No. of bridges > 1.5m span		
	A roads	B roads	C and Unclassified roads
Nottinghamshire	189	70	456

Source: Nottinghamshire County Council

The County Council has policies to carry out 'general inspections', 'principal inspections' and 'strength assessments' for all bridges and culverts on the highway network, to carry out appropriate maintenance, refurbishment and strengthening work and to ensure that the bridge stock is maintained in a proper state to safely carry traffic loads. Such policies will be reviewed periodically to ensure their effectiveness.

Revenue funded general inspections currently take place every two years and capital funded 'principal inspections' take place at frequencies not exceeding 10 years, significant structures (railway and major river bridges) not exceeding six years and under water inspections not exceeding three years. Local performance indicators are used to monitor performance in relation to the completion of bridge inspections. The extensive assessment programme allows for the identification of both current and future problems concerning bridges and structures. The levels of inspections and performance indicators will be reviewed periodically to reflect the levels of available funding.

The County Council will prioritise bridge strengthening to ensure that structures supporting the public highway can carry 40/44 tonnes wherever these might reasonably require access. The County Council has carried out a prioritised programme of bridge strengthening but inspections continue to identify structures, particularly culverts, which require remedial works. It is accepted that certain bridges do not need to carry 40/44 tonne vehicles and that in certain locations weight restrictions are acceptable, and where this is the case weight restrictions have been applied.

The County Council will also undertake a programme of upgrading work to bridges and structures. Parapet replacement, protection and improvement work is in progress following individual risk assessments. There are particular concerns with weak timber parapets, post and rail parapets, masonry baluster parapets and sub-height parapets. In certain locations parapet protection work has been carried out, such as trief kerbing and safety barriers. Future work programmes are based on the inspection regime, life-cycle planning and the overall condition of the bridge, as indicated by the Bridge Condition Index.

Currently 17 bridges require upgrading (for example, parapet replacement, protection and improvement work) and a further 22 require waterproofing or re-waterproofing. Programmes of upgrading, as well as bridge deck waterproofing and re-waterproofing will be developed and prioritised utilising the inspection results and other relevant information contained in the HAMS.

There are fourteen significant steel bridges in the county as well as many bridges with steel components such as parapets. Such bridges require frequent painting and a prioritised programme of works will be developed based on the inspection routine results and other relevant information contained in the HAMS.

The County Council record the details and locations in the county where bridge strikes are known to have occurred. The Council will continue to work in partnership with the bridge owners to develop a programme of works to reduce such bridge strikes as funding allows.

In order to improve the effective management of County Council owned bridges, the Bridge Condition Indicator (BCI) has been used for all general bridge inspections since 2003. In 2010, Nottinghamshire's bridge stock condition scores are 82.4 for critical elements and 89.5 for overall bridge stock. When compared to 2005, the 2010 indicators show significant improvements from 87.2 to 89.5 for the overall stock score and 77.4 to 82.4 for the critical stock score.

All bridge works are carried out with due regard to our environmental responsibilities and consultations take place at an early stage with the Environment Agency (EA) and Wildlife Agencies including English Nature. Consultation with the EA and internal drainage boards is important particularly for works taking place in flood plains. For works on listed structures, consultation takes place with English Heritage. The Highways Agency are consulted for bridge works which will effect flows on the trunk road network, in line with our Traffic Management Act duties.

4.3.5 Street lighting

The County Council is responsible for approximately 91,000 streetlights throughout the county which provide benefits in terms of:

- reduced numbers and severity of road casualties
- reduced levels of crime and the perceived fear of crime
- creating a friendlier night time environment that encourages walking and cycling, with an enhanced perception of community safety
- improving accessibility for socially excluded groups, particularly for women, children and the elderly, and
- stimulating the night time economy – letting a town or city continue to thrive after dark.

Well designed and maintained street lighting can therefore play an important part in encouraging the use of public transport, cycling and walking, accessibility and regeneration initiatives. The age and condition of the existing lighting stock is a cause for concern however, and at the beginning of 2010 there were approximately 4,000 ‘poor condition’ lighting columns in Nottinghamshire; with a very large backlog of ‘average’ condition columns. The Council will continue to develop and review a long-term strategy for the replacement of the Council’s street lighting stock.

The County Council will continue to undertake a bulk clean and change cycle for street lighting on streets with significant traffic flows. A programme of day time and night time inspections to help identify a prioritised replacement programme will also be undertaken on streets with significant traffic flows, and where street lighting has been introduced to improve road safety. The Council will carry out the ongoing identification of safety critical street lighting, both in terms of road and community safety, in order to introduce an enhanced maintenance regime. The frequency of maintenance and inspections will be reviewed periodically to ensure that they continue to offer value for money within the available resources and requirements of service delivery.

A prioritised replacement programme of the below standard columns will take place based on risk management from structural condition surveys and local needs identified through consultation and the information contained within the HAMS. This will include condition assessment, service standards, performance monitoring, asset valuation, optimisation and budget considerations, performance gaps, risk assessment, routine maintenance plan, upgrading plan, disposal and sustainability and future developments. The life-cycle plan for the County's street lighting asset, will be used to identify a range of revenue and capital funding options and performance outcomes that will enable value for money options to be identified.

The County Council and its district council partners have historically attracted external funding for street lighting upgrades, particularly in relation to matched funding for fear of crime schemes. These schemes are identified by consultation with district councils and local community groups. Future external funding bids will be considered where funding opportunities arise and where the Council and its partners has sufficient resources to match such funding.

The County Council continues to improve its lighting outage rate and has systems to monitor average outage times. Current targets are to make repairs within less than seven days for County Council faults and less than 15 days for Distribution Network Operator (DNO) faults. Such indicators will continue to be monitored and performance reviewed to ensure effective service delivery.

The County Council will also review lighting in terms of energy efficiency. The County Council is implementing a review of the levels of lighting provided which is detailed within Section 7.2 – CO₂ emissions, of this document. In addition to this the Council will re-tender the energy supply contract upon expiration using an electronic auction and giving full consideration to the use of green energy. The Council will monitor the effectiveness of alternative light sources (such as LEDs for use as the replacement of life-expired equipment) as part of a long-term investment programme. The use of lower energy white light sources in new lighting schemes will also be promoted where appropriate.

The County Council will also periodically renegotiate and implement service level agreements with Central Networks for street lighting connections and disconnections using the national service level agreement as a framework.

4.3.6 Flood risk management

The Flood and Water Management Act 2010 and the Flood Risk Regulations gave county councils a new major flood risk management/drainage management role as a Lead Local Flood Authority. There are some smaller implications for emergency planning, but the major new role is effectively one involving engineering, co-ordination, collaboration and leadership which the Government suggests should sit with the County Council's existing highway duties and responsibilities. These new responsibilities will impact on the way the highway assets are managed and the County Council will need to ensure that its highway drainage policy is consistent with its flood risk management policy.

Whilst the Environment Agency (EA) will retain a strategic overview role, the local leadership role for flood risk management will be given to county councils. In summary the role will comprise:

- setting a local strategy for flood risk management
- providing leadership and accountability for ensuring effective management of local flood risk from ordinary watercourses, surface run-off and groundwater
- the production of local flood risk assessments, maps and plans including an asset register
- improving drainage and flood risk management expertise
- co-ordination of Surface Water Management Plan production
- management of highways drainage
- prioritising local investment in flood risk management
- consenting and enforcement powers for certain works affecting ordinary watercourses (these are watercourses not maintained by the EA as main rivers)
- promoting partnerships with local planning authorities to produce strategic flood risk assessments
- co-ordination of efforts/investment from all parties involved, and
- becoming a sustainable drainage systems (SUDS) approval authority.

To enable the Council to deliver its new role the Act includes:

- powers to carry out works to reduce surface water run-off and groundwater flood risk, and the County Council will have a duty to undertake flood risk management functions in accordance with local and national strategies
- the integration of local flood risk management decision making into local asset management and investment programmes, and
- the County Council will remain a Category 1 responder under the Civil Contingencies Act, and deliver local flood warnings.

The Government recognises that success will depend on greater co-ordination and co-operation between local partners and the County Council are considering methods to ensure effective partnership working with the necessary stakeholders.

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The County Council will produce Surface Water Management Plans to manage local flood risk, and to influence planning and investment decisions, delivering:

- co-ordinated and prioritised investment strategies and asset management
- clarity of roles to avoid duplicated effort across different organisations
- support for greater use of sustainable drainage systems (SUDS), and
- information to improve emergency planning decisions.

It is anticipated that national standards relating to sustainable drainage systems (SUDS) will be introduced governing the way surface water drainage systems must be constructed and operated for the majority of new developments, including roads. Developers will be required to seek approval for new surface water drainage systems from the County Council as the approving body and there will be a requirement for county councils to adopt and maintain new SUDS which affect the drainage of properties and roads. The requirement for future maintenance of SUDS will potentially create a significant financial liability for the County Council, and work will be needed to develop standards and levels of expertise.

The Flood Risk Regulations which came into force on 19 December 2009 place deadlines and duties on lead local flood authorities (county councils) to:

- undertake Preliminary Flood Risk Assessments by 22 Dec 2011
- identify flood risk areas by 22 Dec 2011
- develop Flood Hazard Maps and Flood Risk Maps by 22 Dec 2013, and
- develop Flood Risk Management Plans by 22 Dec 2015.

The production of the Preliminary Flood Risk Assessment including the identification of flood risk areas in Nottinghamshire is well underway. Information has been gathered from all of the district councils and internal drainage boards, as well as localised flooding hotspots from parish councils.

The HAMS system will be utilised to analyse all of the information and data gathered on the drainage assets and Preliminary Flood Risk Assessment.

4.3.7 Partnership working

As part of the Midlands Service Improvement Group, the County Council continues to work in partnership to develop and learn from best practice on all of its highway assets, for example in the development of the transport asset management plan and highway asset management system and to benchmark performance with other similar authorities.

The County Council has entered into external partnership arrangements to achieve cost savings and efficiencies in maintenance and transport improvements service delivery. Such partnership arrangements will continue to be considered and reviewed to ensure the Council gets the greatest value for money from its delivery operations as well as procurement opportunities.

Procedures are in place to consult with, and discuss, the impact of maintenance schemes (developed by both the Highways Agency and ourselves) with the Highways Agency. Similarly, the Environment Agency are consulted on maintenance schemes through the scheme design process at a project level on both scheme design, as well as the type of materials used during the implementation of the scheme. Such procedures will be reviewed periodically to ensure their effectiveness.

The Council will also continue to work in partnership with neighbouring authorities, sharing best practice and helping to aid cross-boundary working on all of its highway assets. For example, the Council has reciprocal arrangements for routine maintenance and salting with neighbouring authorities to maximise the effectiveness of available resources and deliver value for money; and on abnormal load route planning and in connection with bridges on highway authority boundaries.

4.4 Improving connectivity to inter-urban, regional and international networks, primarily by public transport

Improving connectivity to all of the transport networks is key to improving accessibility as well as supporting the local, regional and national economy. Generally the coverage of the public transport network is good but there is need for reductions to journey times and increased frequencies. Improvements to the local public transport networks and accessibility is included in Chapter 6 – Improve access to key services, particularly enabling employment and training opportunities, of this Plan; within the Accessibility Strategy; and within the Integrated Passenger Transport Strategy.

Local rail and bus services contribute to lessening congestion and opening up access to the wider network, particularly into Nottingham and the local centres, but they also contribute to accessibility for the often rural communities served. Public transport services, and particularly rail services, provide important connections to further afield.

Longer distance travel by coach and rail services will be promoted as an alternative to the private car as appropriate. This will include general promotion through the County Council's website and links to journey planning websites. Further information on promotion is included within Section 6.2 – Provision of an affordable, reliable, and convenient public transport network, of this Plan.

4.4.1 Improving services

The Council will aim to improve services to local and longer distance destinations, including through input to future re-franchising of services. Through local meetings and from groups and individuals, the Council invites, and is continuously open to, suggestions about local train services. These suggestions include relatively detailed points, for example about the timing of particular trains, which may seem small but are important to those members of the public who are directly affected. Where possible the Council will include some of these consultation proposals in its franchise input.

To improve connectivity the County Council will continue to negotiate and campaign for the introduction of the following through rail services that do not currently operate:

- Newark to Derby & Birmingham
- Nottingham to Cambridge
- Nottingham to Warsop, Edwinstowe & Ollerton
- The Robin Hood Line (Kirkby and Mansfield) to Retford.

In addition, whilst the following are not within the county, the Council would support the reopening of rail stations which would usefully enlarge the range of destinations from Nottinghamshire's stations, particularly at:

- Ilkeston and Clay Cross on the Nottingham - Leeds line (as they respectively had the 4th and 6th best cases in England for opening stations on existing lines in the ATOC Connecting Communities Report – June 2009), and
- Waverley (subject to the comprehensive redevelopment proceeding) on the Retford - Worksop - Sheffield line.

The County Council will look to provide coach parking and pick-up facilities as part of existing and new bus station facilities whenever feasible to help provide the opportunity for longer distance coach travel.

The County Council will press for new bus and rail services, stations and other infrastructure as part of proposed new developments; as well as improvements to existing services, stations and infrastructure. Any such additional rail services would have to be specified by DfT, with whom the Council will negotiate, in particular over the service specification of future franchises. The Council will seek to utilise existing funds, and developer contributions where appropriate, to take any measures that would enhance the business case for the introduction of these additional services.

4.4.2 Rail

The Council will seek substantial improvements to journey times on most routes, and to frequencies on some routes, particularly where they are currently hourly or less as detailed in tables 24 and 25 below.

There is a major synergy between journey times and frequency. A key part of the Council's strategy is that the journey time reductions, as well as increasing the attractiveness to passengers, will also reduce the cost of increasing frequencies. It does this by enabling each train set and crew to perform more trips if each trip can be completed quicker.

Journey time improvements

Rail service improvements will be sought along most routes as detailed in table 24 below.

Table 24: Aspirational rail journey time improvements

Route	Journey time (minutes)		Comment
	Current	Target	
Nottingham to London	101-104	90	90 minutes is the target for the 'fast' train each hour, as from 2014
Birmingham	77 or 78	60 - 65	60 minutes is the target as from 2014, for at least 1 train per hour, with the second train per hour taking no more than 65 minutes
Sheffield	50 - 57	46 - 50	As from 2014, after completion of the enhancements in the Nottingham resignalling scheme, and other works
Manchester	111	85	This 85 minute target is only achievable if this service was to use Dore south curve i.e. avoiding Sheffield. That would require completion of the 'Manchester Hub' scheme during the LTP3 period, and additional services between Nottingham-Sheffield which could serve Ilkeston, and between Sheffield and Manchester as envisaged by the 'Northern Hub' scheme
Leeds	120	100	From as soon after 2014 as possible
Worksop	66 - 69	63 - 66	As from 2014
Lincoln	52 - 69	35	As from 2015. The 35 minute journey time would be with 1 stop at Newark. As well as infrastructure works (detailed within the Implementation Plan) this is dependent on provision of a second train per hour to serve intermediate stations (see table 25 below)
Skegness	128-134	120	Target is aspirational
Norwich	159	150	Target is aspirational
Newark to London	73-95	73-80	Depends on delivery by Network Rail and the Office of Rail Regulation of the long-promised 'standard optimum pattern' timetable on the East Coast Main Line
Retford to London	82-97	83-90	
Retford to Sheffield	37 - 45	30	The faster journey times would be with stops at Worksop and Kiveton Bridge. As well as infrastructure works detailed in the Implementation Plan this is dependent on provision of a second train per hour to serve intermediate stations
Worksop to Sheffield	26 - 29	22	

Source: Nottinghamshire County Council

Frequency improvements

Most services already have a good frequency, with trains generally between:

- Nottingham to/from London, Derby & Birmingham, Mansfield, and Chesterfield & Sheffield every 30 minutes, and
- Nottingham to/from Cardiff, Manchester/Liverpool, Leeds, Worksop, Skegness and Peterborough/Norwich; Mansfield to/from Worksop; and Retford to/from Sheffield/Worksop and Lincoln every 60 minutes.

There are services, however, which would benefit from more frequent services which are detailed in table 25 below.

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Table 25: Aspirational rail frequency improvements

Route	Frequency (minutes between trains)		Comment
	Current	Target	
Nottingham to Newark & Lincoln	60	30	One train to run express, with 35 minute journey time, and the other to serve intermediate stations, with Collingham, Fiskerton, Lowdham, Burton Joyce and Carlton having a train every hour, and Rolleston, Bleasby & Thurgarton at least every 2 hours
Newark to London	20 - 40	30	Total number of trains is acceptable, but they need to be spaced at even intervals (which they currently are not, sometimes coming in bunches followed by some long gaps)
Retford to London	60-90	60	
Worksop to Sheffield	60	30	One train to run express, with 22 minute journey time, and the other to serve intermediate stations
Nottingham to Grantham	11 - 49	30	There are currently two trains per hour, but they are very badly spaced, with the stopping train following shortly after the fast train. In addition, the service to most intermediate stations is insufficient and irregular. The different stopping pattern prevents perfect spacing for Nottingham - Grantham passengers, but the Council will press for changes to optimise it as far as possible, including in the evenings. The Council will also press strongly for a regular service every hour in each direction, throughout the day, at Netherfield, Radcliffe, Bingham, Aslockton and (as a destination for county residents) Bottesford

Source: Nottinghamshire County Council

4.4.3 Rail infrastructure improvements

Delivering the target journey times will require carefully chosen enhancements to the rail infrastructure which the County Council will press for, including improvements on the:

- Nottingham to London line
- Nottingham to Birmingham line
- Nottingham to Manchester line
- Nottingham to Leeds line
- Nottingham to Worksop line
- Nottingham to Lincoln line
- Nottingham to Skegness line
- Nottingham to Norwich line
- Newark and Retford to London line, and
- Retford and Worksop to Sheffield line.

Further detail on the infrastructure improvements is included in Section 4.5.5 – Rail infrastructure improvements of the Implementation Plan 2011/12-2014/15.

Rail electrification

Further detail on the electrification of the Midland Mainline (MML) is included within Section 7.2 – CO₂ emissions, but the Council supports the electrification of the MML and will lobby government for it to happen at the earliest opportunity.

4.4.4 High-speed rail

In October 2010 the Government announced that it was proceeding with plans to develop a 'Y' shaped high-speed rail network, consisting of a line from London to Birmingham, with arms from Birmingham to Manchester and from Birmingham to Leeds via the East Midlands and Sheffield (both of which would have a station).

The Council very strongly supports the establishment of a high-speed line through the East Midlands. There would be very large benefits to the local economy from having the very fast journey times to London, and also to Birmingham, Sheffield, Leeds, Newcastle and Scotland that a high-speed network would provide.

The purpose of high-speed rail is to move large volumes of people quickly between places where large volumes of people and economic activity are concentrated and therefore the most appropriate place for such a station is in the centre of Nottingham. In addition, the centre of Nottingham is, in aggregate, most easily accessible to the greatest number of Nottinghamshire residents, especially from Broxtowe, Gedling, and Rushcliffe, but also, via local rail services, from

Ashfield and Mansfield. Any new station facilities would, however, have to have regard for the existing natural and built landscape and would be subject to the necessary environmental and habitats assessments.

The Council will work with the company established by the Government, High-Speed2 Ltd, to develop plans for the eastern route. Details of the route and location of the station are expected to be decided in early 2012. Inevitably such a massive project has long timescales for construction, and the East Midlands section is not expected to open before at least 2026. In the meantime, as set out in this section of the LTP3, the Council will continue to press for improvements to rail services on the existing 'classic' network to the key locations that should eventually be served by high-speed rail services, in particular London, Birmingham, Leeds and Newcastle.

5. Encourage sustainable and healthy travel

The County Council's approach to encouraging sustainable and healthy travel will focus on:

1. Public transport provision
2. Promoting and facilitating active, healthy travel
3. Road safety improvements, and
4. Community safety improvements.

1. Whilst public transport will play a major role in encouraging sustainable travel, the measures to be undertaken to promote, improve and deliver public transport is detailed within Section 6.2 – Provision of an affordable, reliable and convenient public transport network.
2. The ways that transport will be used to encourage and facilitate active, healthy travel (which is detailed in Section 5.2) will involve:
 - helping to overcome perceptions of safety and ensuring that people are equipped with the skills to use it safely
 - the provision of highway facilities to enable people to walk and cycle, as well as access active leisure pursuits
 - delivering an accessible and integrated Rights of Way network
 - maintaining, enhancing and extending a planned multi-functional Green Infrastructure network, and
 - promotion of sustainable, active, healthy travel through smarter choices measures and travel planning.
3. Road safety improvements to enable people to make the best use of the transport networks (which is detailed in Section 5.3) will involve:
 - a multi-disciplinary approach to casualty reduction encompassing all services that help to deliver road safety improvements
 - education and training programmes
 - engineering improvements and ensuring that new highway infrastructure is designed safely, and
 - enforcement measures.
4. The way that transport will be used to support community and personal safety initiatives (which is detailed in Section 5.4) will involve:
 - initiatives to reduce crime, and fear of crime on public transport
 - measures to create safer environments, and
 - enforcement of traffic violations.

5.1 Public transport

Public transport plays a vital role in delivering a sustainable transport system. The County Council's approach to public transport's role in delivering a sustainable transport system, including promotion and marketing of all services and facilities; enforcement issues; pricing policies to compete with car parking in town centres; the removal of barriers preventing people from using public transport; and park and ride is detailed within the Integrated Passenger Transport Strategy and summarised within Section 6.2 – Provision of an affordable, reliable, and convenient public transport network, of this Plan.

5.2 Active, healthy travel

Almost everyone is a pedestrian at some time, therefore walking is the most accessible mode of transport available to the county's residents. Surveys in Nottinghamshire have shown that there are relatively high levels of cycle ownership throughout the county, so there is therefore a realistic opportunity to increase the number of commuter and leisure journeys that are made on foot and by cycle. Walking and cycling are a very simple way for people to incorporate more physical activity into their lives and are very important for increasing access to jobs and services for many people. When replacing trips by car they can also help reduce emissions, ease local congestion and improve air quality. England, however, has some of the lowest rates of walking and particularly cycling in Europe – only 2% of trips in England are cycled, compared to 26% in the Netherlands – and cycling levels in Nottinghamshire have decreased over the last five years, despite significant increases in most of the more urban districts. The contribution that cycling and walking can make to the transport and wider County Council objectives will be reflected in the revised Cycling Strategy and the Walking Strategy, both of which will be reviewed following the completion of the LTP3.

At a time when public finances are coming under increased pressure, the potential of low-cost, sustainable measures like walking and cycling, which can contribute to tackling many of the local and national transport objectives as well as wider objectives, needs to be maximised. More active travel can also bring business benefits – a healthier, more active workforce means reduced absenteeism and increased productivity; and reduced congestion means better journey time reliability. It can benefit less active groups in particular – walking and cycling are simple, low-cost and effective ways for some of the most inactive people in society to incorporate physical activity into their daily lives. And it can be good for the environment – journeys made on foot or by bike rather than car will reduce emissions, and can make for a more pleasant local environment.

Poor health and obesity present significant challenges for national and local government. There are significant costs to the NHS in treating long-term conditions arising from inactive lifestyles as well as the wider costs to the economy from sickness absence and premature death of working age people. The average healthcare cost of physical inactivity is around £5m per year for every PCT in England.

Healthy Weight, Healthy Lives, the former Government's strategy for obesity reduction, stated that we are in the grip of an obesity epidemic. Approximately 24% of adults in the county are classed as obese, slightly less than the regional and national averages. All of the districts in the county have seen decreases in the percentage of adults classed as obese, but the averages in Ashfield and Mansfield districts are both higher than the regional and national averages. Just over 9% of children in the county are classed as obese, the same as the regional average and marginally less than the national average. The percentages of obese children in the Ashfield, Bassetlaw and Mansfield districts are, however, higher than both the regional and national averages; with the percentage in Gedling higher than the regional level.

Based on the Sport England's Active People Survey (2008/09) three quarters of adults in England do not meet the Chief Medical Officer's recommendation for physical activity. In Nottinghamshire, only approximately 22% of adults in Nottinghamshire take part in active sport and recreation with decreases in activity seen in several districts.

20% of Nottinghamshire residents are classed as having a limiting long-term illness which is higher than both the regional and national levels.

There are also additional health benefits through greater levels of active travel and the potential resultant reductions in congestion, which will improve air quality. There is a strong link between poor air quality, poor health and premature mortality and it is estimated that it reduces life expectancy in the UK by an average of 7-8 months. More detail on air quality is included in Section 7.4 – Air quality, of this Plan.

