Nottingham Local Transport Plan Strategy 2011 - 2026

the big wheel
turning transport around

Nottingham City Council

Nottingham Local Transport Plan: Strategy 2011 – 2026

Nottingham City Council

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Version: April 2011

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Foreword by Portfolio Holder

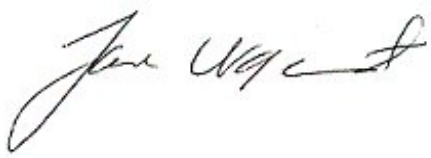
I am pleased to present this third Nottingham Local Transport Plan (LTP) to our citizens, businesses and partners for the period up to 2026. It is being introduced during a time of unprecedented change and austerity. We must address two fundamental challenges of supporting the economy to recovery and both adapting to and reducing the transport systems impact on climate change to help safeguard its benefits for future generations.

This LTP describes how we will build on our strong policy direction and continue to be radical to achieve our transport ambitions and how we will become the first local authority in the country to introduce a Workplace Parking Levy to tackle congestion and generate the local funding to turn ambitious projects including the Nottingham Station Hub, tram lines two and three and improved Linkbus network into reality.

The Plan features our proposals to continue to upgrade our transport networks, support sustainable transport modes through continuing to improve public transport and promote more walking and cycling and green the transport system. Good transport connects people to the services and places they need. Linking people to good jobs and training will be central to our efforts.

Nottingham is the largest economic and employment centre of the East Midlands; however this is contrasted with pockets of severe deprivation. This LTP supports the Council's aspirations to build an International city of significance to support economic and urban regeneration. We will work closely with local communities to deliver small scale improvements in local streets and areas to transform and drastically improve peoples' life chances, safety and well being.

The Council will strive to continue to be a leader in local transport delivery and is committed to delivering a transport system that meets our challenges, works for our communities, businesses and visitors, helps to support growth and is environmentally fit for the future.



Councillor Jane Urquhart, Portfolio Holder for Transport and Area Working

Chapter 1: Introduction

Introduction 1

This Chapter introduces the Local Transport Plan ('the Plan') framework and gives an overview of the approach and structure of the document. The wider policy context is described which gives the Plan its strategic direction and overall focus. The current partnership working arrangements are summarised which will be necessary in successfully delivering its goals.

1.1 Transport Strategy overview

Over the past decade Nottingham has built up a high quality integrated and efficient transport system. As individuals, the transport we use is integral in assisting a wide range of activities to take place. Transport gives people choice, flexibility and opportunities to travel to work, access education, healthcare and other services, allowing us to lead better quality lives. For local business, good transport is crucial in generating economic growth and enterprise, bringing with it job opportunities and creating access to other markets to ensure the city remains competitive. The Local Transport Plan (LTP) is the principal policy and investment tool through which the planning, management and delivery of transport improvements take place.

The LTP has been developed with a view to achieving wider health, socio-economic and environmental benefits to local citizens and businesses. Maintaining our current transport assets, the role of transport in supporting neighbourhood transformation, enabling enterprise, and providing and enhancing the sustainable transport system are core themes of this strategy.

The 2010 Comprehensive Spending Review and associated Budget announcements have confirmed the Government's commitment to reducing the national deficit. As such, public sector funding has entered a time of austerity with reduced levels of funding for local transport compared to what we have benefited from in recent years. However, not continuing to invest in our transport network would present us with major consequences where people and businesses are restricted by poor travel opportunities and lowered aspirations.

More specifically a lack of investment could lead to:

- A rise in carbon emissions which would further contribute to climate change
- Busier and more congested roads, with longer and less reliable travel times impacting on the city's business competitiveness
- Deterioration of the condition of our roads which could lead to an increased lack of safety
- People unable to access employment and learning opportunities and other essential services heavily impacting on the most vulnerable citizens
- Greater health inequalities, growing trends in obesity and lowered life expectancy
- Growing numbers of people will be affected by transport related noise and poor air quality

Whilst there are very challenging times ahead, transport will play an instrumental role in leading the city to recovery following the effects of the recession and tightening budgets. Being clearer about our priorities, maximising value for money and getting the most of our transport assets will be central to the delivery of this Plan particularly whilst the city emerges from the impacts of the economic downturn.

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Box 1.A: Decade of success

Partnership working has been an essential element of delivering an effective transport system with valuable contributions having been made through the public, private and voluntary sectors working together. Work with our partners has helped us to secure substantial investment helping to improve Nottingham's transport offer. This success has earned Nottingham an enviable reputation as a national leader and Centre of Excellence for local transport delivery. Most recently the City Council has gained national recognition for Local Transport Authority of 2010 at the UK Bus Awards and ranked by the Campaign for Better Transport as the least car-dependant city in the country.

Key achievements delivered through past LTPs include:

- Nottingham Express Transit Line One tram route carrying up to 10 million passengers per year
- A comprehensive integrated bus network carrying 63 million passengers per year
- Traffic dominance reduced in the city centre and creation of new high quality public spaces including the award winning Turning Point bus priority scheme and Market Square transformation
- Traffic growth and congestion levels contained across the conurbation since 2005
- 50% reduction in the numbers of killed and seriously injured casualties over the last 10 years
- Quality public transport waiting facilities, raised kerbs at bus stops and electronic information displays on all main corridors
- One of the highest levels of pupils walking to school in the country (63%)
- New cycling measures including the Big Track traffic free 10 mile route, commuter corridors, RideWise cycle training and national demonstration project to promote cycling to further education sites
- £40 million public realm and transport improvement programme prioritised through local neighbourhoods
- "Big Wheel" marketing campaign supporting transport investment and encouraging changes in travel behaviour
- Council's Portfolio Holder for Transport and Area Working recognised with Outstanding Contribution to Transport award at National Transport Awards 2010
- Highest resident satisfaction in the country for highways and transport provision for local bus services, public transport information and traffic management
- UK Bus Awards wins for Nottingham City Transport and Trent Barton bus operators
- Beacon Status award for Road Safety to Nottingham City Council and jointly awarded to Nottingham City and Nottinghamshire County Councils for Improving Accessibility
- Natural England award for best integration of the LTP with the Rights of Way Improvement Plan

1.2 Approach

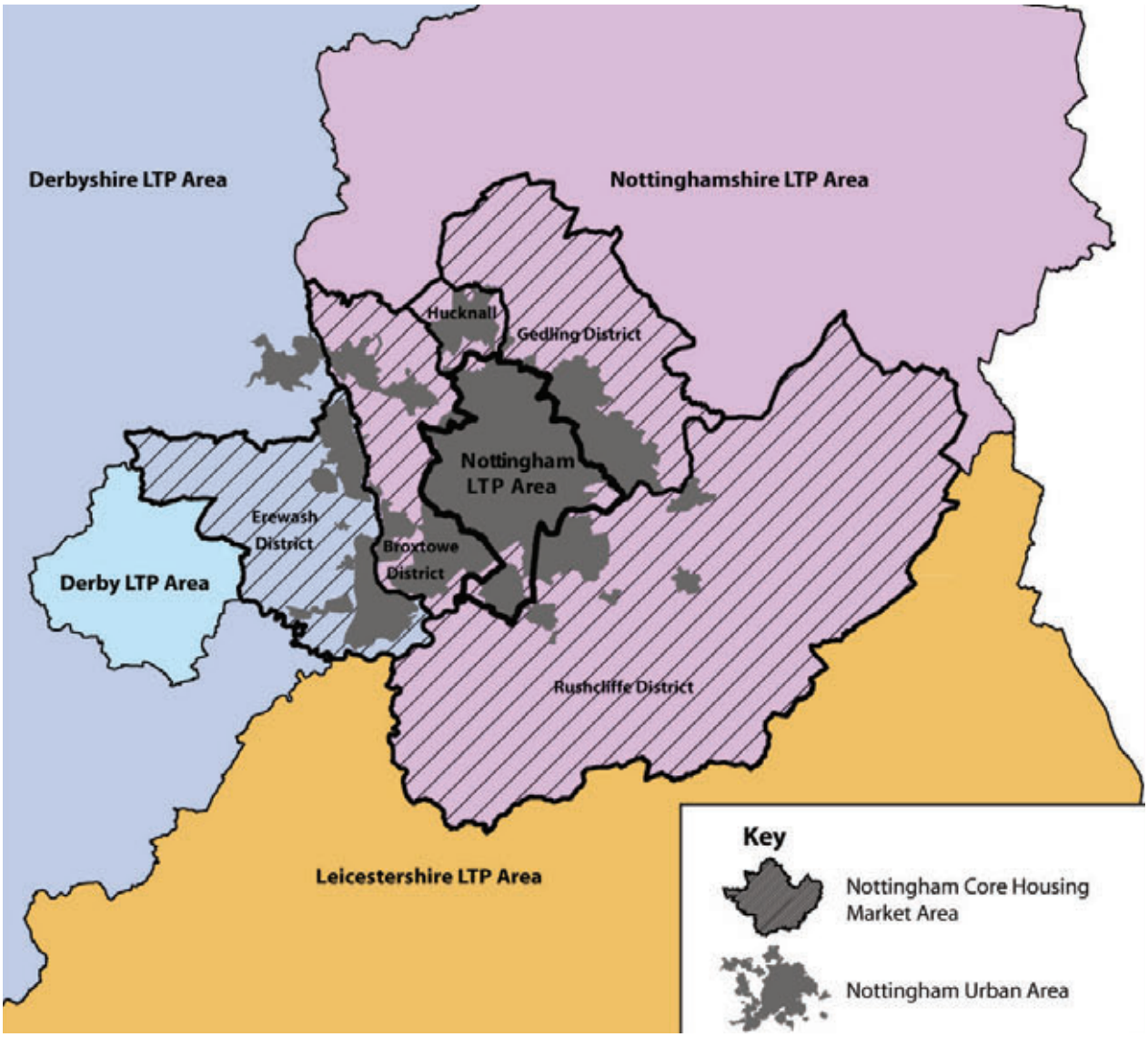
This Plan forms the strategy and investment proposals for delivering transport improvements across Nottingham City Council's administrative area from 2011 to 2026. It forms the City Council's third LTP replacing the 2006 – 2011 strategy (which was jointly produced with Nottinghamshire County Council covering the Greater Nottingham area) and fulfils the legal obligation to prepare a Plan under the Local Transport Act 2008.

1.2.1 Plan area

The area this LTP covers is highlighted in Map 1.1 Nottingham has a resident population of 300,800[(1)] people served by a vibrant city centre economy and town centres in Bulwell, Hyson Green and Sherwood. Collectively there are 20 wards in the area governed by 55 locally elected councillors.

1 Office of National Statistics 2009 Mid-Year estimates of population

Map 1.1: Nottingham Local Transport Plan Area



1.2.2 Structure of the Plan

The Local Transport Plan has been developed to comprise two component documents:

LTP Strategy 2011 - 2026 outlines the long-term transport strategy and proposals covering 15 years.
LTP Implementation Plan 2011 – 2014 details the funded programme of transport schemes and initiatives to be delivered.

The LTP Implementation Plan is a separate document and has been produced alongside this strategy. Further detail is provided in Chapter 8 and the plan can be found in full at: www.mynottingham.gov.uk/ltp3

Supplementary documents that support the Strategy and Implementation Plan include:

- **Integrated Impact Assessment** which brings together the strategic environmental, equality and health impact assessment setting out implications and mitigating requirements of the LTP
- **Highway Asset Management Plan** which provides a strategic overview of how the highway network is managed. It also forms a tool to improve asset management practices by assisting in the development of renewal and maintenance strategies to deliver cost effective improvements

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- **Network Management Plan** fulfils the Network Management Duty setting out how the City Council will bring together and improve systems and procedures for the effective management of the network with regard to reducing congestion and disruption to the highway
- **Public Transport Information Strategy** responds to the Bus Information Duty which requires the City Council to work with bus operators about the type and format of information provided on bus routes, timetabling of services and facilities and connections with other public transport services that are available to the public
- **Rights of Way Improvement Plan** which is required under the Countryside and Rights of Way Act 2000 and it describes actions for the improvement, maintenance and promotion of the public Rights of Way network to meet present and likely needs for outdoor recreation, leisure, health and access
- **Ticketing Strategy** which details how the 'Citycard' smartcard platform will be expanded to include greater functionality, cash 'e' purse capabilities and integrated ticketing

All documents are available on the City Council's website at: www.mynottingham.gov.uk/ltp3

1.2.3 Structure of LTP Strategy

This document is made up of eight chapters and two separate appendices, detailed below:

Chapter 1 introduces the LTP, describes the structure of this document and includes its relationship to other local policy documents.

Chapter 2 details how the Plan has been developed, the LTP vision and objectives, and provides an overview of the key challenges.

Chapters 3 to 7 provide context on each strategic objective for transport, outlines key problems and opportunities, and the strategy proposals and measures which will help to achieve the desired outcomes

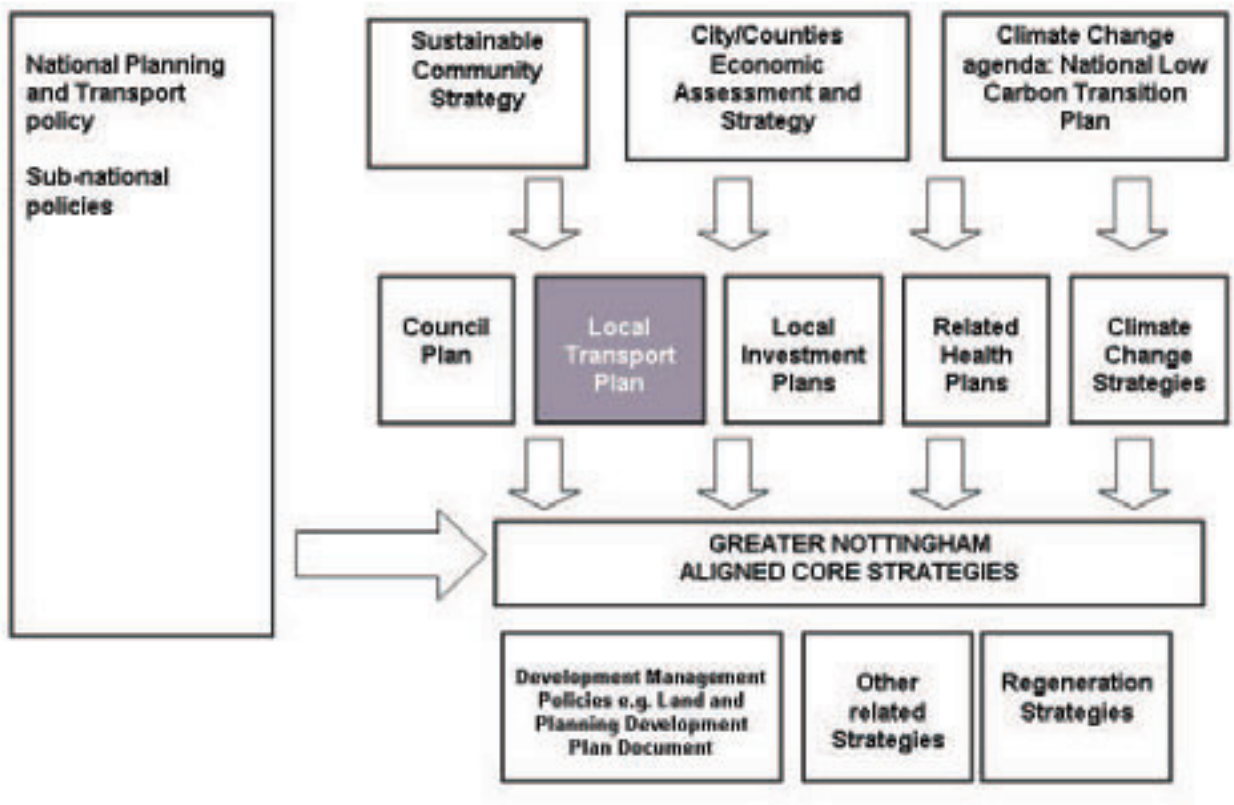
Chapter 8 provides information on the Implementation Plan, the timetable for key funding processes and major schemes. It also provides a summary of the desired transport outcomes and information on the framework of performance measures.

Action plans for improving air quality and mitigating noise impacts from transport respectively and can be downloaded from: www.mynottingham.gov.uk/ltp3

1.2.4 The role of transport

Good transport is a vital factor for delivering better services, improving quality of life and building stronger sustainable local economies through helping the efficient movement of people and goods. This means it is important that this transport strategy is in line with wider policies for economic development, the environment, education, health, planning, equality, community and social inclusion. The Strategy sits within this broader local government policy context (as illustrated in Figure 1.1) across which the LTP helps to add value.