Walking and cycling are not options for all journeys but they are for many journeys under five miles that are currently made by car. Many shorter car journeys could easily be made on foot or bicycle and there is potential for walking and cycling to be integrated into longer journeys – for example on public transport – to support mode shift from the car to lower carbon forms of transport. As about two thirds of the journeys people make are less than five miles, there is significant potential to make walking and cycling an everyday way of getting around. Research from the three sustainable travel demonstration towns shows that between a quarter and a third of such trips could be easily made by alternative means, including walking and cycling. There is therefore the opportunity to get more people walking and cycling particularly to address obesity, improve health and encourage more active lifestyles.

Walking also represents a vital transport mode for certain demographic groups, for example the young, or older people who may no longer be able to drive, or people with a disability, such as those with a visual impairment.

It is also clear from sustainable travel and cycling demonstration towns, and from other countries with high levels of active travel, that it requires a coherent programme of targeted and complementary measures addressing a range of barriers and opportunities to deliver a change. There are a number of barriers to people taking part in more active travel. These can be physical barriers, but they can also be ingrained personal habits or perceived barriers. People are generally aware of the benefits of physical activity but owning a car often means it becomes the choice for many short, everyday journeys. Consultation and studies have identified the following reasons cited for people not walking, cycling and horse riding more often:

- risk (actual and perceived) of injury through traffic volumes and speeds
- severance of direct and attractive routes
- personal safety and fear of crime (actual and perceived), especially after dark
- poor route condition (maintenance) and design
- poor image of walking and cycling
- weather
- over-estimation of distances, difficulty or journey times
- length of journey – requires interaction with public transport over longer commuting
- lack of confidence of cycling
- air and noise pollution
- location and design of common destinations, and
- lack of facilities at destinations.

5.2.1 Provision of facilities

Facilities that improve safety will be provided together with those that encourage safe and enjoyable walking, cycling and horse riding. The Council will seek to do this by making key destinations more accessible by active modes of travel and encouraging greater take up of active travel. The strategic approach used by the County Council aims to counteract the potency of the barriers to active travel wherever possible, and these are detailed below. These measures will also assist those whom are unable to use private cars, such as the visually impaired or people with disabilities. The provision of the facilities detailed within this section will therefore consider the needs of those with a disability in the design and prioritisation processes.

Quality of footway provision

An attractive public realm will assist in encouraging more people to interact with urban centres on foot. It is important that generous footway widths are provided, particularly in busy pedestrian locations such as shopping precincts. The materials used must be of a sufficient quality to prevent early decay, which in turn could cause hazards for those on foot and increase the future maintenance burden. Hazards such as street furniture will be located sensitively to ensure ease of passage for pedestrians, those with a disability or visual impairment, and pushchair users.

New and improved footways and cycleways

Pedestrian infrastructure facilities will continue to be considered as part of town and district centre improvements whenever possible (including as part of Local Accessibility Transport Studies – see below), to help improve accessibility and economic vitality and viability.

New pedestrian infrastructure will also be considered in more rural areas to improve access to key facilities and services. In such areas, footways will be designed sympathetically to avoid the urbanisation of the rural environment. The design standards for walking and cycle routes on the rural network are currently being reviewed to enable routes to be provided at appropriate locations within a value for money framework; preserving the special rural character of villages and rural areas; and avoiding the over urbanisation of such areas.

Improved walking facilities will include a variety of measures including the reallocation of road space to widen footways; resurfacing footways; provision of convenient, direct road crossings; reducing street clutter; improved street lighting; pedestrian signing; and environmental improvements.



The County Council has undertaken work to identify and map all of the cycle routes in the county (including on-road, off-road and signed routes). This has enabled the Council to identify a strategic cycle route network, including those on orbital, traffic free and quiet routes. Work will continue to be undertaken to ensure that they consider all improvements and are up to date. There are over 350km of cycling routes in the county, plus a network of signed advisory quieter cycle routes. The map will be used to identify gaps in the network which will be prioritised for future cycle improvements, particularly where they will improve access to employment, training or other key services.

Through cycle working group meetings and other consultation exercises, officers receive requests for new cycling facilities throughout the county. Feasibility studies will be undertaken to investigate whether potential routes are coherent, direct, attractive, safe and comfortable for cyclists. In order to expand the network in the county, the County Council will investigate developing new routes to link the urban fringe to

the countryside and leisure routes. This will help to promote more rural leisure rides and may assist with encouraging more longer distance rides (to work and leisure) from satellite communities to towns.

The provision of new cycle facilities is detailed within the County Council's Cycle Design Guide. Whenever feasible facilities will be provided on-carriageway in urban areas with all possible on-carriageway solutions considered before off-road provisions are contemplated.

Developing new cycle routes on the existing transport network will be constructed where the high cost can be justified by current or projected high levels of usage. This will include, where appropriate, the reallocation of road space where this will not severely impact on journey times of other vehicles. It is intended that these schemes will complement demand management measures to reduce the speed of traffic and create an environment where cyclists feel safer.

In some instances off-carriageway designs will be more appropriate, particularly where there is likely to be a high demand for inexperienced or more vulnerable cyclists to use the facility. In more rural areas, off-road tracks could also be more attractive and provide marketable leisure routes. Thus full consideration is given to both types of facility on a site specific basis, along with a range of other measures, in order to encourage less confident cyclists as well as enhancing provision for regular, experienced users across the county.

New pedestrian and cycle links to key employment, education and shopping sites that will improve safety and encourage cycling and walking over shorter distances will be considered as part of development proposals for new and existing sites. The inclusion of cycle and pedestrian facilities in new transport infrastructure or development sites will ensure that high quality facilities are built-in from the start, and that additional expenditure is not required to provide facilities at a later date. Further detail on the provision of facilities through the development control process is included in Section 5.2.6 of this chapter. The County Council's Highway Design Guide and Sustainable Developer Guide detail the standards that are required of developers to ensure that high quality facilities are provided.

Maintenance of walking and cycling routes

The maintenance of routes to ensure that they continue to be usable is as important as providing new routes. Accordingly, the County Council will continue to review its policies and strategies to ensure that effective repair, salting, cleansing/removal of litter, cutting back of vegetation etc. is undertaken to ensure that routes remain accessible and attractive. Such policies are detailed within the Highways Network Management Plan. Pavement repair and maintenance will be undertaken where deemed necessary, as identified through the Council's annual inspection process. This ensures that only the locations most in need of repair are treated. Where considered appropriate, pavement maintenance will also be considered as part of a new facility (e.g. when undertaking road repairs); where improvement of the surface is considered important to the appeal of the facility; or where value for money efficiency savings can be made by undertaking repairs at the same time.

Crossing provision

The County Council provides crossings to help ensure safe, convenient journeys on foot, cycle and horse. New crossing facilities to encourage pedestrian, cycle and equestrian activity in and around urban areas also provide a good value for money solution to many accessibility and congestion problems. Such facilities can also mitigate the severance caused by major, heavily trafficked roads. The County Council will continue to ensure that sites provide good value for money, but the Council will maintain a pragmatic and flexible approach when identifying sites so that, where appropriate, accessibility problems can be addressed.

In densely used locations controlled facilities will be utilised if feasible, however, it is equally important that dropped kerbs and associated tactile paving is considered at other sites to assist those with a visual impairment, as well as wheelchair and pushchair users. New crossing points are provided with a safe approach gradient and with a minimal dropped kerb height to ensure comfort and safety.

The time pedestrians wait to cross at formalised points will be kept to a minimum and, particularly in town and district centres, staggered crossings are avoided wherever capacity allows. Following site investigations, the Council is carrying out pedestrian upgrades to existing signal controlled junctions on a priority basis. These will introduce additional 'green man' provision at selected sites where it only partially exists at present.

Enhanced priority measures for cyclists will be considered where appropriate at new and existing light signal controlled junctions. In densely used locations with signal crossing facilities, controlled facilities such as toucan crossings will be provided if feasible, and in accordance with national and local design guides.

In line with lessons learned from best practice elsewhere in the country, advance cycle stop lines (ASLs) will be considered for installation at new light signal controlled junctions, or when carriageway resurfacing takes place at existing signal junctions. A series of ASLs have been installed at suitable existing junctions and the County Council will continue to review sites across the county. Signal locations will be upgraded to feature this tool to assist cycling where it is feasible to do so and where it does not have a significant impact on queuing traffic and the resultant air quality.

The County Council recognises the importance of pegasus crossings at key locations for equestrians. There are a number of pegasus crossings across the county and new facilities will be considered at locations of high usage and traffic volumes.

Reallocation of road space

Reallocation of road space will continue to be considered when appropriate to help increase cycling and walking levels, improve the vitality and viability of town and district centres and improve the safety of vulnerable road users. This could be in the form of major schemes such as pedestrianisation, home zones, or access restrictions for general vehicular traffic; as well as widening footways, the provision of build-outs at crossing points or cycle lanes.

Similarly, area-wide 20mph zones will be considered where they will encourage healthy active travel, improve safety and provide demonstrable outcomes to deliver LTP3 objectives.

Local Accessibility Transport Studies

The County Council's Local Accessibility Transport Studies (LATS) can help to improve accessibility to local jobs, goods and services in district centres and rural market towns by identifying local need through extensive consultation with stakeholders and the public. Targeted improvements have included new and improved footways, cycle lanes and parking facilities, additional pedestrian crossings to reduce the severance impacts of major radial routes into district centres, bus route improvements (including the upgrading of bus stops and provision of timetable information) and interchange improvements or provision in the centres themselves. Further details on LATS can be found in Section 6.1.6 – Local Accessibility Transport Studies.

Integration with public transport

The integration of walking and cycling with passenger transport will be considered whenever feasible to help increase passenger transport patronage as part of longer distance journeys. Improved access by foot and cycle will be considered at existing passenger transport interchanges (such as bus and rail stations) as well as part of the design for any new or improved interchanges. Similarly, better integration of cycling and bus use will be delivered through parking provision at bus stops where there are potentially significant users and it offers value for money. Pedestrian access will also be considered when deciding the locations of bus stops or other passenger transport waiting areas. Safety and comfort of pedestrians whilst waiting at bus stops will also be considered through the provision of, for example, open, well lit bus shelters. A number of improvements to bus infrastructure, aimed at enhancing the pedestrian section of public transport journeys, will be made by providing new or refurbished bus shelters, timetable and service information and raised kerbs.

By putting the needs of cyclists at the heart of the public transport network and station design, it will enable users to access services on bikes, with cycle hubs at stations capable of providing top of the range facilities for thousands of cyclists. The County Council will therefore consider the level of cycle parking at new stations as well as at key locations on its public transport network and provide, or secure funding to provide, facilities as appropriate. The County Council will consider making bids for appropriate funding opportunities as and when they arise.

Parking

Secure cycle parking at public locations provides a very low cost method of encouraging cycle use. In addition to parking at public transport interchange, the level of cycle parking at all town centres will be investigated and reviewed as part of an overall integrated parking strategy. New or updated facilities will be provided on an area wide priority basis, along with adequate directional signing to these resources. A balance of short-term, visible parking and longer term secure parking (i.e. lockers) will be provided dependent upon the likely type of journeys to the particular destination. Sites such as car parks, hospitals and railway stations can all be supplied with Sheffield stands or lockers, and these facilities can also be installed in village centres and other local trip attractors to enable rural residents to cycle to local facilities. Encouragement will be given to the provision of cycle parking at private sites, through measures such as travel plans, smarter choices work and partnership working. Provision will also be encouraged at other key attractors, such as leisure facility sites.

Pedestrianised areas

To ensure that cycling is encouraged (due to its environmental and health advantages over other forms of transport), where appropriate, cyclists will be allowed an exemption to use these areas, unless there are overriding safety factors.

Street lighting

Improvements to street lighting will continue to be made to reduce the fear of crime, as well as road accident remedial work and general maintenance - key deterrents to pedestrian activity.

Roundabouts

Continental style roundabouts will be considered to assist cyclists where they will offer a significant casualty reduction benefit.

Other funding sources

The County Council also looks to maximise funding from all other available sources to provide facilities for vulnerable road users. These include Sustrans, emda, SSP and developer contributions as well as our own Local Improvement Scheme monies.

5.2.2 Promotion

Whilst authorities justifiably spend significant amounts of funding on infrastructure, there is the need to ensure the delivery of the maximum impacts achievable from these improvements through selling the implicit value and potential of these schemes to the general public. The 'soft measures' highlighted here, and in Section 4.1.5 – Smarter choices, should help maximise the benefits of these infrastructure improvements through 'inexpensive' promotion, marketing and education techniques.

The County Council will continue to produce various sustainable travel publications to promote it as both an option for commuting as well as a leisure based activity. Information will also be replicated on the corporate website to help access to the information.

The Council provides various free maps and leaflets regarding cycling and these are popular sources of information for members of the public. It is important to ensure the accuracy and detail of information is enhanced in the future and work will take place to this affect as resources allow. The possibility of providing more detailed mapping and geographical information, available through the corporate website, will also be considered. Strategy has been devised to ensure that newly incorporated cycling routes will be more effectively marketed. This may take the form of a leaflet/map and/or press release. It will have the benefit of being able to direct people onto new routes from the start, rather than waiting for people to discover facilities gradually, which in turn provides better value for the investment in the newly built infrastructure.



The Council will act as a signpost to local, regional and national walking and cycling travel planning websites. A national online sustainable journey planner is being developed to provide a better integrated, multi-modal trip planner providing door to door routes. Its aim is to help break some of the barriers to active travel by showing people how easy it is to undertake such journeys and remove misconceptions about how long the journeys will take.

The County Council will continue to attend events to promote walking and cycling as resources allow. These include attending promotion days at market places and work places in order to increase the profile of walking and cycling amongst both staff and the general public. The County Council will also look at cost effective ways to help deliver promotional events, such as the guided 'rural rides' programme and the Great Notts Bike Ride which have been successful ways of encouraging new cyclists.

Encouraging people of all ages to take part in walking programmes will give people the chance to re-evaluate walking opportunities in their local environment and provide them with the confidence to undertake short journeys on foot. The County Council will work with partners, particularly in the health sector, to support national campaigns as part of the 'Be Active, Be Healthy' strategy, such as the 'Change4Life' programme promoting physical exercise; the 'Walking for Health' programme; the physical activity care pathway 'Let's Get Moving'; as well as the 'Cycle to Work Guarantee' scheme.

Smarter choices

As well as reducing congestion, the smarter choices agenda aims to give people real travel choices and promote active travel. More detail on the County Council's approach to smarter choices is included in this Plan in Section 4.1.5 – Smarter choices, and within the Smarter Choices Strategy.

Travel planning

Travel plans aim to change traditional attitudes to travel; reduce the need to travel by car; encourage more trips on foot and other sustainable means of transport. They also aim to improve accessibility through providing supportive engineering measures where necessary; and making people more aware of the choices of transport available to them in addition to the routes they are able to take. The County Council undertakes extensive work in promoting and supporting commuter travel plans and school travel plans, including a range of associated education/publicity and engineering measures to facilitate them, such as road safety training, passenger transport information, safer routes to school schemes and cycle storage and drying facilities. The County Council will continue to work with a variety of organisations to develop a range of effective travel plans, including:

- residential travel plans as part of new developments
- area-wide personalised travel plans targeted at areas with existing services and infrastructure to maximise their usage
- workplace travel plans
- school travel plans, and
- leisure travel plans.

DfT analysis of households with car drivers shows that people working in the public administration, education and health industry account for the largest proportion of commuting and business trips (28%) and distance travelled (21%). There is therefore significant opportunity to work with the public sector to reduce travel by car. This will include the continuation of the County Council's own travel plan for all of its sites.

Working with businesses and organisations to deliver effective travel plans, particularly those establishing new worksites, will be a critical way of promoting cycling, walking and public transport as an alternative to the private car. The travel plan process also has a critical role to play in helping to identify and prioritise off-site engineering improvements which would improve accessibility and road safety on the walking and cycling journeys between the home and school or workplace.

The Smarter Choices Strategy proposes to support area-wide personalised travel planning in geographical areas in Nottinghamshire. The areas will be prioritised through the accessibility planning process (subject to a value for money check). Such schemes will be tailored to the individual's current travel patterns and the options available to them. It will involve direct marketing of existing, new and amended public transport alternatives and more healthy travel choices. Town centre travel planning events will also be undertaken at targeted town centres where there is evidence that there is scope to increase journeys by walking, cycling or public transport.

The County Council will also work in partnership with the organisers of leisure events (such as football and cricket matches, as well as one-off events) to develop travel plans to maximise the numbers of attendees travelling to the event by public transport, on foot and by bicycle.

The County Council will work in partnership with the local planning authorities to promote the use of residential travel planning at new developments, funded by the developer, through the use planning conditions. The Council will also work with the district councils as planning authorities to investigate more effective mechanisms for enforcing and monitoring travel plans when they are developed as part of the planning process.

Promoting and increasing active and sustainable travel to schools and other educational establishments is a core part of our active travel strategy. To make active travel a mainstream transport choice over the long-term, there is no better place to start than with young people. Encouraging more active travel by children can encourage habits that last a lifetime, so that over the long-term there would be less need to encourage adults out of their cars and into walking and cycling. Travel plans will therefore be developed and maintained with pupils of all ages.

Influencing the travel choices of 14-19 year olds will also be a key part of the active travel strategy as it is an opportunity to influence a generation reaching driving age about the value of active and sustainable alternatives. The education transport options for this age group and promotion of active travel will be considered as part of travel plans with education establishments (including colleges of further education) and through the Children and Young Persons Home to School Transport Strategy.

5.2.3 Safety and training

Safety concerns are often cited as a reason why people do not cycle or, for example, allow children to walk to school, meaning that they are missing the opportunity to do more physical activity and improve their health. Improved road safety will continue to play a major role in encouraging walking and cycling. This will be achieved through targeted education and publicity, enforcement and engineering measures as detailed within the Cross-Service Road Safety Improvement Plan and Section 5.3 – Road safety, of this chapter.

Walking, cycling and horse riding infrastructure improvements detailed within this chapter will all have regard to improving safety for vulnerable road users.

Road safety schemes such as 20mph zones, home zones, school zones and traffic calming will be considered when appropriate to help remove barriers caused by road traffic, helping remove social exclusion and producing a safer environment for vulnerable road users. Similarly, to reduce barriers and increase accessibility, suitable pedestrian, cycle and horse crossing facilities will be provided as necessary.

Safer routes to school can encourage more children to walk and cycle to school in a safe environment and will continue to be provided to address road casualties and on well used routes to school. Whenever possible such schemes will also be developed to provide enhanced benefits to all pedestrians and cyclists in the wider community.

The County Council offers a range of education for all types of road users; of all ages. This is detailed further within Section 5.3 – Road safety, of this chapter, and within the Cross-Service

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Road Safety Improvement Plan. Adult cycle and child pedestrian and cycle training is considered within Nottinghamshire County Council's Cross-Service Road Safety Improvement Plan.

A programme of pedestrian related training will be delivered to primary school age pupils throughout the county through schools and other organisations where children gather. Publicity on safer walking activities is also provided to other age groups such as the elderly and young adults. Cycle training, available through schools and at other venues such as leisure centres (thereby making it more accessible), is offered to all children aged eight and over throughout the county including:

- off-road training aiming to develop cycling skills and control amongst younger children aged eight and nine years old, and
- the national on-road Bikeability scheme aiming to teach children aged 10 and over how to carry out cycle manoeuvres and to develop their road user skills.

Adult cycle training is currently available, providing practical solutions that make cycling an enjoyable and safe form of everyday transport. The training aims to impart skills, knowledge and assistance with everything from bike use to route planning, but most of all to improve confidence and the observational skills to make cycling enjoyable. Cycle training is provided to individuals, families or to organisations as part of their travel plan.

Fear of crime is a recognised barrier to walking and cycling. Perceived safety plays a key role in encouraging vulnerable road users as improved safety, both in terms of real and perceived dangers, helps to encourage more people to walk, cycle and ride horses. This in turn improves community safety and inclusion through reduced general fear of crime due to greater numbers of people on the streets.

The County Council will endeavour to make monies available through funding arrangements such as health funding, fear of crime budget, developer contributions, as well as enhancements and maintenance budgets for street lighting improvements that will make people more likely to use footways. Encouraging new or improved pedestrian and cycle routes along canal towpaths or disused railways should be highly visible and integrated with other activities, in order to maximise safety and security. Further detail on community safety is included in Section 5.4 – Community and personal safety, of this chapter.

5.2.4 Rights of way

Nottinghamshire has an extensive network of Public Rights of Way (PROW), comprising nearly 3,000km of footpaths, bridleways and byways, and wider countryside access including Open Access, country parks and permissive routes. The opportunities for outdoor recreation and wider utility access are numerous; for example, through walking, horse riding and cycling. By the very nature of PROW, the majority of this access is in an attractive, safe, traffic free environment, providing a welcome relief from the metalled highway network. The routes in the county are geographically spread and vary in type, status and surface. Therefore provision is made in both rural and urban settings and importantly they also link these two environments together. Different classes of PROW are available for different classes of user, with all routes available to pedestrians; and the surface can also dictate the type of use – 'everyday' cyclists prefer a hard, wide surfaced path but horse riders and mountain bikers prefer a soft and more challenging natural surface.

The PROW network offers excellent opportunities for encouraging healthy active travel and complements the wider transport network. Many paths, both urban and rural, provide a community link in the transport network to access essential services and facilities, public transport and recreation. They provide a viable and valuable alternative to motorised transport and are a particular asset in encouraging social inclusion and healthy activity.

Good access to the countryside is fundamental for wider quality of life issues. Not only will better connectivity between the town and countryside reduce the problems of rural isolation, but it will encourage a healthier lifestyle for both urban and rural residents. The natural environment and country parks, with opportunities for sports, recreation and exercise can contribute to health and

well-being, tourism and the local economy. An improved PROW network also means people are more able to access jobs, education, leisure, essential services, health and thus enjoy a better quality of life. To this end, the County Council has developed and is implementing a Rights of Way Improvement Plan (ROWIP).

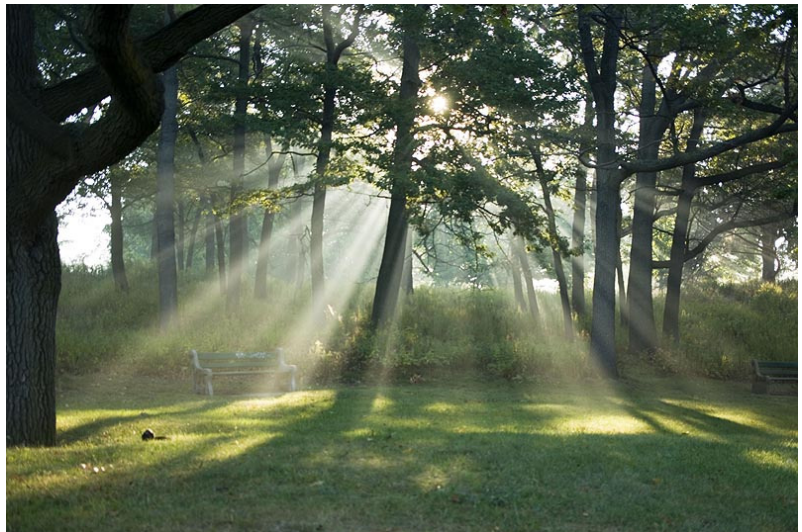
The ROWIP sets out the County Council's strategy and action plan to develop the PROW network to deliver transport and wider County Council strategic objectives. Access development together with network enhancement, as highlighted within the ROWIP, will be a priority to make the PROW network more useable and accessible to a wider section of the community and to encourage healthy active travel alongside the other LTP3 objectives. The County Council will continue to work closely and efficiently with all partners and stakeholders to achieve a safe and attractive network for all vulnerable road users. This will involve linking more PROWs safely into the wider highway network. For example, historically the road network has developed around the PROW network to the extent that some paths are unavailable due to the safety risks of accessing and egressing a particular path on a highway. This will be addressed strategically through future planning and a closer working relationship with our partners. Continuity and improved funding for maintenance is also essential in contributing towards providing good quality routes encouraging more people to walk, cycle and ride.

The continued promotion of PROW to raise awareness, user rights, access opportunities and to encourage responsible use will remain a high priority throughout the LTP3 period within available resources.

The County Council will also work in partnership with neighbouring transport authorities to improve the PROW and green infrastructure networks across administrative boundaries where appropriate.

5.2.5 Green infrastructure

Green infrastructure (GI) is a strategic, planned network of high quality green spaces and other environmental features (including footpaths and cycleways), delivering a wide range of environmental, health and quality of life benefits to local communities. Green infrastructure should be provided as an integral part of new development, alongside other infrastructure, and Nottinghamshire's approach to the development and delivery of GI is detailed within the 6Cs GI Strategy (which covers the counties of Derbyshire, Leicestershire, and Nottinghamshire and cities of Derby, Leicester and Nottingham).