Figure 1.1: Strategic fit of the Local Transport Plan



A number of key documents and strategies helped to inform the overall strategic direction and purpose of the Plan. These were detailed in a strategic document review available online at: www.nottinghaminsight.org.uk

1.2.5 Supporting the economy

The 'Local Growth: Realising Every Places Potential' White Paper identified the Government's requests for forming Local Enterprise Partnerships (LEPs) to replace the Regional Development Agencies. LEPs would be accepted based upon their focus on growth, digital infrastructure and a low carbon economy. Nottingham and Derby City Councils and Nottinghamshire and Derbyshire County Councils have collaborated with local business to develop a LEP. The LEP forms a private sector led partnership that will set the strategic business context for and co-ordinate the alignment between planning, transportation and other major infrastructure provision, including digital infrastructure and communications across the four authority areas. It will act as a key sounding board for a broader approach (including housing, transportation and infrastructure) to regeneration and foster close cross-border working recognising the importance of links to neighbouring economic areas like Sheffield, Leicestershire and Manchester. More information on the LEP is included in Chapter 6.

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Map 1.2: Derby, Derbyshire, Nottingham, Nottinghamshire LEP Area

Further information on the LEP can be found at: http://d2n2lep.org

In the October 2010 Comprehensive Spending Review the Government announced the introduction of the **Regional Growth Fund**. The fund is designed to encourage private sector growth and to support areas reliant on jobs in the public sector. £1.4 billion of capital and revenue is to be awarded through a bidding process made available over three years from April 2011 to 2014. Objectives of the fund are to stimulate enterprise by providing support for projects and programmes with significant potential for economic growth and create additional sustainable private sector employment and encourage the transition of areas currently reliant on the public sector to move towards a private sector-driven economy.

1.2.6 Joined up planning

A crucial aspect to transforming Nottingham and the success of delivering sustainable housing and employment growth is the integration of land use and transport planning, and therefore it is essential we work closely with the surrounding local planning authorities.

In 2005, the Nottingham Core Housing Market Area (HMA), covering the administrative areas of Nottingham City, the Boroughs of Broxtowe, Gedling, and Rushcliffe within Nottinghamshire and Erewash in Derbyshire, was designated as a Growth Point area by the Government. Collectively the

area has a current population of 768,000, which is projected to rise 7% to 824,000 by 2026. The Nottingham city region employment and land study has shown that 18,000 new office jobs will need to be catered for between 2003 and 2016[(2)].

The Core Strategy sets the overall spatial vision for an area and is the key development plan document forming a part of the Local Development Framework. The **Aligned Core Strategies** has been developed in partnership with the authorities within the Nottingham core HMA to ensure coherent planning for the future of the area would be more consistent whilst also making the best use of resources.

For more information on the Aligned Core Strategies visit: http://www.gngrowthpoint.com

This new planning framework presents an opportunity to look across the broader geographical HMA area to better reflect current and future housing, land use and travel trends and demands in each of the local transport authority (Nottingham City, Nottinghamshire and Derbyshire County Council) LTPs. To realise this opportunity the three Council's have entered into a voluntary agreement for joint working over this Plan period allowing for aligned strategies and infrastructure proposals in a consistent manner. All three authorities have developed 15 year LTP strategies in line with the Aligned Core Strategies and shorter-term Implementation Plans of two years for Nottinghamshire County Council and three years for Nottingham City and Derbyshire County Councils.

1.2.7 Tackling climate change

Tackling climate change and reducing carbon emissions from transport is at the heart of this strategy. The City Council has been an early pioneer for tackling climate change giving its name to the Nottingham Declaration on Climate Change. Road transport is a major and growing contributor to UK carbon dioxide emissions, one of the harmful greenhouse gases released into the atmosphere, making up 21% of the total carbon emissions. The Government has committed to tackling climate change through setting national targets for carbon emission reductions. The LTP has been developed to encourage travel through more sustainable and greener modes and to future proof the transport system to climate change impacts. The low carbon and resilient transport strategy is presented in Chapter 4.

The Government announced a new **Local Sustainable Transport Fund** to encourage local authorities to develop packages of measures that support economic growth and reduce carbon emissions as well as deliver cleaner environments, improved safety and increased levels of physical activity. The bid will also need to demonstrate value for money, deliverability and affordability. A mix of capital and revenue funding will be made available from £30 million in 2011/12 increasing to £80 million by 2014/15. Local authorities will have to compete for this funding and the City Council will be working with Nottinghamshire and Derbyshire County Councils and other partners to develop a bid. Further details of the fund are included in the LTP Implementation Plan.

1.2.8 Working in partnership

Joint working has allowed the effective development and implementation of transport initiatives within Nottingham, together with a sharing of best practice with organisations further afield. The City Council's work with national transport agencies, private transport operators, service providers, businesses and interest groups is vital to deliver an effective transport system. The Council will continue to work with the Greater Nottingham Transport Partnership (currently subject to review) and different Government bodies and groups to develop and deliver our proposals. Examples are detailed in Table 1.1:

2 Available at: http://www.nottinghamshire.gov.uk/employmentlandstudy.htm

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Table 1.1: Examples of working in partnership

Area of Working	Partnerships
International/European	
Mobility management initiatives and sharing good practice	The City Council has developed and built upon close working relationships with partners in Romania, Japan and China through hosting delegation visits. The City Council supports and participates in the Euro Cities annual European mobility week held in September. We have also participated in the annual European conference on mobility management and the Velocity annual cycle conference.
National	
Policy based steering group membership	The City Council takes the opportunity to participate in national policy forums in order to influence future transport initiatives and learn from best practice. Nottingham is a member of the influential Core Cities group, an associate member of the Passenger Transport Executive group and attends the Department for Transport's Concessionary Fares Project group.
Other agencies	The City Council continues to work with other Government agencies such as the Highways Agency and Network Rail respectively on major road and rail schemes.
Sub National	
Local Enterprise Partnerships	The authority is working with Derby City, Derbyshire and Nottinghamshire County Councils in partnership with local business to develop a Local Enterprise Partnership focused on aligning planning, transport and other major infrastructure provision.
Nottinghamshire Safety Camera Partnership (currently subject to review)	Nottingham City along with Nottinghamshire County Council, Nottinghamshire Police, Nottinghamshire Fire and Rescue, Nottinghamshire Primary Care Trust and the Highways Agency participate in the Nottinghamshire Safety Camera Partnership to work jointly to reduce road traffic accidents. Initiatives include speed management, red signal violations, drink-drive initiatives, motorcycle and pedestrian safety and improving driver behaviour.
Three Cities collaboration	The City Council are continuing to work closely with neighbouring Derby and Leicester City Councils to ensure that transport initiatives complement one another and best practice is shared. Current projects include the Three Cities urban drainage study.
East Midlands Traffic Managers Forum	The City Council is a member of the forum for local authority appointed traffic managers to share experiences and discuss common highway management and coordination solutions.
Midlands Service Improvement Group	The City Council participates in the Midlands Service Improvement Group sharing best practice, working collaboratively on initiatives, benchmarking and setting local standards on services and procurement.
Housing Market Area	
Strategy development, implementation and marketing of transport proposals	The Joint Advisory Committee for Planning and Transport comprises leading members from Nottingham City and Nottinghamshire County Councils to consider matters of strategic importance with cross-boundary implications and ensures effective co-ordination of the LTP takes place. The Council is also a member of the Joint Planning Advisory Board involving the District Councils, Derbyshire County Council and Erewash. The Greater Nottingham Transport Partnership (GNTP) facilitates consultation with local business, public and voluntary sector partners at every stage of the transport process from developing policies through to the implementation of schemes. The conurbation-wide Big Wheel approach to marketing is a particular strength of this work. The future hosting and funding arrangements of the GNTP is currently under review and consultation.
Quality partnerships	Quality partnership bus and rail meetings take place quarterly with transport operators. The Council has been an active member of the voluntary Bus Quality Partnership scheme with a view to coordinating infrastructure investment. The scheme developed a formal Punctuality Improvement Plan to improve bus performance by improving punctuality and reliability. In May 2010, the City Council introduced a Statutory City Centre Quality Partnership Scheme, which local bus operators have signed up to.

Area of Working	Partnerships
Respect for Transport	Since 2004 members from Nottingham City, Nottinghamshire County Councils, Nottinghamshire Police, Nottingham City Transport and Nottingham Express Transit have met bi-monthly to discuss ways to improve the community safety aspects for public transport users and staff.
One Nottingham	A series of thematic partnerships have been established by the One Nottingham Local Strategic Partnership to oversee the delivery of the Sustainable Community Strategy objectives and targets. Progress against transport targets fits into the World-class partnership, however there is strong interplay amongst the Green and Neighbourhood partnerships.
Community Level	
Area committees	Many of the neighbourhood local transport initiatives that are taken forward by the City Council are derived from the One Nottingham Local Strategic Partnership, area committees or other community based working groups e.g. the Equality and Disability group.
Local Access Forum	In line with the requirement under the Countryside and Rights of Way Act 2000, the Council coordinates a Local Access Forum (LAF) which acts as an advisory body providing comment on strategic access and recreation public rights of way issues within the city.
Third sector involvement	The City Council has been working with social enterprises on some transport services, which are provided by these groups such as the RideWise initiative focused on delivering cycle training across Nottingham to national standards, Nottingham Community Transport and Dial-A-Ride providing door services for those citizens unable to use conventional bus services.
Bus user groups	The City Council is continuing to work with bus service users including the Royal Institute for the Blind and learning disability groups to improve services for as many people as possible.

1.3 Policy context

The Plan has been developed to be consistent with a range of national and local government policies and strategies.

The Department for Transport set out national transport policy priorities that should be reflected in LTPs in the White Paper 'Creating Growth, Cutting Carbon: Making Local Sustainable Transport Happen'. The paper established Government's two key objectives to create growth in the economy and to tackle climate change by cutting carbon emissions as well as other important priorities including road safety, affordability, accessibility and people's health and wellbeing.

1.3.1 LTP contribution to other strategies

There is strong interplay with the provision of high quality integrated transport systems and the outcomes of successful economies, attractive places and thriving communities. The Plan will seek to strengthen and enhance these links with the wider agenda through the following strategies:

The **Sustainable Community Strategy Nottingham Plan** sets out the overall strategic direction and long term vision for the economic, social and environmental wellbeing of Nottingham. This was developed by the One Nottingham Local Strategic Partnership, which brings together the public, private, voluntary, community and faith sectors and was adopted in September 2009.

The Sustainable Community Strategy Nottingham Plan can be found at: www.onenottingham.org.uk

Nottingham City Council's **Council Plan 2009 – 2012** corporate priorities are fully aligned with the Sustainable Community Strategy and are all reliant upon an efficient transport network, as set out in Table 1.2:

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Table 1.2: Council Plan 2009 - 2012 Corporate Priorities

Theme	Priorities
World Class Nottingham	• Improve accessibility to and across Nottingham • Reduce the environmental impact of our activity and address the wider challenge of climate change
Neighbourhood Nottingham	• Improve physical access and infrastructure, including new or improved schools, pavements and street lighting in every neighbourhood • Better integrate and appropriately devolve public services, to ensure more accessibly and responsive services for all
Family Nottingham	• More families will be strong and healthy, providing an enjoyable and safe place for children to grow up
Work in Nottingham	• We will raise employment levels of local people • We will increase business growth
Safer Nottingham	• We will cut crime by a further 25% to support Nottingham becoming a significantly safer city with lower crime, lower fear of crime and perceptions of anti-social behaviour (ASB) overall and in every neighbourhood
Healthy Nottingham	• Work to reduce health inequalities between areas and social groups, working with partners so that people become healthier, liver longer, feel able to achieve their potential and make positive contributions to city life

The Council Plan can be found at: www.mynottingham.gov.uk/councilplan

The City Council's Message Map (Figure 1.2) sets out the Council's focus and direction for continuously improving services for our citizens through 'Leading Nottingham' principles. These principles are adopted through the LTP to help focus resources to improve accessibility to jobs and training opportunities, improve environmental quality and neighbourhoods, deliver effective traffic management and safety, and enhance the sustainable transport network. The Council will lead Nottingham's transport delivery and work together with our partners to develop schemes, identify efficiencies, and involve our citizens to deliver schemes that are fit for purpose.

Figure 1.2: City Council's 'Leading Nottingham' message map

The LTP is aligned with a number of objectives identified in other local documents, including:

Local Development Framework documents form the policies and framework for the spatial vision of Nottingham and assist in controlling development across Nottingham and also consider transport infrastructure and green infrastructure requirements of potential development sites: www.mynottingham.gov.uk/ldf

Local Investment Plan is a 15-year framework for the HMA that sets out priority projects and initiatives through Homes and Communities Agency investment. It ties transport infrastructure and improvements to potential housing and regeneration developments

Local Economic Assessment evaluates the economic conditions across Nottingham with a view to improving economic interventions, including better spatial prioritisation of investment by the City Council and its partners: www.nottinghaminsight.org.uk/insight/framework/local-economic-assessment/home.aspx

Climate Change Strategy (to be published autumn 2011) will set out the Council's plans to significantly reduce carbon emissions through greater efficiency and shifting to renewable energy. It will include city-wide and individual ward action plans: www.mynottingham.gov.uk/climatechange

1 Introduction

Climate Change Adaptation Action Plan undertakes climate risk assessments of transport interventions with a view to identifying possible adaptive responses: www.mynottingham.gov.uk/climatechangeadaptation

Energy Strategy provides an approach for the city's plans relating to sustainable energy supply and use to 2020. It includes a recommendation to set transport related carbon emissions reduction and technology targets of 20% reduction by 2020: www.nottenergy.com/

Fair and Just Equality Scheme details the types of inequalities in Nottingham and their locations by ward. The scheme highlights the equality priorities of making the city a welcoming place for everyone where citizens can achieve their potential by making services easier to access and providing fair treatment that meets individual needs. It includes an action to increase satisfaction with local bus services for disabled users: www.mynottingham.gov.uk/equalityscheme

Children and Young People's Plan and Youth Strategy priorities are central in realising national ambitions to make England the best place for children and young people to grow up. Transport planning has a vital enabling role to play in improving the health and lives of children, young people and families: www.mynottingham.gov.uk/childrenspartnership

Sustainable School Travel Strategy meets the Education and Inspections Act 2006 to assess the travel and transport needs of all children and young people and considers how transport infrastructure provision can be planned to meet the needs of all pupils: www.mynottingham.gov.uk/schooltravelstrategy

Other important strategy documents that transport schemes will need to adhere to are:

- **Nottingham city centre Masterplan 2005 - 2015** sets the strategic spatial framework for the development of the city centre through the continuation of an integrated approach to planning, economic development and transport delivery
- **Nottingham city centre Urban Design Guide** sets out the physical framework for the city centre alongside strategic proposals that have been planned for the Eastside, Southside and Waterside regeneration areas on the fringes of the city centre
- **Nottingham city centre and neighbourhoods Streetscape Design Manuals** are a local interpretation of the national Manual for Streets guidance, which specify materials and design criteria to be used on the streets and public spaces of the city

All documents can be found at: www.mynottingham.gov.uk

1.3.2 Summary

This introduction has set the scene for what the Nottingham Local Transport Plan is, why it is necessary to the city's success and the Council's approach with developing it. The Chapter has described why transport is important and its role in achieving wider objectives linked to health, planning, social inclusion and the environment. A summary of the essential partnership working arrangements and broader policy framework has been presented which have helped to set the strategic direction of the Plan. This is discussed further in Chapter 2 it goes on to describe how local evidence and consultation feedback has helped develop the vision this Plan will deliver and the key challenges the Council must face in the process.

Chapter 2: Developing the Plan

Developing the Plan 2

2 Developing the Plan

This Chapter sets out the process undertaken whilst preparing the Local Transport Plan (LTP). The beginning of the Chapter describes how local evidence, data intelligence and feedback through consultation has been used to inform the development of the LTP. It then goes on to detail the vision for improving transport over the next 15 years. The final sections summarise the key challenges facing the strategy that have been derived from the analysis of local data.

2.1 Playing to our strengths

Nottingham's local transport planning process has been well established over the last 10 years through collaboration and partnership working to deliver a strong policy direction. It has evolved from a foundation of demand management techniques to constrain traffic growth, underpinned by the provision of viable and sustainable alternatives for travel within and across the city, and of smarter travel choice packages such as travel plans and integrated ticketing.

Nottingham City and Nottinghamshire County Councils' were jointly designated as a Centre of Excellence for local transport delivery by the Department for Transport (DfT) earning a reputation for successful integrated planning and transport provision. The two authorities were awarded Beacon Status for their efforts to 'Improve Accessibility' and the City Council for 'Road Safety' during the second Local Transport Plan period in recognition that:

- **Accessibility** has been improved through the development of a high quality integrated public transport network with the introduction of the Nottingham Express Transit (NET) Line One tram in March 2004, improvements to bus services by local operators, the introduction of high quality waiting facilities with lighting and CCTV, and through the development of the Linkbus network with partners which now carries over 6 million passengers per year. This has been supported by the implementation of real time information displays and the introduction of bus lane enforcement to improve punctuality
- Successful **integration of land use planning and transport delivery** has been seen through the city centre Turning Point traffic redistribution scheme, Market Square and Trinity Square redevelopments, and quality streetscape improvements across the city centre and regeneration areas
- Considerable attention has been given to **addressing road safety** through speed enforcement along main routes coordinated through the Nottinghamshire Safety Camera Partnership, the implementation of 20mph school safety zones and an ongoing programme of education, training and publicity aimed at all road users including the innovative child LIFECYCLE training initiative and BAREbones and Shiny Side Up motorcyclist education campaigns

Based on the success and outcomes to date, this approach forms a solid platform on which to build this Plan. In order to develop an effective and deliverable strategy we have prepared this strategy by moving through four key steps:

1. **Nottingham today:** Through compiling a robust evidence base we were able to take stock of our current standing and draw out the key challenges and problems this LTP would need to address
2. **Getting to tomorrow:** The strategic policy framework helped to inform the vision, objectives and desired outcomes of the Plan and through consultation with partners were tested and refined
3. **Delivering change:** A series of strategic options were considered and tested through the Integrated Impact Assessment process and helped develop a preferred option for the strategy to achieve over the next 15 years
4. **Tracking progress:** Through incorporating a series of performance measures linked to the strategic objectives and proposals to monitor progress. These are discussed in Chapter 8

Throughout this process a key principle has been involvement, ongoing engagement and consultation with delivery partners and key stakeholders. Using their feedback the Council have been able to refine and focus the approach and proposals to how the Council will go about achieving our aspirations.