A major step-change in the scale, quality and connectivity of GI assets will be required to match the scale of planned new growth in order to deliver environmental, economic and social benefits. This will be achieved through all of the stakeholders involved in planning, delivering and managing GI and sustainable development working in partnership to establish an enhanced and accessible GI network.

The long-term vision for GI in the 6Cs sub-region is to maintain, enhance and extend a planned multi-functional GI network. This will comprise existing and new green spaces, natural and cultural features and inter-connected green links in and around the three cities of Derby, Leicester and Nottingham, connecting with their surrounding towns and villages as part of the sustainable growth

of the sub-region. The river valleys of the Trent, Soar and Derwent and their tributaries provide the 'backbone' of the network, linking the three cities with each other.

The Strategy recognises the role that GI can play to provide many social, environmental and economic benefits close to where people live and work, including:

- increased opportunities for communities in and around the three cities to access a variety of greenspaces on their doorsteps and in the wider countryside. It will be set within, and contribute to, a high quality natural, cultural and built environment that provides substantial quality of life benefits for residents and visitors, and is a focus for attracting and retaining economic investment in the area
- acting as a framework for delivering biodiversity benefits on a landscape scale, and as appropriate to the local landscape character, by protecting, connecting and creating a diverse range of wildlife habitats and providing ecological corridors for species dispersal and migration
- contributing to environmental awareness through education and access to nature
- contributing to adaptation and mitigation to the challenges of climate change, such as flood management, and
- providing increased opportunities for exercise, outdoor recreation and relaxation which in turn will help improve health and reduce stress levels.

The spatial framework for the strategic planning and delivery of GI within the 6Cs sub-region operates at three spatial levels:

- sub-regional GI corridors – to maintain the integrity of the GI network in the long-term, and connect the 6Cs network to wider regional GI corridors
- city-scale GI corridors – to connect the sub-regional corridors, the urban fringe and the urban cores related to specific principal urban areas and sub-regional centres, and
- urban fringe GI enhancement zones – to deliver GI benefits for both existing and new communities (sustainable urban extensions) related to specific principal urban areas and sub-regional centres in the local areas where most development is likely to take place.

To assist in guiding the delivery of the proposed vision and network, the Strategy also identifies key principles for the short and long-term planning and delivery of GI within the 6Cs sub-region; strategic mechanisms and funding sources for delivery of GI; and a framework for appraising GI projects for funding. The Strategy also suggests ways of sustainably managing GI in the long-term.

An action plan, developed in consultation with partners and stakeholders, forms part of the Strategy; identifying priorities for action related to promotion and advocacy of the GI principles, as well as strategic initiatives for delivering the GI network. Long-term funding and support for GI delivery will need to come from a number of sources and different partners, particularly through new development and the voluntary sector, and a creative use of potential funding sources will be needed which reflects the variety of sustainability benefits GI can deliver.

The strategic framework and action plan will be kept under review, and updated as necessary in the light of changing circumstances and new thinking, to continue providing a coherent sub-regional framework for GI planning and delivery in the 6Cs sub-region. The County Council will also work to ensure that whenever possible GI links into the wider walking and cycling networks in the county.

5.2.6 Spatial planning

The location and design of common destinations, such as employment and education sites, retail parks or leisure centres, can make people feel they have no alternative but to use the car. It is therefore important to consider the location of future developments and to ensure healthy active travel is consistently integrated into transport and planning decisions to create an environment and culture where walking and cycling is the natural choice for many journeys.

Planning Policy Guidance Note 13 sets out the statutory provisions and guidance on planning integrated, sustainable transport for new developments and makes it clear that local authorities should:

- locate day to day facilities which need to be near their clients in local centres so that they are accessible by walking and cycling, and
- accommodate housing principally within existing urban areas, planning for increased intensity of development for both housing and other uses at locations which are highly accessible by public transport, walking and cycling.

Engagement will be undertaken between planners and developers at a preliminary stage to make it easier and more cost effective to integrate walking and cycling into the design of new developments. Cycle and pedestrian facilities are a cost effective way of meeting sustainable travel and accessibility objectives of new developments and funds from developer contributions will be negotiated in order to provide good pedestrian and cycling links to and around new developments. The County Council will work in partnership with local planning authorities to ensure such facilities are a priority when considering agreements with developers so that they are built as an integral part of any development rather than having to retro-fit them at a cost to the Council.

The reliance upon the car will be minimised wherever possible as part of this and it is important that walking and cycle provision is direct, safe and high quality.

The County Council's guidance for new development is included within the regionally developed Highway Design Guide. The Highway Design Guide sets out the general principles and minimum standards for the provision of pedestrian and cycle facilities in residential and industrial developments for which we are the responsible highway authority. The Guide will continue to be reviewed and updated to reflect the objectives of the County Council.

5.2.7 Partnership working

In addition to working with public sector partners (such as those detailed above), the third sector is a valuable source of support, advice and expertise. We will therefore work with appropriate national, regional and local third sector organisations in the development of walking and cycling strategies and action plans, as well as identifying improvements as appropriate.

Partnerships can be a useful means of promoting active travel to different groups. Joint ventures with district and borough councils, health partners (NHS and primary care trusts) and local interest groups will continue to be undertaken to help provide new ideas for promotion, as well as provision of facilities in particular areas.

5.3 Road safety

In 2009, 3,114 people were injured on all roads (including trunk roads) in Nottinghamshire – 446 of which were killed or seriously injured and 2,668 were slightly injured. These accidents remain a huge drain on the NHS and emergency services and the cost of these accidents to the community is estimated at £180m per year, in addition to the incalculable pain, grief and trauma for those involved.

A detailed breakdown of road casualties in Nottinghamshire over the last five years is included in the LTP3 Evidence Base Report but:

- the total number of killed and seriously injured (KSI) casualties in Nottinghamshire decreased year on year and in 2009 the number of casualties had fallen by over 46% when compared to the 1994-98 average; and by 25% when compared to 2005
- the numbers of KSI casualties in each of the main road user classifications (pedestrians; car drivers and passengers; cyclists; and motorcycle riders and passengers) has decreased when compared to both the 1994-98 average and when compared to the number of casualties in 2005

- the numbers of child KSI casualties has decreased year on year and in 2009 the number of casualties had fallen by just over 68% when compared to the 1994-98 average; and by 50% when compared to 2005, and
- the numbers of slight injuries has seen significant reductions and in 2009 the number of casualties had decreased by just over 21% when compared to the 1994-98 average; and by 15% when compared to 2005.

Against this backdrop of reductions, between 2005 and 2009 there have, however, been increases in casualties in particular districts, including:

- increases in KSI casualties in Broxtowe (8% increase – although almost a fifth of these are on motorway and trunk roads) and Mansfield (6% increase)
- increases in motorcycle KSI casualties in Broxtowe (70% increase) and Gedling (29% increase)
- an increase in car driver and passenger KSI casualties in Mansfield (31% increase), and
- an increase in slight casualties in Rushcliffe (8% increase).

There are also still specific road safety issues across the whole of the county, particularly relating to motorcycle casualties, young drivers and speed. Despite significant recent decreases in the numbers of motorcycle casualties, in line with the national picture, they continue to be an area of concern. The numbers of motorcycle KSI casualties has decreased by 15% when compared to the 1994-98 average; and by 10% since 2005. In 2009 motorcyclists accounted for 1% of traffic on Nottinghamshire's roads but 25% of all of the KSI casualties. Analysis of motorcycle casualties has identified two specific groups as being involved in accidents:

- riders of larger machines, predominantly resulting in KSI casualties, and
- riders of smaller machines, predominantly ridden by young riders, resulting in slight casualties.

Between 2005 and 2009 the numbers of young driver KSI casualties has fluctuated but ultimately increased by 12%. The proportion of young driver KSI casualties has also increased and in 2009 they accounted for 37% of all of the car driver KSI casualties in Nottinghamshire, compared to 29% in 2005.

The numbers of KSI casualties where speed was a contributory factor to the accident has decreased by 24% when comparing 2009 with 2005; but the number of fatal casualties where speed was a contributory factor to the accident has doubled over the same period. In 2009 speed was a contributory factor in 43% of all of the fatal casualties in Nottinghamshire.

5.3.1 Multi-disciplinary approach to casualty reduction

The benefits of a broad, multi-disciplinary approach to casualty reduction have been long recognised by the Council. Consequently, the County Council's road safety strategy is a cross-service plan, which is driven forward by a Road Safety Board comprising representatives from transport policy, strategy, highway management, and safety. This has been an effective means of achieving more focussed, co-ordinated, corporate and systematic working, resulting in improved service delivery and casualty reduction performance across the board. The Road Safety Board also helps to ensure the close integration of strategies, such as those relating to community safety, maintenance, cycling, walking, motorcycling, accessibility, regeneration etc. and road safety. The Board monitors and reviews performance on a quarterly basis, identifying weaknesses and risks to meeting targets so that strategy can be reviewed and revised to rectify any problems.

The County Council's road safety strategy, as set out in the Cross-Service Road Safety Improvement Plan, aims to help improve the efficiency and effectiveness of the service, enhance partnership working, and focus resources towards key areas of road safety work to achieve national, regional and local road safety casualty reduction objectives and targets. It also details the range of actions (from education programmes to highway maintenance programmes) that will be used to meet local road safety objectives, as well as how specific road safety issues will be addressed. All of the actions are regularly reviewed and reported on to ensure their successful progress and therefore the effectiveness of the Road Safety Plan. The Road Safety Plan was

drawn up in consultation with all internal and external bodies that have a role in casualty reduction in Nottinghamshire as well as elected members, and includes tasks to improve safety for all road users of all ages (children, elderly, pedestrians, cyclists, drivers, passengers, motorcyclists and horse riders etc.).

The County Council recognises the link between safety and promoting sustainable transport. To help ensure these areas of work are complementary, in addition to the road safety education functions, the County Council's school travel awareness and school travel planning functions are housed within the Road Safety Team. This enables the delivery of road safety education, training and publicity to school pupils whilst encouraging walking and cycling through developing travel plans at schools to reduce congestion. It is therefore appropriate that the Cross-Service Road Safety Improvement Plan includes aspects of its school travel awareness initiatives as well.

The Road Safety Plan has close links to the Community Safety Strategy to help build safer communities, and several tasks within the Cross-Service Road Safety Improvement Plan are aimed at contributing to both road and community safety. Similarly, the Cross-Service Road Safety Improvement Plan has significant contributions to make towards regeneration, quality of life and accessibility strategies throughout the county, and these contributions are reflected within the tasks that are detailed within it. The reduction in accidents also has an impact on levels of congestion caused by accidents, resultant air quality and its obligations under the Network Management Duty.

It is anticipated that a new national casualty reduction strategy, reflecting the Government's priorities and associated revised casualty reduction targets up to 2020, will be published in Spring 2011. The Cross-Service Road Safety Improvement Plan will therefore be reviewed and revised following analysis of our accident and casualty data, consideration of the Government's new targets and the views of our elected members, partners and colleagues across the County Council.

5.3.2 Casualty reduction delivery

All of the work undertaken to reduce casualties in Nottinghamshire is evidence led. Records of all injury accidents reported to Nottinghamshire police (including those on City and Trunk roads) are collected, analysed, verified, validated and stored by the County Council using both computer and paper based systems. A close working relationship with the police ensures that the accident data recorded is both comprehensive and accurate. Accident problem sites as well as casualty trends are identified using the above data and a range of investigative methods and analytical tools.

A 'child safety audit' is also carried out annually to identify the road safety problems for children in Nottinghamshire, and the audit is used to help identify the appropriate strategies and actions required to deal with these problems. The audit includes a comprehensive analysis of child road casualties, looking at the various circumstances in which accidents occurred. The results of the analysis are then used to inform a wide range of education, engineering and publicity solutions. In carrying out the child safety audit the County Council also reviews how successful its education and engineering programmes have been, as well as identifying any possible problem areas that may not have been dealt with through existing road safety programmes. The child safety audit results in the formulation of the overall strategy to address child road casualties and was recently cited by DfT as a good example of the use of data in determining priorities and options for a range of issues.

The approach that is to be used to reduce road traffic accidents and casualties in Nottinghamshire combines three key elements known as the 'three Es'. The three elements, which may be applied singly or in combination to address an identified road safety issue at a local, regional or national level, are:

- education
- enforcement, and
- engineering.

The delivery of these elements is also considered in existing specific road user strategies (such as cycling and motorcycling); and will be considered as part of the development of future strategies (such as walking) which aim to encourage safe, convenient and efficient travel.

Education

A forward programme of a range of evidence led road safety education and awareness raising activities will be developed and carried out each year to support national campaigns and to address identified local road safety and travel awareness issues. The education, training and awareness raising programme will be based on the concept of lifelong learning to ensure that it encompasses the issues faced by people of all ages at the appropriate time. Particular attention will also be given to issues that have been identified as requiring specific focus – for example, currently motorcycle riders, young drivers and issues surrounding speed have been identified and a range of activities have been developed and delivered to address them.

Engineering

The County Council has pioneered road safety engineering measures since the formation of its Accident Investigation Unit in 1973. Some of the techniques employed are summarised below:

- area-wide traffic calming schemes
- signing and lining improvements (including inter-active signing)
- surface improvements and anti-skid treatments
- new and improved street lighting
- new and improved traffic signals
- new and improved junctions
- geometric improvements
- red light and safety cameras, and
- improvements for vulnerable road users, such as cycle routes, pedestrian and cycle crossings and refuges.

Following detailed analysis of casualty data, a countywide programme of engineering schemes will be developed and delivered each year. The schemes will be prioritised on a 'first year rate of return' (FYRR) accident savings basis, with each scheme achieving at least predicted 200% savings. In 2009, on average a 400% FYRR was achieved on accident remedial schemes, which means for every £1 spent we saved the equivalent of £4. The type of scheme implemented will depend on the location, the type of problems and engineering solutions identified. Where it is predicted that a scheme will not meet the 200% FYRR savings they are considered and prioritised within other elements of the Council's programme of integrated transport measures.

In addition, safety audits will be a key component to our casualty reduction strategy. All highway improvement schemes costing over £5,000 are subjected to the safety audit process. This involves a three stage examination of the proposals, from the preliminary design to post-completion inspections to highlight and remove potential safety problems, thus avoiding death and injury in future years. The County Council is a member of the East Midlands Safety Audit Forum (part of the East Midlands ADEPT) which gives the authorities in the region the opportunity to learn from one another through sharing best practice and exchanging views on how to deal with problems at specific sites.

Enforcement

The County Council has a strong working relationship with the Roads Policing Unit of Nottinghamshire police. Jointly, we will adopt a data-led approach and this underpins our safety camera partnership work along with targeted enforcement activities. This includes activities covering speed awareness, seatbelts, mobile-phone use and drink/driving.

Partnership working

The County Council recognises that it cannot achieve its road safety strategy alone and therefore has long standing partnership arrangements with a range of organisations. Collaboration with a wide range of external organisations and agencies will continue to be a major feature of the Council's approach to casualty reduction. In order to maximise our casualty reduction potential, we

will continue to work closely with other agencies and stakeholders with a remit to reduce casualties. This is currently achieved principally through the Nottinghamshire Road Safety Partnership involving the City and County Councils, police, Highways Agency, Fire & Rescue, Her Majesty's Courts' Service and the Nottinghamshire County Primary Care Trust. Partnership working brings additional insight and resources into all stages of the strategy, from initial policy formulation to the implementation of specific measures. The County Council will continue to work in partnerships on both long-term and short-term projects to take the opportunity not only to share best practice and learn from other authorities, but to pool resources, help co-ordinate and focus efforts thereby maximising improvements, and also to adopt more consistent road safety programmes across the region in order to maximise their impact.

Partnerships, such as those with neighbouring authorities on cross-boundary issues on all aspects of road safety service delivery, are part of the everyday work of the road safety service. The County Council is part of several regional partnerships delivering road safety education, training and publicity programmes such as the Shiny Side Up partnership, No More Lives Wasted campaign and the Fatal 4 regional project. The Council also works on specific education, training and publicity on cross-boundary issues with neighbouring authorities, such as joint advertising and publicity of specific road safety messages along traffic corridors that cross administrative boundaries. Engineering measures are also developed jointly with neighbouring authorities, such as reducing speed limits along whole routes that cross administrative boundaries to ensure consistency. Cross-boundary co-operation is supported through the Network Management Duty as part of reducing congestion and effective co-ordination of road works whilst ensuring that road safety is of prime importance at all times.

The County Council will continue to regularly benchmark its performance with other transport authorities via the Midlands Service Improvement Group. The new DfT Evalu-it toolkit will be utilised to better monitor and evaluate road safety campaigns and initiatives.

The inclusion of road safety as one of the core priorities in the County Council's Strategic Plan (2010-2014) further emphasised the need for cross-service working. Closer working arrangements with other County Council departments and service areas including Children & Young People Department, Adult Social Care and Health, Chief Executives, Safety Advisory Group, Community Safety Partnership and the Children's Safeguarding Board will therefore continue to be fostered.

5.4 Community and personal safety

People will only use public transport, walk or cycle if they think it is safe to do so. Fear of crime affects some sectors of the population more than others, with women, parents, the young and the elderly and ethnic minorities having particular safety concerns that need to be taken into account in transport provision. These concerns become even more acute when they relate to trips after dark. Of all the modes of travel, car journeys are seen to carry the least risk in terms of fear of crime due to the door to door nature of such journeys. Crime and the fear of crime is therefore a factor which continues to act against the move towards an increased use of more sustainable modes of travel.

There are currently large gaps between fear of crime and actual crime levels. Local perceptions of anti-social behaviour are worse in Nottinghamshire than on a national level. People generally feel safe in their own home and feel safe during the day outside of the house but less people feel the same sense of security after dark. Although it is not easy to quantify, the fear of crime that individuals have is therefore also important. The reduction of actual and perceived fear of crime is therefore a key opportunity to increase the use of more sustainable modes of travel.

People often wrongly perceive that crime is increasing when in fact it has shown large decreases. Between 2007 and 2009 all of the districts have seen decreases in the rate of theft of vehicles; the rate of theft from vehicles; and the rate of vehicle interference. All of the districts except Ashfield have seen decreases in the rate of cycle theft between 2007 and 2009.

The creation of safer and stronger communities is an integral part of the Council's Community Strategy. Transport has an important role to play in tackling crime and improving personal security. Section 17 of the Crime and Disorder Act 1998 created a duty on local authorities to take account of community safety in all areas of their work and this is reflected in the LTP3. It includes crimes committed by motorists, individuals on public transport and in terms of people feeling safe whilst using the highway. The outcome of Nottinghamshire County Crime and Community Safety Strategic Assessment will be used to inform how transport improvements can address community safety issues and concerns.

The County Council acknowledges that crime and fear of crime is one of the top areas of concern for many of its communities. The Council will therefore continue to work in partnership with district councils, the police, the local community and other key partners to identify and help fund appropriate measures.

5.4.1 Fear of crime on public transport

Crime and fear of crime on public transport is a major constraint in encouraging people to use more sustainable modes of transport. A DfT study in 2004, 'People's perceptions of personal security and their concerns about crime on public transport' envisaged that effectively introducing measures to enhance personal security would result in a 12% increase in journeys.

To fully address this problem all elements of the public transport journey will be investigated, including the walk to and from a bus stop, the wait at the bus stop and the bus journey itself. Integration audits will be undertaken to identify improvements to links between bus stations, rail stations, and bus stops with cycle and walking routes. Along with accessibility, improved security will be a key element of this process. Where suitable, measures will be put in place to address shortfalls, such as improved street lighting, improved waiting infrastructure and CCTV. Where appropriate, crime will be designed out of transport infrastructure, for example, open bus shelters.

In partnership with public transport operators, a number of methods will be used to improve the perceptions and issues of anti-social behaviour on public transport and its associated property. These will include improved security associated with public transport, such as the use of CCTV on buses, improved lighting at bus stops and the use of CCTV in taxis. The County Council will review its promotional campaigns on public transport safety issues, and develop and deliver effective campaigns across the county, as well as targeted in specific 'problem' locations.

Working in partnership with train operating companies, help points will be considered at rural rail stations in Nottinghamshire as part of a rail quality partnership. The County Council will also assist the British Transport Police and Railtrack as appropriate to address vandalism issues on the railways.

Further detail on the measures undertaken to address crime and fear of crime on the public transport networks is included within the County Council's Integrated Public Transport Strategy and within Chapter 6.2 – Provision of an affordable, reliable, and convenient public transport network, of this Plan.

5.4.2 Safer environment

Poor quality public spaces and traffic dominated environments (such as lack of lighting and poor urban design) can result in people feeling disorientated, isolated, intimidated and unsafe. A number of methods will be used to reduce such feelings and avoid anti-social behaviour.

Improvements to existing transport infrastructure will be considered in areas where there is a record of crime or perceived fear of crime, particularly where partners can also provide funding. Such schemes will be generated by reference to public concerns and crime statistics and, for example, may include street lighting improvements or replacing subways with other appropriate forms of crossing (in line with recognised good practice). Secure cycle parking will also be introduced at specific locations in partnership with district councils where it is considered they are required.

The statutory duty on the County Council to consider crime and disorder in all that it does is recognised within all transport improvements undertaken by the County Council where 'safe by design' measures will be promoted, and particularly within the Council's Cross-Service Road Safety Improvement Plan which has a clear emphasis on speed reduction measures.

The closure or diversion of footpaths and Rights of Way on crime and disorder reduction grounds, under Section 118/119B of the Highways Act 1980 will be considered but the agreed protocol identifies closure only as a final measure. The local Crime and Disorder Partnership will consider any options to reduce criminal behaviour in the area and closure or diversion will only be considered when all alternative means have been exhausted.

Theft from motor vehicles accounts for the majority of all vehicle crime. There have been large reductions of thefts from vehicles parked on the highway and in car parks but the highest levels of thefts from vehicles still tend to be concentrated around public car parks. The County Council will therefore work with district councils and the police to encourage the effective lighting and patrolling of car parks respectively.

Section 7.6 – Physical environment; and Section 5.3 – Road safety, of this Plan, also detail work that is undertaken which will play a significant role in providing a safer environment for Nottinghamshire residents.

5.4.3 Traffic violations

Speeding motorists are a major concern in anti-social behaviour in Nottinghamshire. The County Council will continue to work in close partnership with the police to try and ensure effective traffic enforcement. This will primarily be through the Nottinghamshire Road Safety Partnership involving the City and County Councils, police, Highways Agency, Fire & Rescue, Her Majesty's Courts' Service and the Nottinghamshire Primary Care Trust. Enforcement of additional static and moving traffic violations will, however, be considered in due course as part of the County Council's developing civil parking enforcement strategy (which is detailed within Section 4.1.4 – Parking, of this Plan).

5.4.4 Partnership working

The County Council will continue to work in partnership with district councils, parish councils, crime and disorder reduction partnerships, local businesses and the police to improve community safety. Such partnerships will enable CCTV to be installed on the highway and on highway infrastructure where technically possible and required. Temporary CCTV cameras installed by the police on suitably converted lighting columns have been, and will continue to be, considered to target crime 'hotspots'. Most town centres have CCTV installed or proposed and these cover identified routes between key facilities. Networks will be encouraged where possible on routes covered by CCTV.

The County Council will also consider highway infrastructure as part of partnerships to reduce town centre violence and through ongoing town centre management partnerships.

Working in partnership with schools, responses to local concerns (such as 'stranger danger') which may arise from reports from the public, or in the preparation and implementation of school travel plans, will be addressed through the development of the travel plan and any associated road safety education.

6. Improve access to key services, particularly enabling employment and training opportunities

The County Council's approach to improving access to key services, particularly enabling employment and training opportunities will focus on:

1. The delivery of the elements of the accessibility strategy, and
2. The provision of an affordable, reliable, and convenient passenger transport network.

1. The Accessibility Strategy (which is summarised in section 6.1) will involve:

- public transport improvements (as detailed below)
- walking and cycling improvements to key services, particularly employment and training opportunities
- effective land-use planning
- smarter choices measures, particularly travel planning
- working with service providers to help ensure services are delivered effectively
- Local Accessibility Transport Studies, and
- the development and review of action plans.

2. Providing an affordable, reliable, and convenient passenger transport network (which is summarised in section 6.2) will involve:

- maintaining, and where possible, improving the passenger transport networks
- improving the quality of services
- integration of public transport with pedestrians, cyclists and other road users
- improving the quality of public transport infrastructure
- improving ticketing and fares options, including integrated ticketing and concessionary passes
- provision of public transport information and marketing of available services
- improving real, and perceived personal safety and security issues on public transport, and
- enforcement issues, such as those relating to bus lanes and bus stop clearways.