2.1.1 Compiling the evidence base

The DfT guidance for LTPs[3] outline the need to make best use of available resources through identifying clear priorities for dealing with the challenges this Plan will face. In order to assess where we are today, a comprehensive evidence gathering exercise was undertaken which brought together knowledge of the current transport network and future trends and demands placed on the system through anticipated growth. This information was captured in five evidence review papers, which set the context for the strategic objectives. Each paper considered:

- Baseline data and local intelligence across a number of key themes and areas including demographic trends, socio-economic and environmental issues
- An analysis of the key findings of various travel behaviour, attitudes, and perception and satisfaction surveys
- Review of national and local indicator performance and trends

Read together the evidence papers provide a picture for current and future changes, which are likely to impact on the strategy proposals. A summary of the key pieces of evidence are set out below and the full review papers can be accessed at: www.nottinghaminsight.org.uk

Table 2.1: Summary of key evidence

Type and Source	Description
Greater Nottingham Local Transport Plan 2006 – 2011 and associated documents, Nottingham City Council and Nottinghamshire County Council.	The data and tables contained within the reports prepared in the Congestion Delivery Plan, Network Management Plan, Accessibility, Road Safety and Bus Strategies, LTP2 Strategic Environmental Assessment and 2008 Delivery Report provide a wealth of statistical information on transport trends, and current transport problems and issues.
National Highways and Transport Public Satisfaction Survey 2010, Ipsos MORI. www.nhtsurvey.org	In August 2010, Nottingham participated in a National Highways and Transport public satisfaction survey inviting 6,000 city residents to respond. A total of 95 local authorities took part in the survey, which consisted of a 12-page questionnaire allowing for comparisons across the participating authorities. Questions covered all aspects of local highway and transport services (e.g. from the condition of roads and footways to the quality of local bus services). Nottingham ranked highest overall nationally and across the Core Cities in three categories including local bus services, public transport information and traffic management categories and in the top five for ease of access (no car), taxi/minicab services, local road safety, management of roadworks and highway enforcement/obstruction.
Three Cities Agglomeration and Accessibility Study 2010, East Midlands Development Agency.	This study examined approaches to improving transport connectivity within, between and beyond Derby, Leicester and Nottingham, with the aim of maximising economic productivity and limiting the carbon impacts of additional journeys resulting from economic and population growth.
LTP Integrated Impact Assessment 2010/Core Strategy Sustainability Appraisal 2008, Nottingham City Council.	Assessment of economic, social, equality, health and environmental impacts of the Nottingham Housing Market Area Aligned Core Strategies and Nottingham Local Transport Plan.
Economic Assessment 2010 & Greater Nottingham Economic Review 2009, Nottingham City Council and Nottinghamshire County Council.	Analysis of economic conditions in the local area in order to get a more accurate, evidence based picture of the opportunities and challenges facing the local economy.

3 Available at: http://dft.gov.uk/pgr/regional/ltp/guidance/localtransportplans/

2 Developing the Plan

Type and Source	Description
Air Quality Detailed Assessment and Management Reports 2010, Nottingham City Council.	Annual air quality monitoring updates and assessment of conditions in response to air quality standards and compliance required by the Department for Environment, Food and Rural Affairs (DEFRA). Includes updates on air quality management areas in Nottingham.
Greater Nottingham and Ashfield Infrastructure Capacity Study 2009, HMA authorities.	The study identifies if and where there are deficits in infrastructure provision within the Housing Market Area and details additional infrastructure requirements to support the expected level of growth
Joint Strategic Needs Assessment 2009, NHS Primary Care Trust	Analysis of data and local knowledge shows the health and wellbeing status of local communities and defines where inequalities exist alongside evidence of effectiveness of interventions.
State of Nottingham Report 2008, One Nottingham Local Strategic Partnership.	One Nottingham and its partners have collated, analysed and discussed a wide range of evidence and local intelligence in order to establish a shared view of Nottingham's strengths and weaknesses. The report also examines how the city is changing, and what future opportunities and risks this change may present.
The Big Idea Greater Nottingham Local Transport Survey 2008, Nottingham City and Nottinghamshire County Councils with The Big Wheel.	Local perception survey with large, small and medium sized business and public to assess their attitudes to various transport challenges, objectives and priorities.
Nottingham Insight data repository, Nottingham City Council	Shared evidence base of local demographic, economic and social trends, provides comparisons across other core cities and nationally. Sources include Office for National Statistics, Census and other government statistics.
Major Scheme Appraisals/Business Case, Nottingham City Council and Nottinghamshire County Council.	Comprehensive appraisals undertaken of major scheme proposals including the Turning Point (and associated evaluation report), Nottingham Express Transit tram, and Nottingham Station. Includes the DfT's "New Approach To Appraisal", environmental appraisals and consideration of alternative scheme options.
Noise Action Maps, Department for Environment, Food and Rural Affairs (DEFRA).	A strategic noise map was produced for the Nottingham agglomeration by DEFRA based on major road and rail noise computer modelling from information on traffic flows and rail movements.

2.1.2 Transport forecasting model

The Nottingham Housing Market Area (HMA) multi-modal transport model was expanded in 2009 based upon an existing model and updated with new data. It was developed jointly with the authorities within the HMA (the City Council and Boroughs of Broxtowe, Gedling and Rushcliffe in Nottinghamshire and Erewash in Derbyshire) and endorsed by the Highways Agency. The model includes a simulation network consisting of three main elements to forecast road trips by various classes of user and trip purpose, Nottingham Express Transit (NET) Tram and heavy rail, and trip distributions between modes of transport.

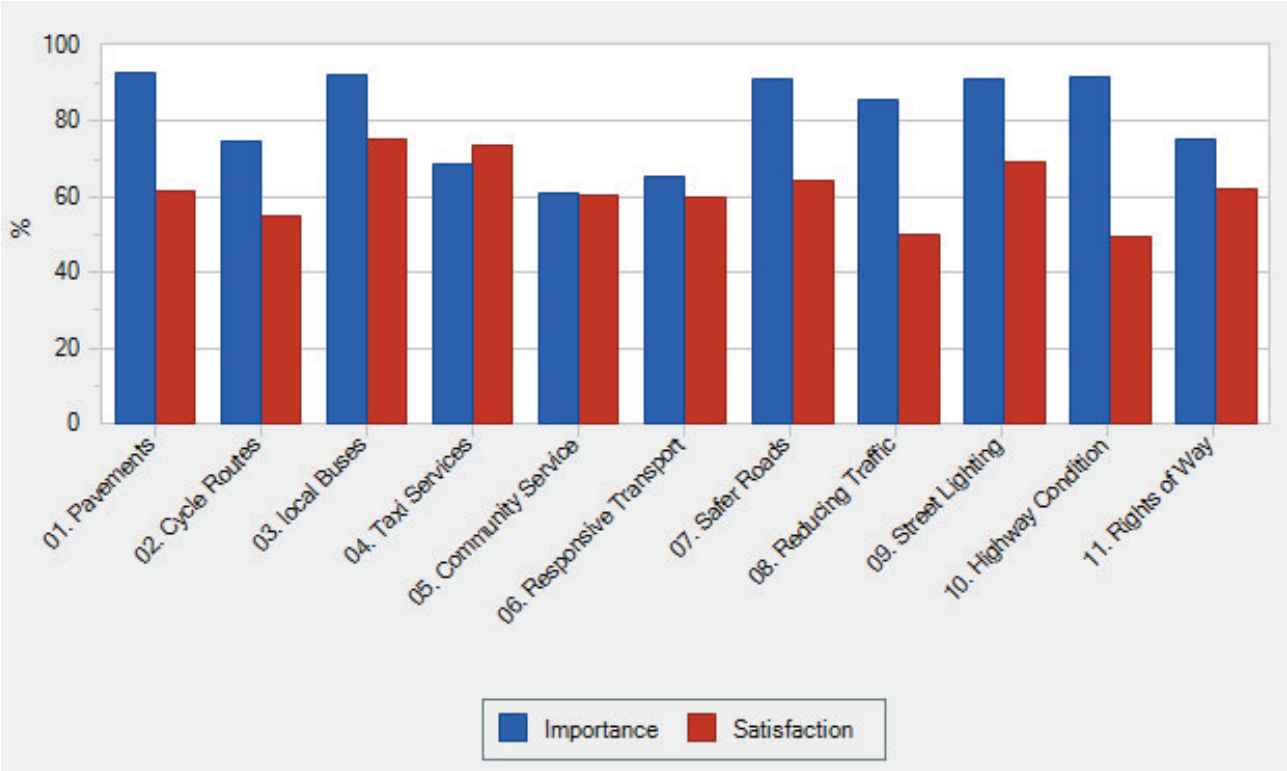
The model has been used to provide information on forecast pressures on the highway network which would result from potential development and growth sites, and includes forecasts of future traffic problems for 'with' and 'without' development scenarios. The model is essential for overseeing the impacts of key policies within the Aligned Core Strategies and the LTPs.

2.1.3 National Highways and Transport Satisfaction Survey

In August 2010, the City Council participated in a National Highways and Transport (NHT) survey alongside another 94 local authorities. Nottingham ranked highest overall nationally and across the Core Cities in three categories including local bus services, public transport information and traffic management categories and in the top five for ease of access (no car), taxi/minicab services, local road safety, management of roadworks and highway enforcement/obstruction.

Figure 2.1 from the survey shows the level of importance and satisfaction that residents felt across a range of transport provision aspects. This data from local citizens is vital in planning improvements that communities feel are important to them. Detailed analysis on the NHT survey results can be found on the web at: www.nhtsurvey.org

Figure 2.1: NHT Survey importance and satisfaction results for Nottingham City 2010



2.1.4 Consultation and engagement

A key strength to the Council's success has been the involvement and influence of our local partners in formulating this strategy. An extensive programme of consultation events took place to ensure a large range of local partners, business, community and voluntary groups and the public were given the opportunity to shape the LTP. The consultation audience has been formed using our extensive stakeholder database cultivated over the past years, supplemented by the DfT's LTP guidance[4] list of suggested partners.

Tried and tested approaches were utilised as well as new innovative ways of obtaining views through the use of web resources and social media. The consultation was split into three broad stages:

4 Available at: http://www.dft.gov.uk/pgr/regional/ltp/guidance/localtransportplans/

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Stage 1: Early consultation on the proposed direction and strategic framework was tested through workshops with members of the Greater Nottingham Transport Partnership and One Nottingham partners in the summer/autumn 2009. Partners were asked to rank the importance of the LTP strategic objectives for transport (detailed in Section 2.2). The goals of supporting the economy and reducing carbon emissions from transport were jointly ranked as the highest priorities.

In early 2010 the City Council participated in follow up workshops with the same groups to feedback on progress and developments with the LTP and to seek views on the proposed options and measures. This was done with the involvement of the Nottinghamshire and Derbyshire County Councils' to enable partners to feedback on key cross-boundary transport issues and measures for inclusion in the respective Plans.

Stage 2: LTP challenges and options consultation document was produced to tell the Nottingham LTP story so far and included an emerging transport vision, key challenges and options for transport initiatives and measures, and desired outcomes. Consultation took place over a five-week period in the summer 2010 which asked respondents from local business, City Council officers, councillors, the voluntary and community sector, statutory environmental bodies, health, and equality and disability groups their views through an online eight-question survey. A large proportion of comments were in support of the overall approach taken with the Plan. In parallel to this, the Integrated Impact Assessment Scoping Report was also consulted on.

Stage 3: Consultation on the LTP Strategy and **Draft Integrated Impact Assessment Report** consisting of an eight-week consultation took place between November and January 2011. The consultation activities aimed to encourage partners and citizens to participate in the consultation process and help to shape the future of local transport in Nottingham.

Consultation feedback was grouped into two response categories:

- **Online survey response** generating 797 responses covering over 1,000 issues which were categorised into 18 groups ranging from tram, bus, ticketing, rail, car parking and road safety
- **Feedback from statutory bodies and partners** totalling 25 letters including Campaign for Better Transport, Confederation of Passenger Transport, transport operators, Nottingham Trent University, Local Access Forum, NHS Nottingham City Public Health and Sustrans

All consultation documents and the full consultation feedback report can be accessed online at: www.nottinghaminsight.org.uk

Government announced the local government settlement in December 2010 which determined individual authority allocations for small scale local transport measures and highway capital maintenance for the next four years. The City Council set out its proposed three-year programme between April 2011 and March 2014 in the LTP Draft Implementation Plan which was subject to approval by the Council through the annual budget process in March. The final Plan has been published on the dedicated LTP webpage at: www.mynottingham.gov.uk/ltp3

Integrated Impact Assessment

Two statutory assessments are required to be carried out against the Plan to help inform its ongoing development:

- Strategic Environmental Assessment
- Equality Impact Assessment

It is also good practice to undertake a Health Impact Assessment.

The process and requirements for each of these assessments were considered as part of one Integrated Impact Assessment (IIA) to ensure environmental, health and equality implications are simultaneously captured and appropriately mitigated.

The first stage of the IIA was to prepare a scoping report and consultation on the report took place for five weeks during the summer 2010 with the statutory environmental bodies English Heritage, the Environment Agency and Natural England as well as key local partners including NHS Nottingham City Primary Care Trust and the Health and Environment Partnership.

The scoping report provided the policy context and baseline information about the environmental, health and equality issues relating to transport. It also established the framework for assessing the impacts of five strategic options developed for the Plan against eight IIA objectives:

- Population and economy
- Climate and carbon emissions
- Material assets (minerals, waste, energy and fossil fuels)
- Water
- Natural environment (landscape, biodiversity, soil and contaminated land)
- Urban environment including townscape and cultural heritage
- Equality and inclusion
- Human health including safety, air quality and noise

The IIA assessment framework was developed through a workshop with partners comprising of the planning, health, environment, equality, air quality, maintenance sectors and the statutory environmental bodies.

This IIA framework provided the approach for assessing impacts of the five LTP strategic options. This was done as a two stage process through workshops and one to one meetings with expert officers and strategic partners held during summer 2010. A partner workshop considered the LTP strategic options set out in the challenges and options consultation alongside a 'without Plan' option against the eight assessment objectives. This headline analysis combined with the feedback from the LTP challenges and options consultation informed the selection of the preferred LTP strategy. A second workshop and individual meetings then considered the individual strands of the preferred strategy option in more detail against the IIA objectives and the collated baseline data to identify impacts and recommendations for mitigation. The outcomes are summarised in Table 2.2. More detail is provided in the **Integrated Impact Assessment report** available online at: www.mynottingham.gov.uk/ltp3

Table 2.2: Summary of the significant effects arising from the preferred strategic LTP option

Theme	Significance of impacts
Climate/carbon emissions	Transport is the fastest growing source of greenhouse gas emissions in the UK with domestic transport currently contributing 21% of total UK greenhouse gas emissions, the majority from cars. Commuter and business travel constitute nearly 40% of all miles driven by car. Therefore the LTP will have a significant positive impact on reducing carbon emissions from transport by reducing the need to travel, encouraging active travel, and delivering modal shift to sustainable modes. However new highway infrastructure will increase capacity which could generate additional car trips. It will be possible to reduce carbon emissions over time through technology changes if policies are successful in continuing to constrain traffic growth.
Material assets (minerals, waste energy & fossil fuels)	The transport sector is currently over-reliant on oil and therefore vulnerable to sudden fluctuations in the global oil market. Although petrol vehicle use is falling with an increasing use of more efficient and lower carbon emission diesel, it is predicted that by 2025 the UK will be importing 57% of its oil compared to 15% in 2010. The LTP will play a significant role by providing public transport and low carbon travel options, reducing the need to travel and supporting modal shift thereby helping to reduce use of fossil fuels. The LTP will also have a medium impact in terms of use of scarce resources. New construction will increase the use of materials and generate construction waste.