Nottinghamshire's Sustainable Community Strategy 2010-2020 recognises that "*access to services by all is crucial*" and one of its aims is to increase the percentage of people able to access employment by public transport. This clearly illustrates the critical role which accessibility to jobs, learning, affordable food, essential services, health care, and leisure and cultural facilities have on life chances and well being. Matching people more effectively with where they need to get to can help make inclusion in society within reach of the whole community. The goal that opportunities should be available to everyone is a cornerstone of the transport strategy for Nottinghamshire, as well as one of national Government's priorities. Transport strategy is just one element to delivering improved accessibility and therefore must be closely integrated with other plans and strategies designed to improve accessibility, quality of life for local people and to encourage sustainable communities.

The vision for accessibility in Nottinghamshire is for everyone, particularly people from less affluent backgrounds, to be able to reach the opportunities and services that they need. This will be achieved by:

- mainstreaming accessibility considerations into land-use planning and locational decisions in the longer term
- innovative and accessible service delivery in the medium term, and
- travel planning and information provision in the shorter term.

This vision will guide future actions. The County Council will therefore work with stakeholder organisations from a range of sectors to improve accessibility for all, but particularly for those without access to a car, to the following key locations:

- employment opportunities
- training opportunities
- health care
- healthy and affordable food, and essential services, and
- leisure, culture and tourism destinations.

The differing needs of those already working, actively seeking work, or not able to seek work; as well as the differing needs of various user groups with specific access issues will be considered as part of the analysis of access to each of the five themes above. Similarly, issues for disabled and older people will be considered as part of analysis of each of the five themes.

Mapping at countywide and district level (which are included in the LTP3 Evidence Base Report) and discussion with stakeholders have been used to help identify accessibility issues across the county, some of which are detailed below.

Car ownership levels

Car ownership levels are lowest in the urban parts of Nottinghamshire. However, mapping has also identified small isolated areas of low car ownership in rural areas, and it is these areas which may not be able to support a conventional commercial bus service due to low levels of population. There is less distinction between the percentage of rural and urban households consisting of two or more people over 17 but with one car. Thus, although rural areas may have higher levels of car ownership than urban areas, there may be people living in rural areas who still have difficulties accessing key facilities because they cannot access the household car at certain times.

Indices of deprivation

Deprivation levels are highest in the urban parts of north west Nottinghamshire, particularly in Ashfield, Mansfield and Worksop. Mansfield is the most deprived district in Nottinghamshire and is within the 10% most deprived districts in England. Ashfield and Bassetlaw are in the most deprived third of English districts. There are also small isolated pockets of deprivation in rural areas, particularly in the area to the south east of Retford. These areas are at particular risk to changes in the revenue budget used to support socially necessary bus services as bus services in these areas are partially or wholly provided by the supported bus network with no alternatives being provided by commercial bus services.

Social need in Nottinghamshire

A variety of deprivation indicators have been used to compile the overall index of social need, including car ownership levels, income levels, family composition and babies born with a low birthweight. The areas categorised as 'extreme social need' roughly correspond to the most deprived areas in the index of multiple deprivation. The areas experiencing high levels of social need tend to be areas favourable to commercial public transport provision, with high population density, large numbers of people on low incomes, including people without access to a car, students and pensioner households.

Population with a limiting long-term illness

Limiting long-term illness is a key indicator of deprivation. The percentages of the population with a limiting long-term illness, as well as the percentage of households with one or more people with a limiting long-term illness, are higher in Nottinghamshire than both the regional and national averages. Again the highest percentages are found in the west of the county, in Ashfield and Mansfield, as well as in Bassetlaw and Newark & Sherwood.

Demand and supply for public transport

In general, demand for public transport is highest in areas where there are a large number of households without access to a car; in areas experiencing high levels of deprivation; areas where there is a high concentration of population on low incomes; and areas with a high population

density. Demand for public transport in the county in this context is largely matched by the supply of conventional public transport i.e. commercial bus services, especially on weekdays. Demand for public transport is lowest in rural areas where there are high levels of car ownership, in particular large numbers of households with access to two or more cars. Analysis shows significant areas of the county where demand for public transport may not be high enough to justify the provision of commercial services but where there is still a demand for some form of public transport to be provided. The rural areas of Bassetlaw district, particularly around Retford, fall into this category. Given a limited supply of revenue funding, one of the challenges of accessibility planning is how best to serve areas where there may be a demand for public transport but not at the levels which would justify a commercial bus service.

Many of the actions included in the strategies to manage congestion and encourage active travel also play a part in improving accessibility (and vice versa) and therefore these chapters should be read in conjunction with this one.

6.1 Accessibility Strategy

The County Council's approach to improving accessibility across the county is detailed within its Accessibility Strategy which will be reviewed on completion of the LTP3. The main objectives of the Accessibility Strategy are to:

- improve access to major employment sites
- improve access to schools for children aged 16 and under, and to further or higher education and training for students aged 16 and over
- increase the accessibility of healthy and affordable food, and essential services to be found in town and district centres
- improve access to hospitals and general practitioners' surgeries
- increase the accessibility of leisure, culture and tourism destinations
- improve access to all destinations for older people and disabled people
- enable people to access Nottinghamshire County Council's services more easily, to improve consultation on the public transport that the Council provides, and streamline the way in which our transport services are delivered, and
- integrate accessibility considerations into local planning decisions by providing support and mapping, and to maximise the accessibility of planned new developments by assisting with site design where possible.

6.1.1 Public transport improvements

The County Council's Integrated Passenger Transport Strategy sets out how the Council will work to improve accessibility in the county, including the availability of passenger transport services; integration of services and interchange; physical accessibility; ticketing and fares; quality and suitability; information provision; and personal safety. The Strategy is summarised in Section 6.2 – Provision of an affordable, reliable and convenient passenger transport network, of the Chapter.

The County's supported bus network makes an important contribution to general accessibility levels and reducing social exclusion. Services are provided in rural areas where clearly the demand is not as great as that in urban areas and where demand is not high enough to justify the provision of commercial bus services. If County Council funding support for all County supported services was withdrawn (including funding to support a diversion/extension of a commercial route to service a particular community) many communities would face a reduced level of service and some communities would have no services provided at all. In some areas there may be an increase in the distance walked to the nearest bus stop with a desired frequency and in practice, many people would not be able to walk such distances particularly if they are disabled, elderly, sick or infirm, or if they live in hilly areas.

The commercial bus network is even sparser on Sundays when compared to weekdays, with County-supported services forming a vast majority of the service provision in rural areas, with a large number of rural communities having no services at all on Sundays. The complete Sunday

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bus service networks in Retford and Newark, and the majority of the Sunday bus network in Worksop are provided by County-supported services.

The County's budget for securing socially necessary bus services has come under increasing pressure in recent years due to continuing withdrawals of marginal services provided by commercial operators, rising costs and pressures on revenue budgets. To try and prioritise this revenue funding for tendered bus services in a fair and consistent manner, a performance management framework is used. This framework is used to assess all claims on the revenue budget for supported services in relation to existing funding commitments, and to assess the feasibility of any initiatives arising out of the accessibility planning process with regards to the likelihood for funding, given existing commitments.



The County Council use the following variables to prioritise each local bus service contract and non-statutory school transport contract:

- subsidy per passenger
- number of passengers per journey
- journey purpose
- car ownership levels in the communities which the service serves
- availability of alternative public transport provision in the communities which the service serves, and
- index of multiple deprivation levels in the communities which the service serves.

The framework and the variables used will be reviewed periodically to ensure that it continues to meet the requirements of the Council and to consider changes in priorities when necessary.

In addition to supporting conventional public transport, the County Council will also support schemes (such as demand responsive transport, community transport and voluntary or social car schemes) designed to supplement the local bus network.

The County Council also undertake area transport reviews to determine the most effective delivery of all of the different forms of public transport services in an area in order to ensure the most efficient use of resources. The Council will use both the area transport reviews and the performance management framework to ensure services are provided where there is most need and to ensure the services provide value for money.

Further information is detailed within the Integrated Passenger Transport Strategy which is summarised below in Section 6.2 – Provision of an affordable, reliable, and convenient passenger transport network.

6.1.2 Walking and cycling improvements

Walking and cycling have a vital role to play in helping people get to more local facilities and opportunities, and for allowing travel at minimal cost. The County Council's walking and cycling strategies set out how the Council will work to improve accessibility by improving and maintaining the walking and cycling networks. Improvements to cycling and walking links to public transport facilities will also be key in helping to improve an integrated sustainable transport system. Consideration of personal safety issues along these routes (as well as at bus stops, stations, and interchange points) are also important elements of accessibility. The Rights of Way Improvement

Plan will also have a particular role in delivering accessibility to leisure. These strategies are summarised in Chapter 5 – Encouraging sustainable and healthy travel and throughout the LTP3.

6.1.3 Land-use planning

The location of new developments is key to ensuring that they are accessible. The County Council will work with local planning authorities to help ensure that accessibility is a key consideration in spatial planning so that employment and residential development is located in accessible, sustainable locations. The Council will also work to ensure that where necessary, developer contributions are secured to fund accessibility improvements, such as public transport services and facilities (including improvements to existing stations, services and facilities), as well as walking and cycling facilities. Further detail on land-use planning to help improve accessibility is detailed within sections 4.1.3 – Reducing the need to travel; and 5.2.6 – Spatial planning, of this Plan.

6.1.4 Smarter choices

Awareness raising and behavioural change plans, in the form of the Smarter Choices Strategy, will ensure that people have the information they need to make the most appropriate travel choice. Another key element of the Smarter Choices Strategy is the use of technology which will have a significant impact on accessibility through enabling people to access the goods and services they need without having to travel. The Smarter Choices Strategy is summarised in 4.1.5 – Smarter choices, of this Plan.

Travel planning

As well as aiming to change traditional attitudes to travel, a key aim of travel planning is to improve accessibility by providing engineering measures where necessary, making people more aware of the choices of transport available to them, in addition to the routes they are able to take.

Travel plans will therefore play a key role in improving accessibility through the provision of information on journey planning, as well as the associated supporting infrastructure. Travel plans will be developed with a variety of organisations and a range of travel plans will be developed. Further detail on travel plans can be found in this Plan in Section 5.2.2 – Promotion, as well as within the Smarter Choices Strategy.

6.1.5 Partnerships

A partnership approach, involving local and regional organisations will be utilised in the development and delivery of the Accessibility Strategy. In order to achieve the accessibility vision, the County Council established an Accessibility Partnership encompassing the five key destinations (employment; training; health care; healthy and affordable food and essential services; and leisure, culture and tourism destinations). The partnership itself is composed of two main elements, a wider reference group and a steering group. Partners involved include external organisations, regional bodies, transport operators, other County Council departments, and a wide range of local authority transport officers. The existing partnerships will be reviewed, including their roles and responsibilities to ensure that the partnerships are effective tools for delivery.

The County Council is a member of the East Midlands Rural Accessibility Forum and Midlands Service Improvement Group which consider cross-boundary issues and share best practice.

In partnership with neighbouring authorities, cross-boundary issues will be considered in the development of the accessibility strategy and delivery, as destinations may be easier to get to, or people may want to access jobs and services that are outside of the county.

Other local interest groups have an equally important role to play in the development of the Accessibility Strategy as they have expertise of the local area. Similarly, the County Council will work with organisations, such as Job Centre Plus and the Rural Community Action Nottinghamshire to help overcome the difficulties and issues that people experience in accessing particular destinations.

The County Council will continue to work with service delivery agents and organisations to try and influence the way services are offered to the public in order to make them more accessible (for example, opening times, location of services, choice of facilities etc.).

The Council will support other organisations with accessibility advice and analysis, for example to support locational decisions, redevelopment and regeneration proposals, or support the development of strategies.

6.1.6 Local Accessibility Transport Studies

A key element of Local Accessibility Transport Studies (LATS) is the use of accessibility planning techniques in undertaking a transport needs assessment as well as measures to maintain and improve access to local centres (and therefore to jobs and services). LATS will be integrated into the wider needs of the community by including:

- transport needs assessments
- use of accessibility planning techniques
- partnership working with active town centre management groups
- partnership working with district council planning authorities in support of the development of Local Area Action Plans (as required by the local development framework process), and
- economic healthcheck analysis.

This work will be undertaken with the support of relevant local partnerships. Where no partnership exists, a capacity building exercise will be used to establish a community group.

The aims and objectives of LATS are to:

1. **Encourage local empowerment** through consultation and the development of **local transport strategies** to tackle local problems
2. **Enhance and maintain accessibility** to local services within the district centres (including rural centres) and the hinterlands
3. Help **improve people's quality of life** through developing sustainable district centres (including rural centres) that are safe, healthy and attractive places to live, work and visit
4. **Make best use of the existing network** through re-allocating road space to favour public transport, walking and cycling; improving walking, cycling and public transport networks; maintaining satisfactory access by car; and ensuring appropriate car parking facilities and controls
5. **Reduce the need to travel** through promoting 'smarter travel choices' such as public transport; and promoting healthy travel choices such as walking and cycling
6. **Aid regeneration** through helping to promote the role of district centres as shopping and service centres, promoting leisure and tourism and add to attractiveness of each area. Studies will help maintain and enhance the economic well-being of district centres, promoting each as a competitive and attractive place to work, shop and invest in
7. **Ease congestion and improve air quality** by reducing traffic dominance through effective traffic management.

The main features of the LATS process are:

- early consultation with the stakeholders, such as district councils, business and key organisations
- involvement of hard to reach groups such as disabled groups
- a survey of residents to determine transport needs and aspirations
- further consultation on a proposed package of measures, and
- partnership working to assist with the detail of policies and schemes and to guide implementation.

The County Council, in partnership with other stakeholders, will develop a comprehensive programme of measures to deliver the objectives of each LATS within a value for money framework. It is not possible to be prescriptive on the details of the programme of measures for each LATS but it is likely that there will be some common features such as:

- more emphasis on improving access to, and within, towns by public transport
- improved conditions for walking and cycling to work, school, the town centre, and other services/facilities
- better travel information and advice provided both en masse and on a one to one basis
- measures to assist the delivery of goods and ensure the vitality of the area
- advice to businesses, schools and other organisations on the development of travel plans for staff and visitors, and
- effective parking management, including restraint on car parking in town centres where necessary.

The areas in which LATS will be carried out will be identified through the ongoing accessibility planning process, consultation with key stakeholders, links with district council programmes, such as town centre master plans whenever possible, and as part of ongoing consultation with transport groups. Where appropriate, LATS will encompass several smaller settlements as part of a single study, for example when local services are spread amongst different settlements.

Localised congestion in district centres (including rural centres) can be tackled through the programme of LATS. In these locations congestion can greatly inhibit accessibility to local services and can encourage shoppers to patronise out of town superstores rather than local shops. The LATS aim to encourage use of local district centres by improving and promoting sustainable access and reducing delays. Not only will this reduce the need to travel to non-local centres and supermarkets but will also reduce the need to use private motor transport.

6.1.7 Development of action plans

Mapping and analysis will continue to be undertaken to identify accessibility issues and to help focus resources in the areas that need them most. Identified problems will be evaluated to establish a realistic package of interventions for addressing the priority accessibility problems which will be used to develop local accessibility action plans (LAAPs). The LAAPs will be developed with stakeholders and will be monitored and reviewed periodically to ensure that they are still relevant, effective, and offer value for money in accessibility delivery. Key considerations for inclusion in the LAAPs will be:

- that costs associated with an action are proportionate to the outcome and represent value for money
- there are partners or external sources likely to be able to fund an action
- there are synergies with other actions
- the measures within the plan are a good mixture of short, medium, and long-term; and localised and strategic actions
- barriers to deliverability and feasibility of delivery, and
- fit with accessibility and wider LTP3 objectives.

More detail on the County Council's approach to improving accessibility and LAAPs is contained within the County Council's Accessibility Strategy which will be reviewed following the completion of the LTP3.

6.2 Provision of an affordable, reliable and convenient passenger transport network

The County Council recognises the essential role that passenger transport provides in the development of a sustainable transport system. The Council has therefore developed an Integrated Passenger Transport Strategy alongside LTP3; encompassing buses, heavy rail, light rail, park and ride, taxis, surface access to airports, community transport and social car schemes.

The vision for the Integrated Passenger Transport Strategy is to develop an integrated passenger transport system that is:

- available to all
- high quality
- understood by all and easy to use, and
- affordable.

The vision is neither urban nor rural specific but the methods of achieving the vision will differ between urban and rural environments. The County Council will use the appropriate range of infrastructure, operational, technological, resources and information measures that are available to them in delivery of the vision. The measures used to deliver the vision will be dependent upon the issues identified and their ability to deliver value for money outcomes.

There are a number of real and perceived barriers to people using passenger transport that will need to be wholly or partially overcome to deliver the strategy, including:

- availability of passenger transport services in terms of coverage, periods of operation and frequency
- lack of direct routes to destinations, length and speed of journey
- poor image of passenger transport
- personal safety and fear of crime either on route to waiting facilities, at waiting facilities or on board
- relative cost of passenger transport services
- vehicle and driver standards/quality
- unreliable services, and
- lack of information on available services.

6.2.1 Public transport services

Network coverage – buses

Buses are the major provider of the passenger transport network across the county. The most recent national survey of public satisfaction with local bus services in Nottinghamshire identified a satisfaction level of 70% (the highest of the County Council's that responded to the National Highways and Public Transport Survey). More recent local surveys put this figure at 89%. In 2009/10, over 35million passenger bus journeys originated in the county, which is an increase of almost 8% since 2005/06.

In Nottinghamshire, 96% of households are within 800 metres of an hourly or better bus service (0600-1800 Monday to Saturdays). Within the more rural parts of the county, access to an hourly or better bus service is less good, particularly in the villages, hamlets and isolated dwellings.

80% of bus services in the county are operated on a commercial basis. In 2010/11, the County Council spent approximately £7m to provide additional services to supplement the commercial bus network marketed under the 'Notts Bus' banner. These services support and complement the commercial network by providing services in the more rural parts of the county that have limited or no services or by providing services in the early mornings, evenings or weekends. Without this support, the more rural parts of the county would have a reduced level of service with some parts having no services at all.

The County Council will work in partnership with commercial bus operators and other stakeholders to ensure that the bus network adequately serves as many local communities as possible. This will entail the provision of a high quality, frequent bus service for as many hours as possible that enables them to access key services and facilities within the budgetary limitations.

The performance management framework, developed by the County Council, independently assesses the socially necessary bus services that the County Council subsidises so that transparent decisions are made when budget pressures occur, whilst allowing the objective evaluation of proposed new bus services as detailed in this chapter in Section 6.1.1 – Public

transport improvements. The framework and the variables used will be reviewed periodically to ensure that it continues to meet the requirements of the Council and to consider changes in priorities when necessary. Similarly, the area transport reviews to determine the most effective delivery of all of the different forms of public transport services in an area will be undertaken periodically to ensure the most efficient use of the resources available.

The Local Transport Act 2008 introduced changes to enable local authorities to influence the standard of bus services in their local area in order to better meet local transport needs. It introduced three main options for local authorities (in addition to their existing powers to subsidise socially necessary bus services) through:

1. Voluntary partnership agreements – an agreement entered into voluntarily by one or more local transport authority and one or more bus operator and possibly other relevant parties. The agreement can cover any matter that the relevant parties have control over or power to deliver
2. Quality (statutory) partnership agreements – a statutory agreement between one or more local transport authority and one or more bus operator. The local transport authority can stipulate frequencies, timings, minimum fares, age of the fleet etc. as long as the bus operators have no ‘admissible’ objections. Any operator that does not meet the service standards are prevented from using the facilities provided as part of the agreement (for example, bus lanes) and enforcement action can be taken against any bus operator who breaches the terms of the agreement
3. Quality contract schemes – the local transport authority writes contracts concerning the timings, frequencies, fares etc. that bus companies then bid to run.

These alternatives provide the County Council with options to improve the network coverage, timings, fares and frequencies of bus services. Where it is deemed necessary and beneficial the County Council will use these powers to improve the standards of bus services across the county.

Network coverage – heavy rail

The patronage levels at most of the stations located in the county have increased between 2004/05 and 2008/09 with significant growth occurring at Beeston, Newark (both stations), Retford and Worksop.

Until December 2008, a Sunday service was not available at stations on the Robin Hood Line. The launch of a Sunday service provided an hourly service (between Nottingham to Mansfield Woodhouse) with four services (two in the morning and two in the afternoon) travelling onwards to Worksop. This enables people to access work opportunities; leisure destinations including access to the countryside; and to aid regeneration.

The initial Sunday service was funded by the County Council until May 2011. Figures showed that around 90% of passengers on this Sunday service were boarding and alighting south of Mansfield Woodhouse. So from May 2011 until March 2015 the Council will fund a service of eight trains per day between Nottingham and Mansfield Woodhouse. This is expected to cater for 90% of the Sunday patronage at just 37% of the cost of the initial service. The Council is funding this in the expectation that DfT will incorporate it into the next East Midlands franchise which will commence in April 2015.



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Journey time and frequency enhancements on the rail network can improve its attractiveness to passengers and increase the accessibility to key destinations and services. The County Council will therefore seek journey time enhancements from:

- Nottingham to London; Birmingham; Manchester; Leeds; Worksop; Lincoln; Skegness; and Norwich
- Newark to London
- Retford to London; and Sheffield, and
- Worksop to Sheffield.

Service frequency within Nottinghamshire is generally good with trains operating:

- every 30 minutes Nottingham to/from London, Derby and Birmingham, Mansfield, Chesterfield and Sheffield, and
- every 60 minutes Nottingham to/from Cardiff, Manchester/Liverpool, Leeds, Worksop, Skegness and Peterborough/Norwich; Mansfield to/from Worksop; and Retford to/from Sheffield/Worksop and Lincoln.

The County Council will seek frequency enhancements between:

- Nottingham to Newark and Lincoln
- Worksop to Sheffield, and
- Nottingham to Grantham.

And will seek services at more evenly spaced intervals between:

- Newark to London, and
- Retford to London.

Further information on journey time and service improvements is detailed within this Plan in Section 4.4 – Improving connectivity to inter-urban, regional and international networks, primarily by public transport; and within the Integrated Passenger Transport Strategy.

The County Council supports the development of a high speed line through the East Midlands which will provide significantly improved rail journey times from Nottingham to London, Birmingham, Sheffield, Leeds, Newcastle and Scotland. Details of the route and locations of the stations are expected in early 2012, but the timescales for construction outline that the East Midlands section is not expected to open before at least 2026.

Network coverage – light rail

The light rail system, Nottingham Express Transit (NET) line one is 14km long and provides a service between Nottingham City centre and the northern suburban centres of Bulwell and Hucknall, operating seven days a week. There are 23 tram stops along the route, two of which are located in Nottinghamshire (Butler's Hill and Hucknall), providing opportunities for access to employment areas.

Nottingham City Council is promoting plans for a second phase of the NET light rail system – line two to Clifton via Wilford and line three to Chilwell via the Queen's Medical Centre and Beeston. The Government gave its support for the development of these two routes in October 2010 as part of its Comprehensive Spending Review.

The County Council will consider future development of NET in the county where such schemes are feasible; provide good value for money for Nottinghamshire residents; where it does not have a negative impact on the highway network; have limited environmental impacts; where the scheme has public acceptance; and where the County Council can afford its contribution. Such considerations will include schemes that are promoted as part of new developments and are funded by the developer.

Network coverage – park and ride

Park and ride associated with efficient passenger transport have proven successful in attracting car users to passenger transport, for at least part of their journey. Park and ride improves the accessibility of the urban centres and contributes to reducing traffic on congested radial routes.

There is currently only one park and ride site in the county, situated at Hucknall which is a combined heavy rail/light rail site with over 400 car park spaces. Whilst not an official park and ride site, there is also the East Midlands Parkway station which provides car parking and train access to Nottingham off the A453 close to the M1 and A50.

Traditional park and ride sites require high capital and revenue costs. 'Pocket park and ride' provides a cost effective measure of providing park and ride facilities on existing bus corridors without the need for significant investment and with the added benefit of multiple sites.

Feasibility work has been undertaken on potential sites for pocket park and ride in the county. These sites would provide park and ride facilities from existing rural locations (for example, public houses and community centres) that are already served by local bus services. Dedicated spaces would then be provided within the car parks to enable people to park and use the bus to reach their destination.

The first of the pocket park and ride schemes, launched in December 2010, will be a 12 month pilot scheme. This location (and the other two subsequent sites) will be monitored in terms of spaces utilised and additional passenger numbers on local bus services. This information will then be used to determine the success and potential expansion of pocket park and ride to other parts of the county.

Network coverage – taxis

The County Council recognise the role that taxis have in an integrated passenger transport system. Taxis can provide a more cost effective means of access to services, particularly in rural areas where there is limited or no other form of public transport available, and for people with mobility impairments who may not be able to use conventional public transport.

Taxi licensing is a district council function with each district having different licensing policies. The County Council does not have any control over the level of taxi provision, the quality of service, the design and specification of accessible vehicles or the monitoring and enforcement of standards.