2 Developing the Plan

Theme	Significance of impacts
Water	The LTP has the potential to make a positive contribution to reducing flood risk and to ensuring resilience of future transport infrastructure. The level of impact depends on implementation. Increasing impermeable surfaces increases surface water run-off and flooding risks so mitigation will be important to ensure the appropriate management of surface water, design of drainage systems and use of appropriate construction materials and techniques for resilience.
Natural environment (biodiversity, landscape and soil)	The LTP is most significant in terms of improving connectivity by improving access to open space and providing opportunities to develop and enhance green infrastructure. Will also provide opportunities to improve access to open spaces by improving the transport network and travel options. However the impacts will be largely dependent on the design and implementation of transport schemes and the ongoing management of individual sites. Some highways schemes could have the potential to reduce public enjoyment of open space which will need to be addressed through appropriate mitigation measures.
Urban environment	Impact of the LTP is significant as the city is primarily an urban environment. However the impacts are generally positive as transport investment offers opportunities to upgrade streetscapes through public realm improvements.
Population and economy	Overall the LTP is likely to have a significant positive impact as reduced congestion and benefits to accessibility will support economic development and business competitiveness.
Equality and inclusion including accessibility and crime	Transport planning plays an important role to improve accessibility and inclusion for all groups. The impacts are mostly positive as many transport improvements are targeted at improving transport accessibility. However reliance of the transport sector on oil is likely to lead to future price fluctuations that will affect the affordability of transport.
Health inequalities including air quality and noise	The gap in health inequalities is of increasing importance in Nottingham with life expectancy in the most deprived wards in the city 10 years below that in the most affluent wards. The LTP provides a significant opportunity to support active travel modes and to increase physical activity levels. Congested traffic is the primary cause of breeches of air quality standards in the City. Two Air Quality Management Areas (AQMAs) are currently designated in the Plan area. Action plans are in place to address these air quality problems. Transport related noise is an increasing area of concern and the LTP provides the opportunity to implement quieter technologies and to upgrade transport infrastructure to reduce noise levels.

This IIA approach considered the overall LTP strategy as a package of measures. More detailed consideration of specific location issues and impacts will be picked up during the statutory Environmental Impact Assessment for individual schemes at the scheme development stage.

2.2 Nottingham Plan long-term vision

Nottingham's long-term social, economic and environmental wellbeing is set out in the Sustainable Community Strategy (SCS) vision. It envisages that in 2030, Nottingham must not only be wealthier but fairer.

Nottingham City Council together with members of One Nottingham, which include the Children's, Crime and Drugs, and Health and Wellbeing partnerships, a range of businesses, organisations and the third sector, have established a vision for the city for 2030, which is set out in Box 2.1.

Box 2.1: Nottingham Sustainable Community Strategy vision

Go ahead Nottingham: Safe, clean, ambitious, proud

Nottingham in 2030 will be a city which has tackled deprivation and inequality by:

- Being one of Europe's top ten cities for science and innovation, sport and culture
- Making every neighbourhood a great place to live
- Giving the best start in life to all of our children and young people
- Making poverty history

Right at the heart of this vision is a determination that we will fashion a new direction for Nottingham where accelerated wealth creation goes hand in hand with a decisive breaking of the cycle of inter-generational poverty through early intervention, so that more of our children grow up to benefit from the city's wealth and with higher aspirations.

The Sustainable Community Strategy twenty-year Vision is that by 2030:

- Nottingham will be firmly established as one of Europe's leading cities for science and innovation, with a reputation for world-class research and a thriving knowledge-based economy that provides high quality jobs for local people as well as attracting the brightest talent from across Europe
- We want Nottingham to be a city where every neighbourhood is an attractive, sustainable and safe place to live and grow up, with each neighbourhood having its own unique character
- Nottingham will be recognised nationally as an aspiring and family-friendly city where all of our children and young people grow up to be ambitious and equipped to succeed
- We will break the inter-generational cycle of poverty that exists in too many communities by tackling causes not just symptoms through early intervention and achieve a new level of social mobility so that every child in the city can aspire to the same heights

The full Sustainable Community Strategy is online at: www.onenottingham.org.uk

2.2.1 Developing Nottingham's transport vision

Taking into account national and local objectives, the City Council has developed a long-term transport ambition for the Plan to aspire to achieve for the benefit of citizens, businesses and visitors. This vision will form a roadmap to 2026 and aims to provide a clear message for how the Council will respond to the challenges ahead and deliver a world-class, sustainable transport system for Nottingham.

The vision combines elements from the key themes of planning, health and the environment reflecting the importance of the LTP in the context of achieving these broader goals and recognising the role of a joined up approach to effective transport delivery and investment.

Box 2:2: A vision for improving Nottingham's transport

Nottingham 2026: contributing to a safe, clean, ambitious, proud city

Transport provision, in all its various forms, is an issue for everyone affecting everyday lives. We want transport in Nottingham to provide the network for a dynamic international city of significance where people want to live, work, study and visit with a premiere economy built on success and fairness.

We want to see a culture change amongst Nottingham's citizens and visitors, where walking, cycling and public transport becomes the logical first choice. We aim to tackle congestion, assist in city economic regeneration and promote greater accessibility and equality of opportunity which will contribute to a safer and healthier environment, whilst also reducing emissions and reducing carbon consumption. At the heart of this Plan is a commitment to make smaller scale improvements in local neighbourhoods which can have a huge impact on citizen's lives. In this way the overall quality of life for Nottingham and its citizens and visitors will be assured.

2 Developing the Plan

2.2.2 Strategic objectives for transport

To deliver the 2030 SCS vision, a set of strategic priorities and cross cutting aims were agreed by One Nottingham, forming the headline goals for the next decade to take the city forwards to the 'half way point'. A set of strategic objectives for transport have been derived from these SCS priorities to help guide transport delivery to 2026 through this Plan and are detailed in Table 2.3:

Table 2.3: Local Transport Plan strategic objectives

One Nottingham Sustainable Community Strategy	Local Transport Plan Strategic Objectives for Transport
• Develop Nottingham's international standing for science and innovation, sports and culture • Raise aspirations	• Deliver a world-class sustainable transport system which supports a thriving economy and enables growth
• Be environmentally sustainable	• Create a low carbon transport system and a resilient transport network
• Ensure that all children and young people thrive and achieve • Tackle poverty and deprivation by getting more local people into good jobs • Achieve fairness and equality of opportunity	• Improve access to key services, employment and training including creation of local employment and training opportunities
• Transform Nottingham's neighbourhoods	• Improve the quality of citizens' lives and transform Nottingham's neighbourhoods
• Reduce crime, the fear of crime, substance misuse and anti-social behaviour • Improve health and wellbeing	• Support citizens to live safe, independent and active healthy lifestyles

2.3 Challenges

The City Council has identified a number of key problems and challenges based upon the current evidence available which the Plan will seek to address. These challenges have emerged through document reviews, analysis of past and forecast future trends, findings from perception and satisfaction surveys, and transport computer modelling.

Table 2.4 details a summary of the key challenges against each of the five strategic objectives for transport. The key evidence findings for each of these challenges are described further in the problems and opportunities sections of the respective Chapters (3 to 7).

Table 2.4: LTP challenges

Priorities	Challenges
Deliver a world-class sustainable transport system which supports a thriving economy and enables growth	• Backlog of local transport assets in need of maintenance • Congestion on main routes into and out of the city and around the ring road during peak times that increase business costs and is the main cause of unreliability to bus services • Inadequate rail and road connections to national networks that mean journeys to London, other core cities and international gateways take longer than they should do. This puts Nottingham at an economic disadvantage relative to our competitors • Insufficient capacity of the local transport network to accommodate planned growth associated with new housing and employment developments

Priorities	Challenges
Create a low carbon transport system and a resilient transport network	• Contribute to the very challenging national targets for carbon reduction • Design, develop and maintain a resilient local transport system to cope with the impacts of a changing climate and extreme weather events • Address over reliance on oil in light of uncertainty over future supplies and potentially much higher prices • Ensure future transport infrastructure development and maintenance does not exacerbate flood risk
Improve access to key services, employment and training including creation of local employment and training opportunities	• High levels of social exclusion in the city • Improve the coverage, physical accessibility and affordability of transport to improve access to essential services, support choice and more independent living particularly for people on the lowest incomes • Address low travel horizons • Create more opportunities for training and local employment within the transport sector to improve skills and reduce unemployment of Nottingham citizens
Improve the quality of citizens' lives and transform neighbourhoods	• Rejuvenate the physical environment of many of Nottingham's more deprived neighbourhoods • Support regeneration initiatives through improved transport infrastructure and public realm • Create and improve access to green and open spaces, residential areas and local centres
Support citizens to live safe, independent and active healthy lifestyles	• Address the large-scale health inequalities that exist between people living in different parts of the city. This includes contributing to reducing obesity amongst young people and reducing the number of adults affected by cardio vascular diseases • Reduce adverse impacts of transport on citizens particularly in terms of poor air quality and noise which can affect people's health and wellbeing • Ongoing need to reduce the number of road casualties particularly vulnerable road users • Lower crime and the fear of crime that limits citizens' travel horizons