There are some areas of the county where there are limited numbers of taxis available, including the availability of accessible taxis. Peak demands are placed on taxis for journeys relating to day care centres and to provide home to school transport on an ad hoc basis. This limits the travel options for people who live in more rural areas and people with mobility impairments.

As part of the County Council's review of the provision of public transport services and its Mobility Strategy, packages of work are being developed or investigated relating to the taxi's role in the passenger transport network. These include, looking into the co-ordination of requests for home to school transport; a pilot project to investigate the provision of low cost demand responsive transport to be operated under contract by taxi; and implementing changes to the tendering of taxi contracts for home to school transport. In addition, it is proposed to establish a countywide Taxi Quality Partnership to create a consistent quality of service.

Taxis will potentially play an increasingly important role in the future. Since the withdrawal of Dial-A-Ride, there has been a greater demand for taxi provision and this may increase as a result of 'Putting People First' personal budgets.

Network coverage – air

There are no commercial airports in Nottinghamshire. There are, however, two airports located just outside the county boundary; East Midlands airport located in Leicestershire and Robin Hood airport Doncaster Sheffield (RHADS) located in South Yorkshire.

East Midlands airport is served by regular bus services to Nottingham, 24 hours a day, seven days a week. Skylink passenger numbers have increased by over 268% since it commenced with over 500,000 passengers in 2009. East Midlands airport is also served by East Midlands Parkway rail station, located north of Radcliffe on Soar which opened in 2009. The station provides journeys to and from Derby, Nottingham, Leicester, Lincoln, Sheffield and London.

RHADS is served by regular bus services from Worksop via Harworth, Langold and Bawtry and Retford via Blyth, Bircotes and Bawtry for up to 21 hours a day Monday to Saturday. There is also a Sunday service. These services are currently supported by the County Council. The introduction of the dedicated service has proved to be very successful with a 296% increase in patronage in the year to April 2008 (more recent data is awaited).

Network coverage – community transport and social car schemes

Community minibuses and social car schemes provide a key transport choice for older people, people with mobility difficulties or those without access to public transport to enable them to access key services and destinations in Nottinghamshire.

There are currently 12 service providers of community minibus schemes in the county and 15 voluntary social car schemes. The County Council currently provides significant revenue funding and support to 10 community minibus schemes and 14 voluntary social car schemes.

All of the voluntary social car schemes, with the exception of Newark & Sherwood provide journeys to enable people to access key services and destinations, other than health related. Newark & Sherwood district have a voluntary social car scheme for health related journeys funded by the Primary Care Trust. A new voluntary social car scheme to enable access to other key services and destinations was launched in January 2011 on a three year basis. The two voluntary social car schemes will be operated concurrently until issues of long-term funding have been agreed.

Changes to the Local Transport Act 2008 extended the provision under section 19 and 22 permits. Section 19 permit changes allow smaller vehicles to be used (under 16 seats, i.e. cars and multi-purpose vehicles) to run services, as long as passengers are carried on the basis of separate fares. Section 22 permit changes remove the restrictions on payment of drivers of community transport bus services.

The County Council will continue to work with community transport providers to help complement the conventional network within available funding levels.

6.2.2 Quality of services

Buses

Targets for punctuality and reliability of registered local bus services are set by the Traffic Commissioner. Through changes to the Local Transport Act 2008, the Traffic Commissioner can now hold local authorities as well as operators to account for their contribution to performance of local bus services. Nottinghamshire County Council in partnership with the main operators, Nottingham City Council and the Confederation of Passenger Transport established a Bus Punctuality Improvement Partnership (BPIP) focusing on improving the reliability and punctuality of services and reducing journey times. The BPIP will be reviewed and either revitalised or incorporated into existing bus quality partnership arrangements.

Through the bus quality partnership arrangements, locations where buses have frequent delays due to highway conditions (such as congestion caused by queue lengths or parked cars) have been identified. The delay hotspots will be investigated to determine the reality of the problem or the length of the delay and will be prioritised accordingly as part of the programme of transport improvements. The bus punctuality improvement partnership and bus quality partnership arrangements will assist in establishing the locations where improvements should be made. These improvements could range from additional bus lanes, junction improvements, and traffic signal phasing or traffic regulation enforcement. The County Council is currently trialling automatic

vehicle location (AVL) technology. This uses GPS technology on board buses to determine their location and as the bus approaches a traffic signal junction it obtains priority.

Heavy rail

The stipulations for reliability of rail services are set out in DfT's White Paper 'Delivering a Sustainable Railway', July 2007. Rail reliability is currently measured by the 'public performance measure' (PPM). The PPM is not met if a scheduled train service is cancelled or arrives at its final destination more than 5 minutes late (or 10 minutes for inter-urban services). The target set for punctuality of rail services is that 92.6% of trains should operate punctually by 2014.

Punctuality of train services in Nottinghamshire has steadily improved over recent years, and reliability on most routes meets or exceeds the national standard, except the East Coast Main Line.

The County Council will continue to liaise closely with rail industry bodies, in particular Network Rail and the train operating companies, to secure the best possible operational performance, and to bring about whatever ongoing improvements may be achievable.

Light rail

Under the PFI contract that the City and County Councils have with the operator, there are 23 performance measures with targets that need to be met by the tram operator on a monthly basis. If these targets are not met, deductions are made from the pre-agreed availability payments that are made to the operator. Six of the performance measures relate to the operation of the tram service with the remaining 17 relating to engineering/customer relations measures. To reflect the greater importance given to operations measures, these are more heavily weighted so that together they are worth 85% of the overall payment.

Driver standards

The bus driver Certificate of Professional Competence (Driver CPC) came into effect on 10 September 2008 for PCV drivers. Professional bus, coach and minibus drivers (with 9 or more passenger seats) need to hold a Driver CPC in addition to their vocational licence. The training undertaken is relevant to the type of work undertaken, but could cover issues such as eco-safe and fuel efficient driving, defensive driving, health and safety, first aid and driver's hours regulations.

In addition, the majority of bus operators will provide training on customer care, health and safety, route training and disability awareness as part of their induction process for new drivers. The County Council will work in partnership with bus operators to develop the Driver CPC and ensure that all drivers undertake the required periodic training. All County Council employees that work in County Council operated bus stations are required to have an NVQ level 2 in customer care.

It can take between 9 and 18 months to undertake formal training to become a train driver, involving a mixture of classroom based and practical learning. Training covers a number of components including:

- important features of the railway, including signalling systems, points and level crossings
- procedures for splitting and forming trains
- standard rail rules and regulations
- fault finding, and
- traction types and how engines work.

Drivers practice in a simulator before starting to drive trains under supervision and may work towards NVQ Level 2 in rail transport operations.

In comparison, train conductors undertake approximately six weeks training through a mixture of classroom based training and supervised practical on-train experience and can work towards an NVQ at level 2 in rail transport operations (passenger services). Training covers a number of topics including:

- the operator's rules and regulations
- route familiarisation
- health and safety
- procedures for issuing tickets, and
- customer service skills.

Tram driver induction training can last between 6-12 weeks with the tram operator deciding on the content. Tram drivers may study for NVQs at levels 2 and 3 in road passenger transport operations and rail transport operations.

Taxi licensing is a function of district and borough councils with each district/borough having different licensing policies. The elements of taxi licensing relating to driver standards may include:

- the driving licence (length licence held, DVLA checks)
- Criminal Records Bureau checks
- driving ability, and
- topography test.

To establish a consistent quality of service, it is proposed that a countywide Taxi Quality Partnership be set up which should assist in establishing a consistent driver standard.

Community transport and social car scheme MiDAS (Minibus Driver Awareness Scheme) is a non-vocational driver training standard managed by the Community Transport Association. The training provides both on-road driving assessment and classroom based training on a range of relevant issues, which is vital to establish the quality and safety of community transport schemes and voluntary social car schemes. It is proposed to make it a requirement to achieve the appropriate MiDAS standard as part of the permit to drive scheme under Section 19 of the Local Transport Act 2008. In addition, it is proposed to introduce a voluntary identity badge and vehicle visor display to denote approved driver status within these sectors. The County Council support such proposals.

6.2.3 Integration of public transport with pedestrians, cyclists and other road users

It is important that integration with, and between, different passenger transport modes is developed to ensure that users can integrate as easily as possible and includes timings of services, guaranteed connections, quality of services, ticketing options, interchange facilities and ensuring new developments are located where there is a good network of passenger transport available.

The accessibility planning process has identified walking routes to bus stops and stations as a barrier to accessing key services (in terms of suitable walking surfaces, lighting and anti-social behaviour). These issues are enhanced at night and could be a greater barrier for more vulnerable users (women, older people, etc.).

The County Council will ensure that wherever possible the walking routes to bus stops are located away from secluded areas and are well-lit within the budgetary limitations. The Council will also look to improve routes to stations and stops as detailed in Section 5.2.1 – Provision of facilities, of this Plan.

A cycle/bus interchange project has been completed along the Beeston corridor. The project involves the installation of cycle parking at bus stops to enable people to interchange between cycling and public transport. The usage of the cycle parking along with patronage levels on the local bus services will be monitored. Following completion of the project, the County Council will investigate the feasibility, suitability and value for money of providing cycle parking at additional bus stops in the county.

The Council will seek to enhance access to the rail network by all modes:

- **on foot** – nationally 47% of rail passengers walk to the station (figures are not available for individual counties such as Nottinghamshire). The Council will seek to enhance pedestrian access to stations, establishing direct, attractive and safe routes where possible
- **by car** – nationally 18% of rail passengers drive or are driven to the station. It is primarily the train operating company's responsibility to provide car parking. The Council will therefore work with the train operating companies and encourage them to provide adequate parking, including addressing the problems that currently exist at Newark, Beeston and Collingham
- **by bus** – nationally 14% of rail passengers use a bus to access the station. The Council will work to provide enhanced bus/rail interchange, particularly at Mansfield through the planned new interchange, as well as at Newark and Beeston
- **by cycle** – nationally 2% of rail passengers cycle to the station, though the percentage is higher in some locations in the county, particularly Newark, Retford and Beeston. The Council will seek to improve cycle access to stations, and cycle facilities at stations, and
- **by NET** – nationally 20% of rail passengers use other modes (e.g. the Tube in London, taxis and trams) to access the station. NET already provides good access to Nottingham station, and if the extensions to NET go ahead it will extend this access to other parts of the county.

6.2.4 Infrastructure

Quality of buses

The reliability and punctuality, speed of the journey, quality of the vehicle (low floor, age of fleet, fuel efficiency) and the conduct and attitude of the drivers are all important aspects of the quality of the service provided to customers. The Public Service Vehicle Accessibility Regulations (2000) outline the requirement that all new buses up to 7.5 tonnes had to be fully accessible from 1 January 2005; all existing buses weighing up to 7.5 tonnes must be fully accessible from 1 January 2015; and all single and double deck buses over 7.5 tonnes must be fully accessible by 1 January 2016 and 1 January 2017 respectively.

The County Council undertakes annual surveys of operators to determine the age, accessibility of fleet and fuel efficiency of vehicles. Of the operators that responded to the latest survey (2009/10), 60.3% of respondents have Euro 3 engines or better; 76.4% are under 10 years old (of which 46.3% are between 5 and 10 years old); and a total of 87.3% are accessible to disabled persons. Nottinghamshire County Council's Transport and Travel Services has its own fleet of over 180 vehicles (passenger and light commercial vehicles) of which 81.7% have Euro 3 engines or better, the average age is 4.5 years and 52.2% are accessible or meet Disability Discrimination Act (DDA) compliance.

The County Council will work to improve their own internal fleet and work with commercial bus operators to ensure vehicles are fully accessible for all sectors of the community and comply with the requirements of the Disability Discrimination Act; to reduce the age of vehicles and improve their fuel efficiency; and investigate alternative fuel and electric vehicles.

Quality of heavy rail

Most railway stations in the UK are old and many have limited access for disabled travellers, especially wheelchair users. It is the responsibility of train operating companies and Network Rail to ensure that trains and stations are accessible and comply with the relevant legislation.

The 'Railways for All' strategy (2006) – the accessibility strategy for Great Britain's railways – sets out the roles that all front-line rail organisations will play in the delivery of the strategy and includes improving access to and within the stations and increasing the number of accessible trains. The strategy sets out Government's desire to achieve a step change in the accessibility of the railways and has allocated 'Access for All' funding to improve access to train stations.

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The Rail Vehicle Accessibility Regulations outlines the requirement that all trains must comply with a minimum standard of accessibility by 1 January 2020; and all new train carriages have had to comply with the Regulations since 1 January 1999.

The majority of trains and train stations in Nottinghamshire are accessible. In 2008, lifts were installed at Newark Northgate station to address the accessibility issues. Other train stations in the county that have access issues include Kirkby in Ashfield and Netherfield stations that both have stepped access to the platforms; as well as Beeston and Bingham stations where access between the two platforms can be difficult, especially for the return journeys.

The County Council will work in partnership with rail industry partners and urge them to improve the shortcomings at Beeston, Bingham, Kirkby in Ashfield, and Netherfield stations.

Network Rail, within its 'Network Route Utilisation Strategy' identified the Midland Mainline from London to Nottingham and Sheffield as having the strongest business case for electrification. Further detail on this is included in this Plan in Section 7.2.3 – Encouraging a transfer to lower carbon vehicles, but the County Council supports the electrification of the Midland Mainline and will lobby central Government for this to happen at the earliest opportunity.

Quality of light rail

NET line one is the first UK tram system to have commenced service as fully compliant with the Disability Discrimination Act. All trams are low floor throughout; at-stop infrastructure provides level access boarding; and there are dedicated wheelchair spaces on board. Each tram has four sets of double doors with white strips for enhanced visibility and warning sounds when the doors are opening and closing.

Stations

There are currently six main bus stations within the county:

- Retford
- Sutton in Ashfield
- Mansfield
- Beeston
- Newark on Trent, and
- Worksop.

Of these bus stations, Retford was rebuilt in 2007 and Sutton in Ashfield was upgraded in 2009. The remaining four bus stations are planned for rebuild or refurbishment during the LTP3 period.



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The Department for Transport has recently approved funding for Mansfield Public Transport Interchange and construction on the scheme will start during 2011/12. Further detail on this scheme is included within Section 4.5.1 – Mansfield Public Transport Interchange, of the Implementation Plan 2011/12-2014/15.

Beeston bus station is at the heart of the town and, over recent years, LTP funds have been spent upgrading the site, including new kerbing and an electronic timetable screen. The further redevelopment of the bus station will be considered alongside proposals to extend NET and planned developments in the area.

A new bus station for Newark will be built as part of the Potterdyke development and it is planned to be open for Spring 2012.

The County Council remain committed to providing improved bus facilities in Worksop. The Council will therefore carry out feasibility works to develop new facilities in an appropriate location which will provide good access to the town's facilities and integration with other transport modes. Opportunities for funding any improvements will also be investigated. Any new station will be located within the urban environment but its impacts on the environmental and habitats will be considered as part of feasibility works and a Habitats Regulations Assessment will be undertaken at the implementation stage if required.

There are 26 train stations in Nottinghamshire which are served by a variety of local, regional and longer distance services. The coverage of the rail network is generally good, but the County Council would, however, support the re-opening of appropriate train stations to enhance the range of destinations available for travel to/from Nottinghamshire stations.

Although located in the City, Nottingham train station is a significant station for parts of the county, particularly Broxtowe, Gedling, and Rushcliffe, but also, via local rail services, from Ashfield and Mansfield. The station also serves as a hub for the tram system and for local services to interchange with services to further afield. In October 2010, final approval was received for the £60m upgrade of Nottingham station over the next four years, which will transform all aspects of passenger facilities.

Passenger transport interchanges are provided at the two main airports, located just outside the county boundary. At East Midlands airport, a new passenger interchange building, next to the arrivals building was opened in 2007. The East Midlands airport Master Plan includes a commitment to the development of a full public transport interchange during the Master Plan period (2006-2030). There are six bus bays located outside Robin Hood airport's terminal building, of which three have bus shelters. The Robin Hood airport Master Plan includes a commitment to develop plans and work with operators to promote Parrot's Corner as a transport interchange during the Master Plan period (2008-2030).

The County Council will work with the airports to help any new stations meet the service requirements.

Details concerning the development of park and ride in the county can be found in Section – 4.1.4 Parking; and within section 6.2.1 – Public Transport Services, of this Plan.

At stop infrastructure

Bus stop infrastructure plays an important part in making it easier for people with disabilities or mobility difficulties, wheelchair users and people with young children in pushchairs to use buses. This includes raised kerbs, hard standing boarding areas, as well as audio and visual information at bus stops.

Nottinghamshire has taken ownership of all bus stop infrastructure and is committed to providing new poles, flags and timetable cases at all bus stops in the county. At the end of 2009/10, 80% of bus stops in the county (4,428) had flags, poles and timetable information. In addition, there are

1,467 bus stop shelters in the county. The County Council will provide bus shelters at locations that meet the bus stop policy requirements and as funding permits.

People with visual and/or hearing impairments may also benefit from the use of audio and visual information (as well as Braille) at bus stops so that they know where to catch the bus. This could be through 'real-time' information, which provides passengers with information on when the next services will reach a particular stop, either in an electronic display at the stop, or via the internet, mobile phone or text.

Real-time information has been installed at various sites across the county including at bus stops, bus stations and employment sites. There are plans to install further real-time information subject to available funding.

Adjacent local authorities have implemented real-time bus infrastructure, of which three are not directly compatible with its neighbours. In the past this was a particularly difficult challenge to overcome but with the formulation of national standards for 'server to server' interface, these challenges can be overcome if funding permits.

Traditionally information screens at train stations have shown the scheduled time of trains. Passenger surveys repeatedly report that improved information is of paramount importance, especially at times of delay. To address this, real-time information screens are being installed at Robin Hood line stations by the end of 2011.

The County Council will continue to work with bus and rail operators to provide real-time information at key bus stops, train stations and within public transport interchanges. The Council will also continue to work with neighbouring authorities to review and determine the most effective model to provide real-time information to Nottinghamshire residents.

The County Council in the future will seek to implement improvements to bus stop infrastructure within the available budget to add value to bus companies investment and complement the tendered bus network.

6.2.5 Ticketing and fares

Pricing policies competitive with car parking pricing

The County Council understand that passenger transport fares need to be competitive with the cost of parking in town and district centres, particularly for families and groups of people to help reduce congestion.

The County Council has no direct control over the cost of fares provided by commercial passenger transport operators or the level of, and cost of, parking provision in town and district centres provided either on a private basis, by district councils or the train operating companies at train stations. The County Council will, however, work with passenger transport operators on the cost and range of tickets available, including smartcard technology and developing promotions to encourage people to use passenger transport; and if required use its powers under the Transport Act 2008 as outlined in Section 6.2.1 – Network coverage, of this chapter. The County Council will also work with the district councils and the train operating companies on the level and cost of car parking provision in the town and district centres and train stations.

Affordability

The accessibility planning process has identified that fare levels are a significant constraint for people to access key services, especially people on lower incomes. In 2009 the DfT developed a Smart and Integrated Ticketing Strategy. The aims of this strategy are repeated within the current Government's transport White Paper, *Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen*. These documents set out the opportunity for integrated smart ticketing over the next four years and aim to increase the spread of smart and integrated ticketing schemes to make ticketing more easily understandable for passengers and to encourage modal shift.

Bus and tram operators have a number of fare deals to encourage people to use their services. This can be in the form of day, weekly, monthly, annual, trip and group tickets, with some being available across passenger transport modes. These are normally available for unlimited travel within a defined area. A number of passenger transport operators also offer smartcard type technology.

Rail operators offer a range of annual railcards for young people (16-25), older people (over 60), group (family and friends, up to four adults and four children, one child must travel) and disabled. These provide a third off the cost of rail travel.

Taxi fares are set by the relevant licensing authority (district councils) for hackney carriages and are set by the taxi operator for private hire vehicles.

The County Council has no direct control over the costs of fares or ticketing options offered by commercial passenger transport operators but it will work with passenger transport operators to ensure that the ticketing schemes offered are affordable, easy to understand and use.

Integrated ticketing

Integrated ticketing can make it easier for people to use public transport by allowing them to use any form of public transport with one ticket within a defined area.

'Kangaroo' is an integrated transport ticket that allows one day's unlimited travel for people on buses, trams and trains within the city of Nottingham and surrounding area (Bestwood, Bulwell, Arnold, Carlton, Netherfield, West Bridgford, Wilford, Clifton, Beeston, Chilwell).

'Plus Bus' is a ticket that can be purchased as an addition to a train ticket and provides unlimited bus travel around the origin and/or destination town of the rail journey (within a defined boundary) including travel to and from the train station. Mansfield, Newark, Nottingham, Retford and Worksop all currently operate plus bus schemes.

The County Council will work in partnership with passenger transport operators and other stakeholders to investigate the potential for multi-operator and multi-modal integrated ticketing options across the whole county in addition to the potential of developing plus bus schemes at other key locations. The Council recognises that journeys often cross administrative boundaries and will therefore also work with neighbouring authorities to investigate the implementation of a cross-boundary integrated ticketing scheme to provide a seamless service to the public.

Concessionary passes

The national concessionary pass allows people over 60 and disabled people to enjoy free off-peak travel on local buses anywhere in England. In Nottinghamshire, approximately 82% of those eligible for a concessionary pass due to age have taken it up. This equates to 165,000 passes. The national free entitlement scheme operates between 9.30 and 23.00 Monday to Friday and all day at weekends and on public holidays. Additional benefits above those which are provided by the national scheme can be offered by local transport authorities and such additional benefits will be reviewed by the Council periodically.

From 1 April 2011, the County Council will become responsible for administering the provision of concessionary travel benefits for the elderly and disabled.

In July 2010, the County Council Cabinet approved a discretionary free travel scheme for pupils in year 7 attending preferred maintained and academy secondary and specialist schools in Nottinghamshire and living over three miles from their preferred school. The scheme will commence in September 2011 and consideration will be given to a future expansion for pupils in years 8-11.

6.2.6 Information/marketing

Services

Passengers can be provided with all the necessary information needed to undertake journeys through a variety of media, including:

- printed information, such as printed timetables, area guides, roadside information, bus station information, on board information and publicity
- electronic information, such as journey planners, enquiry terminals, real-time information and e-marketing, and
- face-to-face and telephone information.

The frequency of the services provided can negate the need for more detailed information if they are of high frequency (every 10 minutes or less) as passengers will not have to wait long periods for a service at a stop, station or interchange point. There is still a need, however, for some information to be available to inform people of frequency changes in the evenings and at weekends.

The individual passenger transport operators are responsible for producing their own service timetable leaflets either as individual timetable leaflets or timetable information at stops, stations or interchange points. The County Council has taken responsibility for all bus stop infrastructure and at the end of 2009/10, 80% of bus stops in the county had timetable information displays that provide information on the frequency of services within each area which are updated on a twice-yearly basis. The County Council also produce 12 area guides will be reviewed for their effectiveness.

Train operating companies have responsibility for ensuring that there is timetable information at train stations and individual timetable leaflets at main train stations.

Electronic information in terms of journey planning is provided through Transport Direct which provides information on public transport and car journeys around Britain, but does not provide public transport timetable information. Traveline, the regional journey planner, provides information on public transport options and public transport timetable information, including real-time information by interfacing with local real-time systems.

Traveline is split in to 11 regions with Nottinghamshire forming part of the East Midlands region. Recently, work has been undertaken to integrate East Midlands, East Anglia, South East and London regions to enable journey planning by bus and train between the three regions. The South West region is currently involved in a pilot on behalf of Traveline nationally to identify whether the 11 regional datasets can be incorporated into one dataset. In the future, consideration will be given to utilising air travel information within the UK in the regional or national Traveline datasets. The County Council published the 'Transport Accessible to All' (TATA) document which guides people who, for reasons of disability or isolation, need to use accessible transport to reach essential services. The guide provides information on a number of services including social car schemes, community minibus schemes, flexible bus schemes, transport to hospital, accessible taxis, shopmobility schemes and rail travel. The guide is in paper format and due to the ever changing nature of these transport services, goes out of date quickly. It is therefore proposed that a web based version of the TATA guide be provided.

The County Council has developed a marketing initiative, 'Notts Bus' for specific local supported bus services, focusing particularly on those services which have the greatest capacity to grow and increase their patronage. The individual passenger transport operators are responsible for marketing of their own services and branding to encourage people to use their services and make it easier to understand.

The County Council will continue to review its mechanisms for public transport information provision to ensure its effectiveness in delivering the LTP3 objectives; and in the light of new opportunities and/or technology. The County Council will consider in partnership with passenger

transport operators and other stakeholders the development of marketing campaigns across the whole county to promote passenger transport.

6.2.7 Personal safety and security

Perceptions about anti-social and criminal behaviour can lead to people feeling that buses are unsafe. Whilst actual crime levels do not support this perception, it is necessary to try and alleviate the fear through the use of CCTV and lighting to improve the route to, and condition of, the stop, station or interchange point.

The Council will continue to work with operators to improve safety (real and perceived) on the public transport network. Measures to improve safety will be considered, including promotional campaigns; CCTV cameras on buses, trams and stops; more lighting at bus stops; bus stop/station security; measures to reduce the time people wait for public transport such as timetables via mobile phones; and night public transport leaflets distributed throughout the area.

The policy for the provision of bus stops and bus shelters in Nottinghamshire states that lighting will be provided where connections are available and budgets allow. The County Council will continue to provide CCTV and lighting at bus stops where the budget allows; and at major bus stations and interchange points as part of the rebuild and refurbishment programme.

The County Council will investigate in partnership with passenger transport operators and other stakeholders the development of public awareness initiatives across the county.

6.2.8 Enforcement issues

Vehicles, other than buses can cause delays to the bus network by contravening bus lanes, usually to gain an advantage over queuing traffic. There are currently a total of 5.9km of bus lanes in the county. Persistent parking adjacent to, or within, bus stops can also cause problems for both bus operators and passengers, as it means buses cannot pull up to the kerb to provide level boarding for users, especially people with disabilities, mobility difficulties and people with young children in pushchairs. Bus stop clearways provide a means of deterring car drivers from parking at or near a bus stop. The policy for the provision of bus stops and shelters in Nottinghamshire outlines that bus stop clearways will be introduced at all bus stops in the county. Consequently there is a prioritised programme for delivery of these clearways which will be implemented as allocated budgets permit.

Civil parking enforcement was introduced in the county in 2008. This gave the County Council powers to enforce parking violations on its roads, including at bus stop clearways and persistent parking violations at bus stop clearways will therefore be enforced. Civil parking enforcement powers also give the County Council the authority to undertake bus lane enforcement, including at 'bus gates'. The Council will consider the introduction and use of these powers as required based on individual scheme circumstances.

7. Minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions

The County Council's approach to minimising the impacts of transport on people's lives, maximising opportunities to improve the environment and helping tackle carbon emissions will focus on:

1. Adapting to climate change
2. CO₂ emissions
3. Congestion management
4. Air quality
5. Noise, and
6. Biodiversity, the natural, historic and physical environment.

1. The County Council's adaptation responses (including those relating to heritage assets) to the predicted impacts of climate change are detailed in section 7.1.
2. Addressing CO₂ emissions from ground transport (which is detailed in section 7.2) will involve:
 - effective spatial planning
 - supporting change to new vehicle technologies and lower carbon fuels
 - promoting lower carbon transport choices
 - encouraging a transfer to lower carbon vehicles, and
 - education on lower carbon transport issues.
3. Whilst congestion management will play a major role in minimising the impacts of transport on people's lives, maximising opportunities to improve the environment and helping tackle carbon emissions, the measures to be undertaken to manage congestion is detailed within Section 4.1 – Making best use of our existing transport networks.
4. Addressing transport related air quality issues, particularly within air quality management areas (which is detailed in section 7.4) will involve working with district councils to:
 - assess and monitor air quality, and
 - develop action plans to improve air quality where necessary.
5. Addressing the impacts of noise from transport activities (which is detailed in section 7.5) will involve:
 - implementation of the Nottingham Agglomeration Noise Action Plan
 - promotion of quieter modes of transport
 - highway improvements to address noise issues when appropriate
 - helping to manage commercial traffic when possible, and
 - the effective co-ordination of street works.
6. Maximising opportunities from transport to improve biodiversity, the natural, historic and physical environment (which is detailed in sections 7.6-7.8) will involve:
 - providing high quality spaces for people which are not dominated by motor vehicles through guidance on the provision for new developments; local centre improvements; the management and provision of street furniture and signage; and links to regeneration proposals
 - enhancing the historic urban cores, conservation areas and the public realm whenever possible
 - considering the impacts of transport improvements on heritage assets
 - the protection of sites, species and habitats, and
 - managing the impacts of transport projects and highway management on biodiversity, and using them to enhance biodiversity whenever possible.

The effects of transport on the environment, landscape and biodiversity, including wildlife, is assessed within the Strategic Environmental Assessment (SEA), which accompanies this Plan and was developed alongside the LTP3. The SEA can be found at www.nottinghamshire.gov.uk/ltp3. This chapter looks specifically at the strategy to minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

7.1 Adapting to climate change

Existing highways construction and maintenance policies and standards are typically based on historical climate data but we now need to look to future predictions. In order for the highway network to be resilient in the face of a changing climate, the County Council needs to take action to adapt its policies and standards to help reduce CO₂ emissions from its activities, and to minimise the disruption and costs caused by climate change in the future. It is predicted that the impacts of climate change in the UK will be:

- increased annual average temperatures
- longer, hotter, drier summers
- milder, wetter winters
- soils will become drier on average
- decreased snowfall
- more frequent heavy and extreme rainfall, and
- potentially more extreme winds and storms.

These changes in climate could have significant impacts on the construction and maintenance of highways including roads and footways. For example:

- drier and hotter summers will lead to more incidences of pavement deterioration and subsidence
- wetter winters and more frequent heavy rainfall will result in more frequent incidences of flooding, particularly in low lying areas and floodplains, and a higher risk of landslides. This will have an impact on pavement performance and resilience, drainage capacity and condition, utilities and highways structures (such as bridges, culverts, road signs and street lighting)
- predictions of increased storms and extreme winds may have safety impacts and will have the potential to cause damage to structures and trees on or close to the highway
- reduced snowfall will reduce the need for gritting and snow and ice removal but will not necessarily reduce the need for the winter maintenance capacities, and
- changes to the growing season as a result of warmer year round temperatures will mean that plants will grow faster and for longer periods. New plant species may also start to thrive. This will lead to the need for more intensive maintenance programmes to prevent vegetation intrusion on the highway and 'sight line' impairments due to the increased growth of the soft estate (such as verges). Increased vegetation may also pose problems for drainage through gully blockages and erosion.

By acting now and identifying the work that needs to be carried out (including monitoring, maintenance, strengthening, reconstruction etc.), the network will be more resilient to the effects of climate change. This will help reduce the cost and inconvenience caused by any necessary emergency or reactive work required in the future. By working together to align and co-ordinate maintenance activities and changes to existing policies and standards, the 3CAP authorities of Derbyshire, Leicestershire and Nottinghamshire county councils will be able to plan for and adapt to climate change more effectively than if they work individually. The County Council, as part of the 3 Counties Alliance Partnership (3CAP) with Derbyshire and Leicestershire county councils, has therefore undertaken an assessment of the likely effects of climate change on policies and standards to:

- identify the potential impacts of climate change on the construction and maintenance of highways
- identify existing and potential methods of adaptation that can be implemented to minimise the effect of climate change on the highway network
- develop a comprehensive, local risk-based assessment of the highway network's vulnerabilities to weather and climate, both now and in the future, and to identify possible adaptation responses in order to achieve Level 1 of National Indicator (NI) 188: Planning to adapt to climate change
- identify the most effective adaptation responses based on a risk and probability assessment (i.e. a 'multi-criteria analysis' methodology), in order to achieve Level 2 of NI188, and
- develop an adaptation action plan, thereby achieving Level 3 of NI188.

The resulting 'The Effect of Climate Change on 3CAP's Highway Network Policies and Standards' report (which is summarised below) forms the County Council's strategy to adapt to climate change's impacts.

A risk and probability assessment of the effects of climate change on the highway network identified the ten effects posing the biggest risks from climate change to the highway network:

1. Pavement failure from prolonged high temperatures
2. Increased length of the growing season leading to prolonged and/or more rapid growth of the soft estate
3. Lack of capacity in the drainage system and flooding of the network
4. Surface damage to structures from hotter and drier summers
5. Scour to structures from more intense rainfall
6. Damage to pavement surface layers from more intense rainfall
7. Subsidence and heave on the highway from more intense rainfall
8. Scour and damage to structures as a result of stronger winds and more storms
9. Severe damage to lightweight structures from stronger winds and more storms
10. Less disruption by snow and ice due to warmer winters.

The risk and probability assessment was used to rank those climate change risks that are expected to have the most impact on the highway network and its associated policies and standards. Potential adaptation responses to the climate change risks were identified and a multi-criteria analysis (including impacts of the response; initial and whole-life costs; feasibility; acceptability; and sustainability) of each potential response was undertaken to help prioritise them. By applying a structured evaluation technique the responses have been assessed against relevant criteria and scored according to their overall likely effectiveness and probability of success. This has also allowed for the most realistic responses to be identified in terms of resource demand, public and government acceptance, scale, risk, impact, sustainability and practicality.

The County Council's strategy for adapting to climate change will involve undertaking a range of activities (or responses) to ensure that bridges and other structures; drainage; grass verges; highway network materials; carriageway surfacing; trees and hedges; and winter maintenance activities can all withstand the effects of climate change.

In order to effectively and efficiently adapt to the effects of climate change, the County Council needs to identify the level at which different parts of their network are vulnerable and most in need of attention. Consequently, many of the responses identified as potentially being the most effective involve undertaking a risk assessment and/or asset review. Undertaking this work will help ensure that the County Council has a clear indication of the location, condition and vulnerabilities of its assets (including structures, roads, footways, or the surrounding soft estate). A more targeted programme of action and improvement can then be developed.

The adaptation responses identified as the most realistic and effective at adapting the highway network to the effects of climate change are detailed in table 26 below. These responses will be reviewed periodically to ensure that they consider the differing priorities of the highway; are still the

most effective responses; to consider the findings of work undertaken (such as risk assessments or asset reviews); to consider changes in predictions and projections; and to consider new technologies and working practices. It is also important to note that the extent to which the adaptation responses are delivered will be determined by available future funding levels and will be affected by factors such as their potential impact on heritage, biodiversity and other linked environmental issues. Table 26 also includes the heritage impacts that will need to be considered.

In line with the requirements of NI 188 levels 1 and 2, the adaption responses will be used to start work towards adapting policies, standards, operations and strategies to the effects of climate change. The County Council has developed an adaptation action plan (which is detailed within 'The Effect of Climate Change on 3CAP's Highway Network Policies and Standards' report) as required to achieve NI188 level 3. The adaptation plan will be implemented, monitored and reviewed to ensure the progress with each measure as required to achieve NI 188 level 4.

Table 26: Climate change adaptation responses

Bridges and other structures	Drainage	Grass verges	Highway network materials	Carriageway surfacing	Tree and hedge maintenance	Winter maintenance activities	Heritage impacts
Increase the number and frequency of maintenance works carried out to increase the BCI average and critical values	Improve the knowledge of drainage assets	Increase the frequency of grass cutting where required for highway safety	Carry out an inspection and inventory to assess which parts of the network are most at risk from excessive heat	Undertake a risk assessment to identify the most vulnerable areas of the network and develop priority actions to be carried out	Develop a tree management strategy for implementation across the county council (to include all trees, not just those on or near the highway)	Carry out risk assessment surveys of the region to establish which routes are at highest risk from ice formation	Consider, assess and mitigate any negative impact of increased maintenance on designated and undesignated heritage
Carry out a risk assessment to identify which structures are most at risk from the effects of climate change	Undertake a risk assessment to determine vulnerable areas and establish a prioritised scheme for maintenance	Where required for safety reasons, consider treating grass with growth retardant to produce slower growing grass	Specification: Consider using high modulus base/binder materials and rut resistant surface course material	Review local experience of the durability of surface dressing and consider whether other measures may be more appropriate	Review the species choice for new trees to ensure the most appropriate species is selected, and taking into account biodiversity and landscape considerations	Re-assess and re-classify priority routes based on future climate change predictions	Consider and plan for impacts on designated heritage that will result from climate change and our response to it, e.g. increased gritting leading to increased salt damage to historic walls
Carry out flood studies with the help of other agencies and organisations	Change to an ad hoc gully emptying strategy based on demand and need	Develop a grass cutting strategy that balances the need to maintain highway safety with the nature conservation value of verges	Develop a long-term programme to locate and assess the adequacy and condition of the current drainage provision, and ensure it is well maintained	Implement measures to reduce the risk of 'root invasion' and vegetation ingress on the highway	Undertake a risk assessment to determine vulnerable trees and establish a prioritised scheme for maintenance		Be aware of archaeological implications of action to improve drainage. Be sensitive to designated heritage structures when designing solutions
Ensure that all strengthening and repair work that is outstanding for failed or below standard bridges is carried out	Invest in asset management and location reviews	Ensure that new verges are developed on low nutrient substrate and sown with fine, slow-growing seed mixes to reduce future management requirements	Use performance related specifications which promote properties which resist the adverse effects of climate change	Increase the frequency of carriageway surface inspections	Improve the knowledge of existing tree stock		Ensure that no work to heritage structures or that may affect archaeology is undertaken before considering impacts

Bridges and other structures	Drainage	Grass verges	Highway network materials	Carriageway surfacing	Tree and hedge maintenance	Winter maintenance activities	Heritage impacts
Ensure that all data (new and historical) is transferred into a single system to make assessments of maintenance and repair priorities and needs more effective	Carry out drainage condition surveys		Specification: Appropriate planting – tree types and locations				Ensure that alert and constraints mapping of heritage issues is included in data systems and referred to in scheme development
Evaluate the Depreciated Replacement Cost (DRC) for all highway structures to allow for an assessment of the impact of spending to be made	Increase the frequency of highway network drainage inspections		Avoid creating wind-throw risks when undertaking works such as copse or tree line thinning, removing hedgerows or earthworks				
			Review existing materials specifications – general				

Source: Nottinghamshire County Council

7.2 CO₂ emissions

It is widely accepted that climate change is already happening, that there is a need to act to avoid its worst impacts, and that decarbonising transport is an essential part of the solution. Moving to a low carbon transport system will not be cost free, but it should be viewed as ‘investing to save’ as not acting now will result in far greater costs in the future. Whilst it will be a major change, moving to a low carbon economy and transport system also presents opportunities not just for climate change but for the economy, improved health, and the wider environment. It will help people enjoy a better quality of life without compromising the quality of life of future generations.

Central Government, through the Climate Change Act, set targets to reduce UK greenhouse gas emissions by at least 80% by 2050. The Act also set five yearly carbon budgets for the UK economy for the periods 2008-12, 2013-17 and 2018-22. In line with the recommendations of the Committee on Climate Change, they require emissions reductions from 1990 levels of just over 22%, 28% and 34% in each of the four year periods respectively.

Nationally between 1990 and 2007, greenhouse gas emissions from domestic transport increased by 12% and in 2007 represented 21% of all UK domestic emissions; and travelling by road accounts for 92% of the domestic transport sector’s greenhouse gas emissions. Acting to reduce these emissions will help ensure that low carbon transport becomes a reality.

In 2008 CO₂ emissions from all road transport accounted for 31% of all CO₂ emissions in Nottinghamshire, higher than the percentages in both the East Midlands (28%) and England (26%). Transport emissions ranged from 37% of emissions in Broxtowe borough to 19% of emissions in Gedling borough.

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Table 27: CO₂ emissions

	CO ₂ emissions				
	Year	Road transport	Percentage of total emissions	Population ('000s mid-year estimate)	Per capita transport emissions (t)
Nottinghamshire	2005	1,848	30%	764.7	2.4
	2006	1,833	31%	766.9	2.4
	2007	1,864	32%	769.3	2.4
	2008	1,763	31%	773.3	2.3

Source: NI 186 – per capita reduction in CO₂ emissions in the Local Authority area

The carbon management plan 'Towards Carbon Neutrality' details how Nottinghamshire will reduce emissions from its own operations but the County Council's general strategy to reduce emissions from transport in the county will focus on (in no particular order):

- supporting change to new vehicle technologies and fuels
- promoting lower carbon transport choices, such as walking, cycling and public transport
- encouraging a transfer to lower carbon vehicles, such as take-up of low emission public transport vehicles; freight vehicles and the movement of goods; and private cars
- education on lower carbon transport issues, and
- congestion management.

Some of the challenges to delivering the required CO₂ reductions have been established over long periods of time and will similarly take a long period of time to overcome, including:

- existing vehicles, fuels and infrastructure are long established, and the economy, business and lifestyle has built up around them
- research shows that transport behaviours are amongst the most difficult to change. There are strong links between transport and lifestyle choices and some people see little reason to make smarter travel choices
- new technology can take a long time to develop and appear on the market
- changing transport infrastructure can be expensive, not only the significant investment required to develop new technology but also purchasing the new technology once it is on the market, and
- many non-transport Government policies can have a significant impact on transport demand and emissions, such as school admissions.

7.2.1 Spatial planning

Effective spatial planning and development control to ensure development is well served by public transport, walking and cycling networks is essential to help deliver CO₂ reductions from transport. Further detail on spatial planning's role in reducing the need to travel and provision of cycling, walking and public transport facilities are included within sections 4.1.3 – Reducing the need to travel; and 5.2.6 – Spatial planning, of this Plan. The County Council will also work with the district planning authorities to promote the inclusion of low emissions strategies at appropriate developments.

7.2.2 Supporting change to new vehicle technologies and fuels

Vehicle efficiency improvements

The European Union's Car CO₂ Regulation, agreed in 2008, establishes a clear, long-term framework for action by the industry to develop lower emitting vehicles. Consequently, vehicles are becoming vastly more fuel efficient and this is likely to continue throughout this Plan period and beyond. This will primarily be delivered through advances in the efficiency of the internal combustion engine. New ultra-low emission vehicles are also making their transition onto the mass market.

Various measures can be taken to further improve rail's energy efficiency and hence reduce carbon emissions. East Midlands Trains and Northern Rail have adopted comprehensive environmental policies that include commitments to reduce total energy consumption and thereby

reduce carbon emissions. Initial reductions have been around 4% per year, and continuation of this will further increase rail's environmental beneficial pre-eminence in this respect. Such initiatives will be driven by the train operators, Network Rail and DfT, but the County Council will strongly support these initiatives.

Electrification

The DfT is in the process of developing a nationwide strategy to promote the installation of electric vehicle infrastructure which is due to be completed by the end of June 2011. Whilst the measures the County Council aims to deliver during this Plan period are detailed below, the County Council will develop an electrification strategy to support that of the DfT following its publication.

The County Council will explore funding opportunities for the provision of electric charging points (such as the 'Plugged-in Places' funding) as and when they become available.

DfT is considering changes to the planning and/or building regulations to help accommodate electric vehicle infrastructure. The County Council will also explore opportunities through the local development framework process and development control policies to encourage the provision of electric vehicle charging points at new developments. The opportunity to install charging points at new employment and housing developments will also be identified through travel plans where appropriate. There may also be the opportunity to install electric vehicle charging points at key locations that attract large volumes of cars, such as at new park and ride facilities. If feasible, electric vehicle charging points would be powered using renewable energy, such as solar or wind power. The installation of charging points would also be accompanied by promotional information to ensure that users are aware of their location to maximise usage.

Such work will be undertaken in discussion and/or partnership with district councils and neighbouring transport authorities to help ensure the provision of an effective network of recharging points.

If the County Council proceeds with a car club (as detailed within Section 4.1.5 – Smarter choices, of this Plan) consideration will be given to the use of electric (or other low or ultra-low emissions) vehicles.

The County Council will promote the take-up of low and ultra-low emissions vehicles as detailed below in Section 7.2.4 – Encouraging a transfer to low carbon vehicles, of this chapter.

Bio-fuels

Bio-fuels are usually blended into the conventional transport fuels and are therefore a readily available renewable technology. As an emerging technology, however, there remains a lot of scientific uncertainty surrounding the full social and environmental impacts of bio-fuels. The 2008 Gallagher Review found that unless produced in the right manner, with appropriate crops, bio-fuels risk displacing existing agricultural production, which in turn may drive deforestation resulting in the loss of biodiversity and ecosystems. This could cause both an increase in net greenhouse gas emissions (above those associated with conventional fossil fuels) as well as contributing to higher food prices and food shortages.

Bio-fuels have the potential to emit millions of tonnes of global CO₂ less each year than the fossil fuels they replace. Promoting the use of sustainable bio-fuels is therefore an important part of the strategy to deliver a low carbon transport system but the County Council will only promote the use of those bio-fuels which are proven to be truly sustainable.

7.2.3 Promoting lower carbon transport choices

Switching to public transport or more active modes of travel (such as cycling and walking over shorter distances) can reduce CO₂ emissions. Active modes are a real possibility given that DfT analysis in 2009 found that 21% of CO₂ emissions arise from journeys of less than 5 miles, and 64% from journeys of less than 25 miles. The measures set out to address congestion and make journey times more reliable (see Section 4.1 – Making best use of the existing transport networks,

of this Plan); passenger strategy elements (see Section 6.2 – Provision of an affordable, reliable and convenient passenger transport system, of this Plan); walking, cycling and rights of way measures that reduce car use along with complementary education and awareness measures through travel plans and publicity materials (see Section 5.2.2 – Promotion, of this Plan); will all contribute to managing road traffic levels and improving vehicular flow, consequently reducing CO₂ emissions within the county.

7.2.4 Encouraging a transfer to lower carbon vehicles

In any organisation where transport represents a significant cost, there is the potential to work with the organisation to promote strategies to increase operational efficiencies, or to invest in more fuel efficient vehicles, technologies and infrastructure. Many businesses have demonstrated that cutting their carbon emissions in these areas can deliver significant benefits, from the cost savings that arise from more efficient operations, to the contribution these can make to an organisation's corporate social responsibility agenda. To support Central Government initiatives, the County Council will continue to promote the take-up of low emission vehicles to the public, organisations and amongst its own fleet.

Similarly the County Council will continue to work to increase operational efficiencies in its own fleet, and in partnership with other organisations through the development of travel plans as well as through the development of the Freight Strategy.

Through its travel planning work, the County Council provides funding and training for businesses to produce a site specific travel plan and fund measures for implementation. Cleaner vehicles for use as pool cars and fleet vehicles will be promoted as part of travel plans that are developed both internally within the County Council, as well as with employers and businesses throughout the county. The County Council will also act as promoters and signposts for national, regional and local advice and grants schemes.

The County Council monitors emissions from its own fleet and has a number of dual-fuel and electric vehicles within its fleet. The County Council will use the information it gathers to consider the role of electric vehicles and other low emission vehicles within the County Council's fleet.

Public transport

It is anticipated that lower emission buses will play a growing role in the UK's transport system. The County Council will continue to work in partnership with operators to improve the age and emissions of their fleets, including exploring opportunities to bid for funding for low emission vehicles. The potential for requiring low emission or electric vehicles for contracted bus services will also be investigated.

Electric powered buses provide environmental benefits through reductions in both air and noise pollution. Nottingham City Council has successfully obtained green bus funding from central government for four electric vehicles. These will be introduced on the 'centrelink' service operated on behalf of the City Council by Trent Barton. Other bus operators within Nottinghamshire do not currently have any plans to introduce electric or hybrid vehicles. The County Council will consider the provision of electric powered vehicles in partnership with passenger transport operators for possible local bus services, as well as demand responsive travel and interconnect style services within the county, but the Council will monitor progress on the City trial for use in future considerations.

Electric trains offer better environmental performance than diesel equivalents and can also increase capacity and reliability, as well as being cheaper to buy, maintain and operate.

In 2009 Network Rail published its Network RUS Electrification Strategy. This identified the electrification of the Midland Main Line (MML), from London to Nottingham and Sheffield, as having "*the strongest business case*" of any route in Britain. In fact the benefits are so great that "*In the case of Midland Main Line the value is technically infinite given that it involves a net industry cost saving rather than a cost*".

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As a result the MML was one of a small number of routes included in Network Rail's 'Core Strategy' for electrification.

As the Electrification Strategy states, the main benefits of electrification are:

- substantial (typically around 30%) reduction in operating costs
- easier to obtain new and/or additional rolling stock in future
- less pollution and noise at stations, and
- significant reduction in carbon emissions, the more so as Britain's electricity generation progressively becomes 'lower carbon'.

For these reasons the Council supports the electrification of the MML and will push Government for it to happen at the earliest opportunity.

It should, however, be noted that, contrary to what is often supposed, electrification will make very little difference to journey times. For long distance services like the MML, the time savings are estimated at "*half a minute per stop*". Nottingham-London 'fast' services have three stops and Nottingham-Beeston-London 'semi-fast' services have eight stops, so the time saving would be 1.5 or 4 minutes respectively. Indeed there are some circumstances - in particular the much touted transfer to the MML of the electric trains that currently operate on the East Coast Main Line - where the electric trains would be slightly slower, and hence journey time on the Nottingham-Beeston-London 'semi-fast' services would be slightly lengthened by electrification if it were implemented in the same way.

The Council's primary concern on the MML is to reduce standard Nottingham-London journey times from 104 to 90 minutes. To achieve that reduction, it is necessary to raise the various speed restrictions along the line and this is the Council's priority for the MML. This certainly would need to happen before the line was electrified, as wherever the electrification equipment was installed for the current lower speeds, it would need to be ripped out and replaced if speeds were ever to be raised - thereby hugely, and wastefully, raising the cost of speed improvements.

Freight

The County Council's Freight Strategy is to be developed following the completion of the LTP3. The Strategy will include the consideration of how emissions from freight can be constrained. This will include working in partnership with freight operators to promote low emission vehicles and also opportunities to make operational improvements.

The Council strongly supports the transfer of freight from road to rail or barge wherever possible as a way of reducing heavy lorry traffic on the county's roads, to reduce the safety risk associated with heavy lorries, and to reduce carbon emissions.

Network Rail is developing a 'Strategic Freight Network' that is planned to link all key British ports with the main centres of population via routes that are cleared for 'W10' loading gauge i.e. that have had bridges, tunnels etc. raised so as to be available for use by the taller 'high-cube' containers that are becoming standard for intermodal freight, and in which rail traffic is growing rapidly (10% per annum in 2010). By the start of the LTP3 period, this network will extend across the East Midlands on the Harwich/Felixstowe - Peterborough - Leicester - Nuneaton - Birmingham - Southampton axis, which joins the MML between Syston and Wigston.

The full 'Strategic Freight Network' is proposed to subsequently include the MML, the Erewash Valley line from Clay Cross and the north to Trent, and the Trent - Stoke - Manchester routes, which would make Nottinghamshire accessible from every main port and conurbation. However, no funding has been allocated yet to allow completion of this network. The County Council will press strongly for the MML, Erewash valley and Trent - Stoke sections to be completed at the earliest opportunity.

The former East Midlands Development Agency undertook a comprehensive assessment of all potential sites for multi-modal rail freight terminals within the entire region. The study assessed

various possible sites within Nottinghamshire, but all had difficulties of one sort or another. One site that has been the subject of previous proposals for a rail freight terminal was at Toton, which was assessed as having *“Excellent rail connectivity but very poor road access and close to urban area...may be able to provide a stabling facility for trains accessing other sites”* and so was not recommended as likely to be taken forward. Taking into account all relevant factors, including accessibility from the rail and main road networks, it identified three sites as most suitable, at Markham, Castle Donnington and Egginton. Although these are all just outside the Nottinghamshire boundary, such terminals serve a very large catchment area, including Nottinghamshire. The County Council would be supportive of developments at any, or all of these, three sites.

The County Council will support the provision of sidings for local factories, quarries etc. where they could practicably be served directly from the county’s rail network.

The River Trent is navigable as far upstream as Nottingham by barges of 300 tonnes, but currently, although there is water freight as far upstream as Gainsborough, there is no freight on the section of the river west of this point. A 2010 British Waterways Board study identified a number of potential new freight flows that could use the river as far upstream as Newark and/or Nottingham, and the Council will support any initiatives to transfer these flows to use the river. The Council will seek to bring Colwick wharf back into general use for water freight, by removing the section of the covenant that currently restricts such use.

Lighting

The electricity bill for street lighting has increased significantly from £1.05m in 2004/05 to an estimated £5.04m in 2010/11. Over the long term, energy prices are likely to continue to rise against a backdrop of the County Council having to make significant budget savings over the next three years.

The Government is encouraging large users of energy to reduce their usage through the mandatory Carbon Reduction Commitment Energy Efficiency Scheme. Under this scheme the County Council will have to purchase allowances for every tonne of CO₂ it emits. This will add £266,000 to the annual cost of street lighting unless electricity usage is reduced.

The County Council has therefore approved plans for changes to street lighting designed to save over 10m kWh per year which is about 25% of the 2009/10 usage, saving about 5,800 tonnes of CO₂ emissions per year. The changes will be implemented over four years and will include:

- switching off some lights where they are no longer considered necessary
- dimming of some lights on main roads between the hours of 10pm and 7am when traffic flows are low and a lower level of lighting will not affect road safety, and
- switching off some lights between midnight and 5.30am in residential areas in consultation with local communities.

All street lights are being considered but each site will undergo a risk assessment to decide which lights should be left on for reasons of safety or crime prevention. A small number of proposals, however, will be developed first for some rural villages that have expressed an interest in the project in order to test out the design and consultation process.

The equipment needed to dim lights is fairly expensive and the energy saved by dimming needs to be sufficient to pay back this initial expense within a few years to make it cost effective. Consequently, dimming is only justified on lights rated at 250 watts or more.

Efficient, light-emitting diode (LED) lighting has been considered as there are many advantages of LED lighting. Whilst LED lighting is not without problems (such as decreasing light output with age; design requirements; and costs), the County Council will continue to monitor the trials taking place in other authorities. Following the outcomes of these trials the Council will consider the implementation of LED lighting as part of a long-term investment programme if appropriate.

7.2.5 Education on lower carbon transport issues

The County Council will continue to promote key messages to make people and businesses more aware of the simple changes they can make which will have an impact on carbon emissions from transport.

Public transport does not always offer the same convenience as the car for many people outside larger towns and cities. Similarly, walking and cycling may not always be practical options for longer journeys. It is therefore important that people with access to a car have the information they need to use it efficiently and in the most environmentally friendly way possible. Eco-driving enables drivers to use their vehicles more efficiently and to reduce fuel consumption, costs and emissions of both CO₂ and local air pollutants. Estimates by the Energy Saving Trust show that drivers could reduce emissions and fuel consumption by around 8% simply by following six smarter driving tips; and this figure increases to an average of 15% immediately following a smarter driving lesson. The County Council will therefore encourage people to drive more efficiently through promoting key messages and supporting national campaigns to make people aware of the actions they can take to buy and run their car in a way that saves fuel, money and reduces CO₂. Such messages may include:

- the actions drivers can take to run their car in a more efficient way to reduce CO₂ emissions, such as keeping tyres inflated, changing up a gear a little earlier, driving more smoothly, and not having clutter in the car, and
- providing advice to consumers about buying the most fuel efficient car to meet their needs.

As part of the development of the County Council's Freight Strategy, the Council will consider how it can promote the Freight Best Practice programme. The programme is a Government funded initiative that offers free resources, tools and guides to help organisations with large or small fleets save money, reduce CO₂ emissions and improve efficiency throughout an organisation's freight operations.

The Driver Certificate of Professional Competence (Driver CPC), which includes an eco-driving element, came into effect on 10 September 2008 for passenger carrying vehicle (PCV) drivers; and 10 September 2009 for heavy goods vehicle (HGV) drivers. All professional bus, coach and minibus drivers (with 9 or more passenger seats) and HGV drivers of vehicles weighing over 3.5tonnes need to hold a Driver CPC in addition to any vocational licence. The County Council will continue to promote the Driver CPC through its partnership working with public transport and freight operators.

Encouraging people to think about reducing their car use, including through travel planning work, is a key element of the smarter choices work undertaken by the County Council (detailed in Section 4.1.5 – Smarter choices, of this document). This includes making people aware of the travel choices that are available to them, particularly relating to public transport, walking and cycling. To help people become more confident to adopt cycling as a means of transport, both off-road training for younger children and the national Bikeability cycle training scheme is offered to all school pupils in the county. Cycle training is also available to individual adults, groups and to businesses.

7.3 Congestion management

Improving journey times will lead to reduced congestion and therefore reduced CO₂ emissions. The County Council's strategy to address congestion and improve journey times is set out in Section 4.1 – Making best use of our existing transport networks, of this Plan. Specifically, the congestion management measures detailed within reducing the need to travel will play a key role in delivering carbon reductions from transport. Central to this strategy will be:

- effective spatial planning – ensuring that the planning system takes full account of the potential consequences of development for transport; putting employment and housing development in appropriate locations; and when necessary ensuring that sustainable public transport, cycling and walking facilities are funded by developers
- maximising new technology – using technology such as teleconferencing to transform the way people work; and use of information technology to enable people to access the goods and services they need without having to travel
- smarter travel choices – delivering a range of smarter choices measures to change personal behaviour and business practices, such as home working, and
- improving access to local centres – helping people to access their local shops and services easily by walking, cycling or public transport instead of making short car journeys.

More detail on reducing the need to travel is included in Section 4.1.3 – Reducing the need to travel, of this document.

7.4 Air quality

The Environment Act 1995 required the Government to develop a National Air Quality Strategy. This strategy, originally published in 1997, set challenging health based targets for eight main air pollutants. These are benzene; 1,3-butadiene; carbon monoxide; lead; nitrogen dioxide; ozone; fine particles (PM10); and sulphur dioxide. The predominant source for many of these pollutants is road traffic, but industrial and domestic sources are also major contributors. The National Air Quality Strategy was reviewed and a new Addendum was published in 2003 which introduced tighter objectives for particles, benzene and carbon monoxide and a new objective for polycyclic aromatic hydrocarbons. Local authorities are required to review and assess the strategy's objectives for seven air pollutants together with the new ones for benzene and carbon monoxide prescribed in regulations.

The Nottinghamshire Environmental Protection Working Group was established in the 1980s and is a partnership between all of the district councils, the City Council and the County Council, as well as the Health Protection Agency and Environment Agency. Part of the Group's remit is to co-ordinate the review and assessment of air quality in Nottinghamshire. The Nottinghamshire Air Quality Improvement Strategy was therefore developed in partnership with these organisations.

Following a review of the strategy, the Group published the revised strategy for Nottinghamshire in 2008, 'A Breath of Fresh Air for Nottinghamshire', which sets out the approach to reducing emissions of key pollutants across the county. The approach details the 'framework for action' to help local authorities manage and improve ambient air quality in Nottinghamshire and to protect the health and well being of the public in a co-ordinated and integrated manner. The Strategy will be reviewed periodically, the next review being due in 2011.

The Nottinghamshire air quality strategy identifies the need to reduce air pollution by encouraging alternative travel modes and promoting sustainable development through the Local Transport Plan and local development framework processes. The Strategy aims to provide a sustainable and efficient transport network that is accessible to everyone through:

- promotion and incentives for the use of cleaner vehicles and green fuels
- traffic management, including parking restrictions and vehicle restrictions, where appropriate
- travel planning
- encouragement of more sustainable travel
- provision of cycling and pedestrian routes
- better integration of transport systems
- improved public transport, particularly through bus quality partnerships
- provision of park and ride schemes, and
- improved spatial planning and development control.

Air quality across the county is generally good but there are locations which have transport related air quality issues relating to NO₂ levels due to high traffic volumes, such as adjacent to the motorway and trunk road network, or at 'pinch points', such as bridges across the River Trent.

7.4.1 Assessing and monitoring air quality

Every year local authorities are required to review and assess air quality within their districts under the provisions outlined in the Environment Act 1995 and the National Air Quality Strategy 2007. These set a number of air quality objectives (set in regulations for certain pollutants) for the protection of human health and the environment to be achieved between 2003 and 2020. The County Council will continue to use the opportunity of working in partnership with the authorities in the Nottinghamshire Environmental Protection Working Group to ensure a consistent approach to assessing and monitoring air quality throughout the county. Working within the Group also aids the cross-boundary work that may be required to address any locations where air quality objectives are unlikely to be met.

A review and assessment of air quality is the first step in the local air quality management process. Part IV of the Environment Act 1995 requires each local authority to review air quality 'from time to time'. The National Air Quality Regulations 2000 and the Air Quality (Amendment) Regulations 2002 prescribe air quality objectives and the dates for meeting them. For each objective, local authorities have to consider present and future air quality and assess whether the objectives are likely to be achieved by the prescribed date.

Review and assessment is undertaken using a phased approach, initially conducting an 'Updating and Screening Assessment' (USA). This is based on a checklist approach to identify those matters that have changed since the first round of review and assessment was completed and which now require further assessment. A 'Detailed Assessment' is then undertaken where the USA indicates that an air quality objective may be compromised.

Where objectives set for air quality are unlikely to be met, local authorities must issue orders designating these areas as air quality management areas (AQMA). In these areas local authorities are required to draw up action plans to ensure air quality objectives are met. Action plans may include measures to be taken both within and outside an AQMA and could extend beyond a single district council's area involving several councils working together, and where necessary the Highways Agency where trunk roads are involved. The action plans will also involve the setting of targets to ensure that the air quality objectives are met within agreed timescales. The County Council will continue to work in partnership with district councils to produce specific action plans for air quality improvements in AQMAs.

Sites that are identified as borderline, or requiring further investigation, but do not require an AQMA to be declared, receive more regular monitoring to help predict future air quality levels. Such sites are also factored into the prioritisation of programmes of work, such as 'smarter choices' and integrated transport schemes to help improve air quality, and ensure that exceedences do not occur.

Ongoing assessment will continue to be undertaken across the county to monitor levels of pollutants to help identify existing or potential exceedences in the future. If issues arise there are existing mechanisms whereby they can be raised and tackled through a partnership approach. Given the close links between air quality and congestion, the measures detailed within Section 4.1 – Making the best use of our existing transport networks, are used to manage congestion and therefore help maintain air quality and will form the basis for air quality action plans. Where assessments identify existing or likely future exceedences additional resources will, however, be prioritised to address such exceedences.

7.5 Noise

Improving the health, wellbeing and quality of life of communities is the main reason for addressing noise issues. Noise and sleep disturbance can have serious effects on physical and psychological health. Whilst annoyance created by noise does not necessarily lead to more serious health issues, it can have adverse impacts on general wellbeing and reduce quality of life.

Reducing night time noise is therefore important because of the potential effects on sleep and consequent health impacts. Daytime impacts, however, also need to be considered as people can be disturbed by noise during the day; changes to working patterns can lead to a variety of sleeping times; and daytime noise has significant impacts on the quality of life.

Noise from vehicles (private, freight and public transport) can be a significant problem and reducing it is the main area of influence that the County Council can have on noise. Tranquillity is a factor in the character and quality of many parts of the county's landscape and settlements and is inter-woven with the character of the historic environment.

Priority will be given to highway measures that reduce noise in areas where there are high levels of road traffic and significant noise sensitive properties affecting a high number of people. However, greater priority will be given to measures that will lead to both the biggest noise benefits and other transport objectives (such as tackling congestion and encouraging active travel) as it is essential to ensure that resources are targeted appropriately.

7.5.1 Nottingham Agglomeration Noise Action Plan

The Nottingham Agglomeration Noise Action Plan is designed to address the management of noise issues and effects in the Nottingham agglomeration under the terms of the Environmental Noise (England) Regulations 2006 as amended (the 'Regulations'). These Regulations transpose Directive 2002/49/EC relating to the Assessment and Management of Environmental Noise. This directive is commonly referred to as the Environmental Noise Directive or END. In particular, the Action Plan covers the noise issues arising from road, railway, aviation and industrial sources (as described in the Directive) that affect the Nottingham agglomeration. The management of noise issues and effects from major roads, major railways and major airports that are located outside first round agglomerations are addressed within the Action Plans for those sources.

The DEFRA Noise Action Plan for Major Roads outside agglomerations identifies 'Important Areas' with respect to major road and rail noise where 1% of the population is affected by the highest noise levels. Locations where noise mapping indicates levels of at least 76 dB $L_{A10,18h}$ are to be investigated as a priority.

There are an estimated 7,300 dwellings to be investigated due to noise from major roads across the East Midlands with 2,100 to be investigated as 'First Priority Locations'. The Noise Action Plan requires the County Council to investigate 'Important Areas' (giving priority to those containing 'First Priority Locations') on its highways during July 2010-June 2011. The County Council is then required to implement any actions or secure budget for actions from April 2011 onwards. From April 2012 the County Council is required to investigate and implement measures on the remaining 'Important Areas' on its highways.

There are locations along 54 routes across the County Council's highway network that have been identified as First Priority Locations which require investigation.

7.5.2 Promotion of quieter modes of transport

Walking and cycling are the most sustainable modes of travel and offer a quieter and healthier alternative to motorised vehicles. But technology is advancing and vehicles with reduced noise impacts are emerging. New technology may offer a range of additional benefits, for example electric and hybrid vehicles are being used because of reduced emissions but also have the potential to be quieter than other vehicles. An expansion in the use of quieter technology has significant potential to reduce noise levels. The County Council will promote quieter modes of transport such as walking, cycling and electric vehicles and provide the necessary infrastructure

where these will also contribute to wider transport objectives, such as tackling congestion and encouraging healthy active travel. Further detail on this work is included in Chapter 5 – Encourage sustainable and healthy travel, and Section 7.2.4 – Encouraging a transfer to lower carbon vehicles, of this chapter.

7.5.3 Highway improvements

Quieter road surfaces can play a part in reducing noise from road traffic because they can have a significant effect, but the noise from vehicles travelling at lower speeds tends to be less. This means that on roads where average speeds are very low, changing the road surface may not have the same acoustic impact that would be expected if average speeds were greater. Quieter road surfaces can also deteriorate faster than conventional surfaces which highlights the need to consider the most locally appropriate response to ensure resources are targeted effectively. The County Council will investigate the use of quieter road surfaces and consider their implementation if they are considered appropriate, feasible and cost effective over the whole of their life-cycle. Noise reduction measures such as fencing, bunds, etc. will also be considered when appropriate as mitigation on new transport improvements and where traffic noise is considered significantly high.

7.5.4 Commercial traffic

A range of measures can also be considered to address issues of noise from commercial transport, including traffic management, such as the consideration of restrictions on coaches and heavy goods vehicles. The County Council will also support schemes which lead to quieter deliveries and servicing of commercial and residential properties. Such schemes will emerge from the Freight Strategy which will be developed following the completion of LTP3 but may include investigating the feasibility of a retail freight consolidation centre; the promotion of quieter, low carbon vehicles; and the promotion of freight routes.

7.5.5 Street works

Noise from street works and the maintenance of the highway infrastructure can also affect residents and local businesses. The County Council will attempt to ensure these works are not undertaken late at night or at weekends, to allow residents some respite from noise. Seeking to minimise and, where possible, limit the noise impacts of street works may however, need to consider extended working hours to reduce the duration of the works. The County Council will also need to consider its network management duty under the Traffic Management Act, 2004 when determining these issues.

7.6 The physical environment

The wellbeing of people living in the county is a central strand of the County Council's Sustainable Community Strategy 2010-2020 and that of a range of other partner organisations, such as borough, district and parish councils. The quality of the environment in Nottinghamshire and its communities has a major impact on many aspects of the county's life. The County Council has long recognised the need for a continued programme of investment to improve the environment. Improvements to the environment can have a positive social and economic regeneration impact. There is clear evidence that the response of individuals to their environment is closely linked to the quality of their everyday surroundings. It affects the pride that people have in their community and has a major influence on their outlook on the wider world.

Poor streetscape and quality of public spaces which are not up to the public's expectations do not engender pride, and can lead to anti-social behaviour. Improving streetscape quality and public spaces can therefore encourage public activity and allows pedestrians to move freely through uncluttered streets. It assists the orderly, efficient and safe movement of people and goods and encourages people to drive less and walk more.

Nottinghamshire is a diverse county that ranges from idyllic rural villages in prosperous farming areas to run down deprived urban areas and isolated ex-mining villages. The countryside equally reflects those differences with some areas still showing the scars of heavy industry that has long

gone, whilst other areas exhibit the undisturbed maturity of ancient forests and arable land. The urban environment ranges from the picturesque settlements of Southwell and Newark, to the heartland of previous heavy industry in Mansfield, Worksop, Sutton in Ashfield, Kirkby in Ashfield and Hucknall. High density living in poor quality housing built for previous generations, still typifies many settlements along the industrial spine to the west of the county.

The LTP3 plays an important role in shaping the environment that we live in. The integration of the LTP3 strategy with the continued endeavours by the Council to lift the quality of the county's environment will provide added value in meeting many common objectives. The attractiveness of the physical environment plays a vital role in creating sustainable communities, thereby reducing the need to travel.

Some key pressures on the environment include:

- housing – it is currently estimated that approximately 100,000 new dwellings may be required in Nottinghamshire between now and 2026
- transport – whilst road traffic has reduced between 2005 and 2009, road traffic is likely to increase as the economy improves
- waste – industry, commerce and households in Nottinghamshire produce around 2.5m tonnes of waste each year
- wildlife – Nottinghamshire contains fewer protected landscapes and wildlife sites than neighbouring counties. The county has 50% less ancient woodland than in 1920; 90% less heathland than in 1922; and 97% less wildflower-rich grassland than in 1930, and
- heritage – the county contains over 4,500 listed buildings; 300 scheduled ancient monuments; 150 conservation areas; and 20 registered parks and gardens; and a historic battlefield. The 'buildings at risk' rate for the county is above the national average at just under 7%.

Nottinghamshire has a well respected tradition for environmental improvement work over the last 30 years through specific programmes and the drawing in of external funding, such as Alliance SSP and WREN. These programmes have complemented and added value to many schemes funded through other programmes. The County Council will continue to try and draw in available external funding for such works during the LTP3 period.

Landscape character assessment (LCA) have been undertaken to identify the differences between landscapes based on sense of place, local distinctiveness, characteristic wildlife, and natural features. Landscape character assessment is therefore a useful tool for understanding, planning and managing landscape change and will be considered as part of proposed highway improvements as necessary. This may be to avoid large areas (e.g. at a parish scale) that need conservation or protection when considering large new infrastructure projects; or at a smaller scale (e.g. sub-parish) to minimise the impacts of smaller schemes by using the LCA as a mechanism for identifying design elements that are either in-keeping with the landscape, or look to provide enhancements where the landscape needs reinforcement.

7.6.1 Local Improvement Scheme initiative

The importance given to the local environment by Nottinghamshire residents resulted in the introduction of the Building Better Communities initiative in 2004, re-launched as the Local Improvement Scheme (LIS) initiative in 2009. The LIS initiative has been very successful at delivering a wide range of environmental improvements across the county for the benefit of local communities which have been recognised locally, regionally and nationally. The vast majority of the projects are requested directly by local communities which are then endorsed by their local County Council members.

The LIS initiative will continue as a countywide programme to improve the environment of Nottinghamshire. The new LIS programme will retain its effective, flexible and unique formula developed under the old banner of Building Better Communities and will continue to support a wide range of projects under the broad headings of:

- better neighbourhoods (landscaping, footway improvements, conservation of local distinctiveness, and general refurbishments)
- better countryside (safeguard biodiversity and strengthen rural character)
- better business (regeneration of local shops and businesses)
- better leisure and tourism (promote the attractiveness and accessibility of places of interest), and
- better awareness (promotion of local 'pride of place').

Project selection will be re-prioritised to focus on a number of areas considered to have been under-represented to date. The areas that will be promoted are:

- rural initiatives (for example, village distinctiveness/village gateway projects)
- market town projects that improve the centre's attractiveness and economic viability
- projects that develop greater local pride and responsibility for the environment (for example, conservation projects, heritage projects and the development of pocket parks)
- projects that support wider local community involvement and accessibility, and
- projects that encourage economic and cultural regeneration and tourism.

Since the inception of the Building Better Communities initiative (now the LIS initiative) over £11m of external funding has been secured for environmental improvements, in addition to the £35m that the County Council has spent on this initiative. A key target of the LIS initiative will remain to draw in external funding that would not have otherwise been invested in the county.

7.6.2 New development

The County Council's Highway Design Guide (developed with regional partners) and Sustainable Developer Guide detail the standards that are required of developers, creating sustainable communities (thereby reducing the need to travel) that provide high-quality spaces for people which are not dominated by motor vehicles.

7.6.3 Local Accessibility Transport Studies

Improvements to local centres will be identified through consultation undertaken as part of Local Accessibility Transport Studies (LATS) which are used to identify a range of town or local centre transport improvements in a holistic manner. More detail on LATS is included in Section 6.1.6 – Local Accessibility Transport Studies of this Plan.

7.6.4 Local centres and town centres

By making town centres, other shopping areas, residential streets, and rural roads places for all road users, as well as motorists, the quality of life in these areas can be greatly improved. Making better provision for walking and cycling can also contribute to wider objectives such as improving community health. The County Council will continue to invest in the infrastructure of urban and rural town centres as well as local shopping centres to ensure that they remain or become attractive, vibrant places to live, work and visit. Such work will enhance the attractiveness, appearance and safety of these centres to make them attractive to both businesses and the community. This investment may include a range of measures such as small environmental improvements to shopping parades; improvements to walking and cycle routes to local facilities; bus facilities; and additional street lighting. Such investment will be prioritised on under performing and run-down town and local centre areas.

Accessibility planning analysis, local transport needs studies and economic health-check surveys will be integrated to help establish appropriate master plans and action plans for towns and villages in partnership with the local community and local planning authority.

7.6.5 Street furniture and signage

Unnecessary street clutter, including street furniture and signage can have a detrimental impact on the physical environment. The County Council will therefore periodically review the clarity, effectiveness and level of signing as well as other infrastructure provided. Such reviews will have regard for the convenience and safety of road users; asset management; directional requirements

to reduce congestion and unnecessary mileage; in addition to the physical landscape and its character.

7.6.6 Public transport

The County Council recognises that the design and maintenance of public transport infrastructure (e.g. bus stops and shelters, stations and interchanges) are also important in improving perceptions of the ease, security and comfort of travelling by public transport to deliver the congestion, pollution, accessibility, and safety benefits of increased public transport patronage. Consequently the Council will continue to invest in the upgrade of all bus stops in the county as well its programme of passenger interchange (bus station) improvements (both of which are detailed within the Integrated Passenger Transport Strategy; and summarised within Section – 6.2 Provision of an affordable, reliable and convenient passenger transport network).

7.6.7 Links to regeneration proposals

The decline of traditional industries has resulted in the need to regenerate specific areas in the county, particularly those classed as the most deprived (as detailed in Section 4.2 – Regeneration, of this Plan). The County Council will continue to target environmental improvements to urban and rural areas of deprivation to complement the regeneration and renewal work carried out by itself, as well as that of other organisations, such as district councils.

7.7 The historic environment

The county's heritage makes a key contribution to the quality of life of its communities. Access to, knowledge and understanding of the historic environment makes a positive impact on people's health and wellbeing. The historic environment plays a key role in promoting a vibrant economy, as it contributes to the leisure and tourism industries and is fundamental to local economic regeneration. The existing road network is a part of the county's historic environment. Some of the road infrastructure is historic and of considerable heritage significance, in particular many bridges around the county are protected as listed buildings or scheduled ancient monuments. There are also many examples of protected signposts, milestones and way markers along the county's roads.

The settlements and landscape that the road network passes through are historic and contain the rich and varied remains of the past, some of it is protected as listed buildings, scheduled ancient monuments, conservation areas, battlefields or historic parks and gardens, but much of it is undesignated local heritage. It is impossible to disentangle this cultural heritage from the natural heritage represented by ancient hedge rows, woodland and other landscape types of which the road network is a part.

Modern roads are the same routes that our ancestors used to move around the county for hundreds and, in some cases, even thousands of years. For instance, the A46 is well known as the route of the Roman Road the Fosse Way, and there are examples of routes that have probably been in use even earlier than this. The archaeological remains of our past lay under and alongside the road network, so the potential for highway development to reveal interesting and important information is often high. Construction of new routes has a predictable likelihood of encountering archaeological remains, sometimes of very high significance.

The modern rail and waterways network is linked closely to the industrial heritage of the county, (especially the coal mining and textile industries) as well as the phenomena of commuting that developed rapidly in the late 1800s. Along these networks the 18th and 19th century heritage forms



an integral part of the modern network in bridges, tunnels, stations, locks and other structures many of which are protected as 'designated heritage assets'.

Planning Policy Statement 5 'Planning and the Historic Environment' 2010 (PPS5) sets out how the local planning authority should take into account the designated and undesignated heritage assets during their preparation of local plans. This includes requiring that there is access to an appropriate Historic Environment Record. The County Council considers that use of the County Historic Environment Record, held by the council, is the key to ensuring all transport proposals follow the requirements of PPS5.

It is acknowledged that some proposals for improvements to Nottinghamshire's local transport network may impact on the historic environment. Detailed below are some of the impacts that can occur. The extent of these impacts can be both individual and cumulative but it is important to note that impact on the historic environment may not necessarily be negative, and can also be positive when the significance and value of the heritage asset is considered at the outset. Where there are opportunities to enhance and protect the historic environment these will be integrated within proposals for the development of the network. The impact of and response to climate change on the transport network's heritage is discussed in this chapter in table 26, within Section 7.1 – Adapting to climate change.

7.7.1 Historic urban cores, conservation areas and the public realm

Most of Nottinghamshire's settlements have a historic urban core reflecting their medieval origins. Over 150 of these are designated conservation areas. These places range from urban market town centres to small rural villages and hamlets. The roads that run through them form part of their character and can be soft and rural with grass verges and hedges, suburban green avenues with formal planting, or urban streetscapes tightly packed within commercial centres. The archaeological evidence of the earlier history of a place can be revealed during road and public realm works. Issues are particularly prevalent in the county's market towns where the public realm is a key component of their economic and cultural vitality and where there is often very acute pressure from transport related issues. Opportunities for enhancement of the 'character' of conservation areas through carefully considered public realm improvements and highway schemes are widespread. Archaeological impact and opportunities for enhancing historic character will be considered at the outset of a scheme and incorporated when possible.

7.7.2 Impacts on heritage assets

Listed buildings

There are many listed structures within highway boundaries, often owned by the highway authority that can be inadvertently damaged or easily overlooked, such as milestones and old market crosses. The road network includes listed bridges and viaducts which will be treated appropriately. Listed buildings that bound the highway network have a 'setting' that may include the character of the road itself and which can be easily eroded, but which may also be enhanced when opportunity arises. Such opportunities will therefore be considered on a scheme by scheme basis and will be delivered where feasible and appropriate.

Scheduled ancient monuments

Some listed bridges are also designated archaeological sites, and many others immediately bound modern roads. Several protected Roman sites are intrinsically linked to the Roman/modern road itself. Damage to the protected archaeology of the county will very rarely be acceptable. Impact on the setting of these assets (see below) may also need to be considered in developments.

Undesignated archaeological sites

The County Council's Historic Environment Record records many thousands of sites that could be damaged by highway schemes. Highway developments off the line of existing roads may encounter archaeological remains and therefore as part of scheme development, records will be investigated and mitigation considered where appropriate. Drainage improvements will often require archaeological input.

Historic parks and gardens

Roads often pass through and alongside designated (registered) and undesignated historic parks and gardens. For example, the main entrance to Rufford Abbey is off the A614 and Newstead Abbey is accessed off the A60. All of the 'Dukeries' estates have entrances off the surrounding roads, often with listed gate lodges and boundary walls immediately alongside the road. The setting and significance of places like these is affected by changes to the roads that bound and cross them.

Historic battlefield

East Stoke is the site of the county's single designated battlefield. The A46 runs right past this site and on through the designated conservation area of the village, past listed and local interest buildings, scheduled ancient monuments and other archaeological sites. The realignment of the A46 and de-trunking of the existing A46 in this area provides an opportunity to enhance the setting of the battlefield and other heritage assets through removal of traffic, reduction in highway infrastructure and reinstatement of the rural character of the vicinity. Archaeological potential in this area is high.

Setting

The setting of designated heritage assets is protected and is the aspect most easily damaged inadvertently by highway developments. New lighting schemes, pedestrian crossings, and road alignments (with their accompanying signage, road markings, guard railing and other infrastructure) will erode the townscape and landscape setting of designated heritage assets if this is not considered at the outset.

Historic landscape character

The county's historic landscape character map and landscape character zones contain the source information for establishing the wider historic environment issues affected by transport. Tranquillity is a measurable dimension of the character of the landscape (and settlements) and can be a key contributor, along with night time light levels, to the quality of places and to their sensitivity to impacts arising from transport schemes.

Cumulative impacts

The county's archaeological resource is non-renewable and there is a presumption in favour of its preservation. Statutory assessments undertaken at many of the county's conservation areas indicate that the treatment of the roads within them has eroded their special interest, significance and character, and continues to do so. The historic landscape of the county is under constant pressure to accommodate the demands of the modern network. Pressure to improve capacity and safety can erode rural character and tranquillity and dilute the distinctive qualities of the county's historic landscape character. Major schemes will always impact on the historic environment and require appropriate impact assessments.

The County Council's heritage asset information plays a vital role in ensuring that we maintain the assets through streamlining its effective use into early feasibility and design work for transport improvements. Cross-service working will be undertaken to ensure effective consideration of the impacts of transport improvements on the county's heritage assets and, where appropriate, mitigation. Such working will also help identify where proposed transport schemes that involve conservation of heritage sites provide opportunity to lever in external funding. A flexible approach to design will also help ensure transport improvements are sympathetic and appropriate when impacting on heritage assets.

Given the close links between heritage assets, traffic volumes and congestion, the measures detailed within Section 4.1 – Making best use of the existing transport networks, will be used to manage traffic volumes and congestion and therefore help maintain the county's heritage assets.

7.8 Biodiversity and the natural environment

Biodiversity is the variety of life, encompassing the whole of the natural environment. As well as being important for its own sake, it provides us with vital commodities such as food, shelter and industrial materials, and with a suite of ‘ecosystem services’ including atmospheric, climatic and hydrological regulation, nutrient cycling, pest control and pollination. Biodiversity and a healthy natural environment are also an important component of the quality of life for local communities – contributing to people’s health and wellbeing, including by offering opportunities for outdoor recreation, thereby encouraging physical activity; improving the quality of the environment; and supporting a vibrant economy.

Biodiversity can be found virtually everywhere, but there are features in our towns and countryside that are especially important for wildlife, such as those that support rare or scarce plants and animals, or particular habitats such as species-rich grasslands, heathland, woods, hedgerows, rivers, and wetlands. Many of these habitats occur within the highway network, or immediately adjacent to it.

Areas can also be important through their role as ‘stepping stones’ or ‘wildlife corridors’, allowing the migration and dispersal of species between sites – something that is increasingly important as our climate changes, and plants and animals need to move into new areas to survive. They also allow genetic exchange between populations which might only otherwise exist in small, fragmented patches of habitat, and for areas to be recolonised by species which have become locally extinct.

The highway network plays an important role as an extensive wildlife corridor, where suitable habitats exist which are sensitively managed. These corridors are especially important in linking small or isolated sites, or in areas dominated by intensive agriculture where there is little other habitat.

7.8.1 Protection of sites, species and habitats

The most important sites in Nottinghamshire for the conservation of biodiversity are legally protected and are detailed below.

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSIs) are nationally important sites that are legally protected, representing the finest places for wildlife and natural features in Britain, supporting many characteristic, rare and endangered species and habitats. There are 68 SSSIs wholly or partly in Nottinghamshire, covering areas of woodland, heathland, grassland, wetland and old quarry. SSSIs are often located next to roads and other transport infrastructure and in some cases, fall within areas of active railway land or the highway boundary – for example, areas of verge in Sherwood Forest near Budby, at Spalford, and between the villages of Eaton and Gamston, are designated as SSSIs and are subject to special management in order that their interest is retained.

Special Areas of Conservation

Nottinghamshire has one site that is of international importance for its wildlife – the Birklands and Bilhaugh Special Area of Conservation (SAC), in Sherwood Forest. This site is designated in response to the EU Habitats Directive, and is subject to a very strict protection regime. Detailed assessment will be undertaken of any plans or projects that may impact the site, directly or indirectly, and both alone and in-combination with other plans and projects, with damaging development only being allowed in imperative cases of over-riding public interest. A Habitats Regulations Assessment of the LTP3 has been undertaken and is available from the County Council’s website at www.nottinghamshire.gov.uk/ltp3.

Special Protection Areas

The Sherwood Forest area has been identified as a prospective Special Protection Area (SPA). Although not yet formally designated, official advice is that a ‘risk-based approach’ should be adopted when considering plans and projects within the prospective SPA area. SPAs are covered by the same strict protection regime as SACs.

Sherwood Forest may become a SPA in the future due to its wildlife habitat. If this occurs, consideration will be given to the development of a transport sub-strategy for the SPA.

National Nature Reserves

As well as being designated as a SSSI, part of Sherwood Forest is also designated as a National Nature Reserve (NNR), recognising the habitat that it holds as one of the best examples in the country, and its value for access, education and enjoyment of the natural world by the public.

Local Nature Reserves

Local Nature Reserves (LNRs) are places which hold wildlife or geological features that are of special interest locally, and offer people opportunities to study or learn about nature, or simply to enjoy it. Although legally notified, they are not protected in the same way as the aforementioned sites. National guidelines recommend that there should be 1ha of LNR per 1,000 head of population. Nottinghamshire is very close to reaching this target, and has a total of 42 LNRs across the county (with a further eight in Nottingham City).

Those sites which are not legally protected, but are of more local importance, are offered protection through the planning system and are detailed below.

Sites of Importance for Nature Conservation

Sites of Importance for Nature Conservation (SINCs) are sites that have been identified as having at least county-level importance for their wildlife. SINCs, also known as Local Wildlife Sites, are used throughout the UK, and are included in relevant national planning policy (Planning Policy Statement 9 – Biodiversity and Geological Conservation) and national guidance. They are a non-statutory designation, used principally in relation to land-use planning and development, and are protected through policies in local planning documents. There are currently just over 1,400 SINCs in Nottinghamshire, the majority of which are designated because of their botanical interest or the type of habitat they represent, although others are designated because of the particular species of animal they support.

Notified Road Verges

In Nottinghamshire, a number of SINCs occurring on road verges are also designated as Notified Road Verges (NRVs). The NRV scheme has run since 1979, and was introduced in recognition of the fact that verges have considerable potential for nature conservation. The aim of the NRV scheme is to manage some of our best verges in a favourable way, so as to maintain their interest and contribute to the biodiversity resource of the county, through a regime of traditional hay meadow management. There are currently 25 NRVs, which support a wide range of species, and include the area of roadside verge in the Gamston & Eaton Woods & Roadside Verges SSSI.

Away from designated sites, there are still further areas of habitat of biodiversity value which need to be safeguarded and enhanced, in order to allow species to continue to exist in the wider countryside, to provide linkages between areas of higher value, and to allow people to experience nature. The importance of many of these habitats is recognised through their listing in both the UK Biodiversity Action Plan (UKBAP), and the Nottinghamshire Local Biodiversity Action Plan (LBAP), which aim to protect, enhance and expand our most important habitats, along with a number of rare and endangered species, some of which are protected by law and many of which occur outside designated sites.

As well as having regard to specific legislation covering sites and species, the County Council also has a more general duty under the Natural Environment and Rural Communities Act 2006. This requires local authorities to have regard to the purpose of conserving biodiversity – a so-called ‘Biodiversity Duty’.

7.8.2 Transport projects and highway management

Transport projects can have the potential to cause negative impacts on particular sites, including all those designated sites listed above, and on other habitats and species. The magnitude of such impacts will vary depending on the relative importance of the site or species involved, and the degree to which the site is affected. Impacts may be temporary, for example occurring only during the construction phase, or permanent, and can be direct (such as land take) or indirect (such as changes to local hydrology or increased nitrogen deposition as a result of vehicle emissions). The County Council will therefore assess the impacts of all transport projects on biodiversity.

In order to sustain and improve the quality of life of our local communities, and to safeguard biodiversity itself, the County Council will seek to ensure that transport projects avoid damage to areas of significant biodiversity interest through the design process, providing mitigation where damage cannot be avoided, and compensatory works as a last resort. The County Council will involve relevant stakeholders, such as the Nottinghamshire Wildlife Trust and Natural England, at an early stage in the design process to ensure that projects are properly considered, and that opportunities are not missed.

As well as seeking to avoid harm to biodiversity, transport projects will, wherever possible, also be used to find opportunities to contribute towards the aims and objectives of the LBAP, by enhancing and restoring existing areas of habitat, and by creating new areas. This will be done by identifying the most suitable habitats for creation, including habitats which might support particular species known to be present in the area. Such opportunities might include the use of SUDS systems to create new wetlands, the creation of new areas of species-rich grassland or heathland along the verges of road schemes, or the planting of new native hedgerows and woodland.

The County Council will also take steps to increase the biodiversity value of the highway network as a whole. This will include it continuing to run the Notified Road Verge scheme, whilst also looking at opportunities to bring other areas of habitat within, or adjacent to, the highway verge into sensitive management which maintains and enhances its value, thereby allowing the highway network to function more effectively as a wildlife corridor and contributing towards the LBAP.

8. Monitoring

This chapter should be read in conjunction with Section 5 – Targets, of the Implementation Plan which details further information on each of the indicators that will be used to show progress in delivering the LTP3 objectives.

Department for Transport (DfT) Local Transport Plan (LTP) Guidance published in 2009 recommended that authorities adopt the relevant transport and non-transport indicators from the National Indicator Set in their LTPs, in particular those indicators reflected as targets in Local Area Agreements. In August 2010 whilst the Coalition Government was reviewing its policy on local Government performance (i.e. on the future of the National Indicator Set and Local Area Agreements), it encouraged local authorities to consider what indicators are most important for their own areas, and to retain the ability to compare themselves against others locally to improve efficiency and effectiveness.

Government has subsequently significantly reduced the numbers of indicators (including those relating to transport) that have to be monitored by local authorities. Whilst this has reduced some of the burden on Councils, it has also removed the consistency of monitoring so that local authorities can compare their performance against similar authorities.

The County Council has determined a series of indicators to be monitored over the LTP3 period. These have been informed by:

- Government guidance concerning indicators and targets
- the Sustainable Community Strategy 2010-2020 and Strategic Plan 2011-2014 for Nottinghamshire
- the transport vision, goals and objectives
- consultation with County Council elected members, the public and stakeholders
- the Strategic Environmental Assessment of the LTP3
- robust analysis of empirical information, and
- the levels of available funding and value for money.

A hierarchy of indicators has been developed which is:

- **key outcome indicators** including targets for the relevant national indicators and any other indicators that directly measure the achievement of transport objectives
- **intermediate outcome indicators** which represent proxies or milestones towards key outcomes and includes targets for some national indicators (e.g. bus punctuality), and
- **contributory output indicators** measuring the delivery of schemes, policies or initiatives that will contribute towards the achievement of targets in the two categories above.

8.1 National indicators

Ten indicators will continue to be monitored nationally, predominantly utilising nationally collected data (as indicated in brackets):

- people killed or seriously injured in reported road traffic accidents (using local authority data)
- children killed or seriously injured in reported road traffic accidents (using local authority data)
- average journey time per mile during the morning peak in the ten largest urban areas, which includes routes into Nottingham city centre (using DfT data)
- principal (A) roads where maintenance should be considered (using local authority data)
- non-principal classified (B & C) roads where maintenance should be considered (using local authority data)
- access to services and facilities by public transport, walking and cycling (using DfT data)
- access to employment by public transport (using DfT data)
- number of local bus and light rail passenger journeys originating in the authority area (potentially using DfT data)
- bus services running on time (using local authority data)
- children travelling to school – usual mode of travel (using DfES data).

Additional casualty data may be required although this will not be clear until the national road safety strategy and associated indicators are published (due in Spring 2011).

8.2 Local indicators

The County Council's local indicators have been selected with a view to ensuring that all aspects of strategy delivery are monitored and reflected in the targets. This ensures that all projects can be justified in terms of their contribution towards achieving the local objectives but also reinforces their contribution to the national objectives. Targets have only been set for local indicators that are directly relevant to the needs and interests of local communities. The local indicators selected by the Council are detailed in table 28 below (with references LTP1 to LTP30). Table 28 details all of the national and local indicators, including how the intermediate and contributory outcome indicators relate to the key outcome indicators.

Additional indicators to those detailed in table 28 may be adopted at a later date. For example, indicators relating to flood management, as well as extra indicators relating to road casualties will be considered at a later date once the strategies relating to these have been finalised. Similarly, Community Safety Partnerships will be moving from thematic crime reduction targets (e.g. violent crime, acquisitive crime etc.) to a geographic 'hot spot' approach, by which targets will be set for 15 specific areas in Nottinghamshire. 'Problem profiles' of these areas are being undertaken and any issues identified as relating to transport will be considered for inclusion as LTP3 indicators.

Detail on the monitoring methodology can be found in the Implementation Plan.

There are also a number of additional output indicators included in the Strategic Environmental Assessment of the LTP3 which will be used to supplement the LTP3 indicators when reviewing the performance and impacts of this LTP3.

Table 28: Key, intermediate and contributory outcome indicators

Theme	Reference	Key outcome indicators	Reference	Intermediate outcome indicators	Reference	Contributory output indicators
Economy	NI167 and LTP1	Average journey time per mile during the morning peak on the urban centre networks in the county	LTP6	Traffic flows into town centres	LTP21	Number of registered car sharers on nottinghamshare
	LTP2	Changes in areas wide traffic mileage (vehicle kilometres travelled)	LTP7	Organisations with a travel plan	LTP22	Public satisfaction with passenger transport information
			NI177	Number of local bus and light rail passenger journeys originating in the authority area	LTP23	Public satisfaction with driver behaviour
			NI178	Bus services running on time		
			LTP8	Public satisfaction with local bus services		
Safety	NI47	People killed or seriously injured in reported road traffic accidents			LTP24	Rates of cycle theft
	NI48	Children killed or seriously injured in reported road traffic accidents				
Resilience of the network	NI168	Principal (A) roads where maintenance should be considered	LTP9	Unclassified roads where maintenance should be considered		
	NI169	Non-principal classified (B & C) roads where maintenance should be considered	LTP10	Footways where maintenance should be considered		
			LTP11	Condition of bridges and other structures		
			LTP12	Rights of Way improvements for all road users		
Active travel	LTP3	Child obesity levels	LTP13	Cycling levels	LTP25	Number of children undertaking cycle training
			LTP14	Footfall in market towns and district centres	LTP26	Length of shared or segregated cycle lane or path
			NI198	Children travelling to school – usual mode of travel		
Accessibility	NI176	Access to employment by public transport	LTP15	Access to training by public transport	LTP27	Number of fully accessible buses
			LTP16	Access to health care by public transport	LTP28	Provision of information at bus stops
			LTP17	Access to hospitals by public transport	LTP29	Provision of real-time information
			LTP18	Access to retail centre or local shops by public transport	LTP30	Take-up of concessionary fare passes
			LTP19	Accessibility to public transport services		
Environmental factors	LTP4	Number of air quality management areas (AQMAs) on County Council managed roads	LTP20	Particulate levels in air quality management areas (AQMAs)		
	LTP5	CO ₂ emissions from road transport				

8.3 Links to the local transport objectives

Nottinghamshire's transport goals and local transport objectives for Nottinghamshire are set out in Chapter 2 of this Plan. The delivery of these objectives has been reflected in the strategy contained within this document; the proposed measures detailed within the 2011/12-2014/15 Implementation Plan; and in the development of the indicators to measure the success of the LTP3.

Several of the indicator's however, relate to more than one of the transport goals and transport objectives. Table 29 below therefore highlights how the indicators relate to each of the twelve local transport objectives.

8.4 Targets

Targets will be set for each of the indicators based on what is expected to be achieved with the indicative financial allocations allotted by DfT.

These targets are 'numeric'; i.e., they consist of a final goal rather than set a target to increase by a given amount per year. In addition to this, trajectories will be set for each target so that performance can be monitored as progress is made through the lifetime of the Implementation Plan. The targets and trajectories (i.e. the annual milestones expected to be reached between the start and end of the Plan period) are the measures by which the success of the LTP3 will be judged and these are contained within the Implementation Plan and will be reviewed annually as part of the review process.

The Council has a strong track record in integrated transport delivery. The targets contained within the Implementation Plan aim to build upon this and are highly challenging, based on the current position and the highest level of improvement realistically achievable from the investment planned during the Implementation Plan period. The targets have been devised with reference to:

- **links to transport objectives** – to ensure the targets reflect the objectives detailed within this Plan (see Section 8.3 – Links to local transport objectives, above)
- **links between input (cost) and outcome** – to ensure the targets reflect the range of integrated transport measures to help deliver the objectives, and that the measures offer value for money
- **national trends** – the growth in traffic and decline in public transport use, together with other national trends, such as increasing car ownership are pertinent issues which have been factored into the development of local targets
- **past trends** – over the course of LTP1 and LTP2, significant progress was made against targets. This local progress has been factored into the development of targets
- **surveys and monitoring** – the Council undertakes extensive monitoring of the road network, perception surveys etc. to understand how and why people travel in the way they do. Other countywide surveys have also factored in, such as MORI surveys
- **comparison with other authorities** – the Council has sought to benchmark itself against other authorities which share similar transport characteristics in devising the targets within the Plan
- **local priorities** – the priorities of local residents has played a significant part in the development of the targets. This does not necessarily accord to current or past areas of poorest performance but has been factored into the process
- **wider context** – consideration has been given to changes in future land use patterns across the conurbation in devising the targets. This may obviously have consequences for related indicators and has been factored in accordingly
- **actions required by partners** – consideration has been given to partnership arrangements and any key activities required by partners to ensure delivery of the set targets
- **risks** – the risks associated with achieving the targets have been taken into account in the development of future trajectories, and
- **realism and ambition** – consideration has been given to all of the factors detailed above to ensure that a good balance between ambition and realism has been reached in setting the targets.

A review of the targets included in the LTP3 will be undertaken throughout the Plan period to constantly ensure they are sufficiently ambitious and realistic. Where appropriate, targets will be reviewed during the Plan period to either stretch them or review trajectories to ensure they are met. It should be noted that where there is one year's data (a number of the indicators), targets will be set in light of trend data as and when it becomes available. This will be carried out through the Implementation Plan review process.