These challenges were tested through direct feedback from partners, businesses and the public. Whilst respondents agreed with the challenges put forward in the LTP challenges and options consultation, the general comments reiterated the scale of the problems facing local transport, in particular:

- Supporting economic growth and business competitiveness in the face of achieving carbon emission reductions
- Encouraging and supporting behaviour change as modal shift relies on adequate education and awareness and high quality integrated alternatives
- Maintaining transport assets as a priority in light of reduced funding however increasing modal shift onto sustainable modes is likely to require increased routine maintenance and replacement
- Access and ease of use issues for the most vulnerable transport users
- Sensible road safety and speed reduction measures should not impede emergency response times
- Greater emphasis on the value of active travel to increase physical activity levels to help to address health inequalities, whilst it also helps to improve accessibility and tackle affordability issues

2 Developing the Plan

- The need to work with wider partners e.g. emergency services, transport operators, health authorities, education and learning providers, workplaces and cycling groups to deliver cost effective mutual goals
- Given the Government's priorities, there is a need to work more with the third sector in light of reduced funding and to support the localism agenda

2.4 Approach

The LTP forms the blueprint for shaping the future of transport provision and infrastructure in the next 15 years. The Council faces unprecedented challenges in the short to medium term and delivering our aspirations is going to be limited by funding availability. However the Council will seek to continue to maximise opportunities and work collaboratively with our partners, stakeholders and the third sector to build on the achievements already delivered to enhance the quality, attractiveness and accessibility of Nottingham and local areas and unlock the city's potential.

The LTP adopts the following hierarchical approach that stipulates considering proposals and measures to be delivered in the following order:

Table 2.5: LTP intervention model

Intervention	Type of measures
Asset management	Consisting of measures directed at managing and maintaining the existing transport assets in order to support existing transport services, preventing deterioration and long term damage.
Demand management	Measures including integration of land use and transport planning to reduce the need to travel and shorten trip lengths, implementing smarter travel choices measures to promote the use of more sustainable modes of transport and where necessary the implementation of parking policies and fiscal measures to lower the demand for travel by car.
Encouraging alternatives	Consisting of providing sustainable alternatives through improvements to walking, cycling and public transport network infrastructure and facilities, as well as making it easier to interchange between different transport modes, through integrated design but also ticketing solutions.
Efficiency improvements	Including making the most efficient use of existing networks through prioritising road space for sustainable transport modes, smarter use of technology to smooth the flow of traffic, better management practices and promoting the take up of cleaner and low carbon vehicles.
Capacity improvements	Meaning new construction of highway infrastructure as a last resort.

The LTP consultation identified five key priority areas for investment over the first phase of the LTP Implementation Plan period 2011-2014. These are:

- **Maintain our current transport system** following a decade of substantial investment into improving our transport infrastructure, by prioritising investment to protect and preserve the existing transport system reflecting the economic and social importance to local communities
- **Support neighbourhood transformation** through enabling local citizens and communities to have a greater say in what local transport improvements are made in their neighbourhoods. These will include opportunities to prioritise schemes such as footway improvements, local accessibility, parking and traffic management schemes in local areas
- **Link local people to jobs and training** through improving transport services and facilities to key employment areas and education sites
- **Support sustainable transport modes** through continued investment in public transport, walking and cycling, including the introduction of more 20mph zones in residential areas across the city
- **Green the transport system** by pursuing clean and efficient vehicle choice and fuels for fleets and buses and providing electric vehicle charging infrastructure

The City Council will continue to give priority to those options that deliver the best value for investment made or achieve more for the same or less resource, i.e. schemes shown to achieve multiple benefits over a wide and varied range of target areas being favoured. This will be done by robustly assessing all the potential options and initiatives against value for money criteria as well as the contribution they make to the strategic objectives for transport. How this approach is being realised is detailed in the Implementation Plan which can be accessed at: www.mynottingham.gov.uk/ltp3

2.5 Summary

This Chapter has summarised the key pieces of evidence that have been collated and analysed as part of developing this Plan. The strategic transport vision for Nottingham identifies the City Council's transport ambition and these have been discussed in light of the key challenges and problems the LTP will face. As part of the development an approach has been set out which gives a broad framework for how the Council have approached selecting interventions to help achieve our objectives.

2.5.1 Next chapters

The following five Chapters (3 to 7) set out each strategic objective for transport and the key strategy proposals and measures we will be taking forward. These measures have been derived from how they can best support each transport objective and have been developed based upon experience from the past LTPs, feedback from partners through the challenges and options consultation and tested through the Integrated Impact Assessment process.

Chapter 3:

World Class Sustainable Transport

World-class Sustainable Transport System 3

This Chapter describes Nottingham's economic profile and the role transport plays in supporting business competitiveness and growth. It draws upon the key problems and opportunities around congestion and capacity, which are major inhibitors to economic growth. Our strategy is formed by a series of proposals and measures that will deliver a world-class sustainable transport system which supports a thriving economy, facilitates growth and supports local people to access good jobs.

3.1 Context

A high quality effective transport system is an important driver for creating a successful and vibrant city. Transport's role in getting people to work and to services such as education and healthcare is crucial to quality of life as well as enhancing people's spending ability. Local businesses have identified increasing congestion as a major threat acting as a drag on the economy affecting business competitiveness and growth. Bus operators also cite congestion as the most significant cause of punctuality and reliability problems[5]. Transport provision is essential in ensuring Nottingham's economy remains competitive and continues to maintain its present success as the largest employment centre of the East Midlands. Its importance is emphasised through recognition as one of the eight Core Cities and a Science City with an economy worth more than £12 billion per year and is acknowledged by the Government as one of the key cities contributing to the national economy outside of London.

The Government's White Paper 'Creating Growth, Cutting Carbon' estimates excess delay costs urban economies £11 billion per year. It is estimated that congestion costs the East Midlands economy over £935 million per annum in lost time, with delays negatively impacting on economic productivity[6]. These impacts are felt most strongly in urban areas and Nottingham is estimated to suffer £160 million per year in peak period (07:00 – 10:00) traffic delay. This is supported by the Chamber of Commerce who confirm transport comes up as one of the top three issues in their business surveys. Congestion in Nottingham is particularly severe where busy radials intersect with the Ring Road and on main routes to and from the motorway junctions.

Investing in transport in congested urban areas is a cost effective way to generate economic growth, jobs and access to employment whilst also elevating the amenity and ambiance of the city which can attract visitors and shoppers who make a vital contribution to the health of the local economy.

Establishing strong connections to other cities, national and international gateways are essential if the city is to remain globally competitive. Delivering the first line of the Nottingham Express Transit (NET) tram as part of a comprehensive and attractive public transport system has been a major factor in securing Nottingham as an international business location with more than 50 regional and national headquarters for companies such as Experian, Alliance Boots, E.ON, and Capital One located here. With two high performing universities attracting nearly 60,000 students each year, the city is at the leading edge both in the business and higher education sectors.

The city is consistently ranked as one of the top retail centres in the country attracting people from a wide catchment area. Invest in Nottingham has calculated that 15 million people live within a 50 mile radius, placing significant pressures on the wider road and rail networks.

Nottingham is home to world-class sporting facilities, such as Trent Bridge, Nottingham International Tennis Centre, the National Ice Arena and the National Water Sports Centre. It also boasts a well developed and globally recognised cultural infrastructure, including the Nottingham Contemporary art gallery, and host of GameCity. The city is becoming an increasingly popular location for film production, which all draw economic and promotional benefits. With tourism in mind, integration of the transport network and appropriate interchange between modes e.g. bus and inter-city coach and rail services, can bring needed benefits through better access, connections and convenience.

5 Greater Nottingham Big Ideas Survey 2008 and LTP Challenges and Options Consultation feedback
6 Atkins Cost of Congestion Report for emda 2008

3 World-class Sustainable Transport System

Significant growth is set to take place over the next 15 years with the city's population estimated to rise by 9% from current levels of 300,800[(7)]. The largest growth is set to take place in the science and technology, knowledge intensive and creative industries with local job opportunities located in the city centre, the Eastside and Southside regeneration areas and Eastcroft area of the Waterside regeneration area (the regeneration areas are described in more detail in Chapter 6. The Nottingham Sustainable Community Strategy contains a target of 20,000 science and technology jobs to be created up to 2020 forecasting significant growth in these sectors. A transport system that tackles congestion and connectivity issues as well as improves access to jobs and services for local people is a key policy objective of the City Council and cornerstone of this strategy. A large proportion of jobs in Nottingham are in the public sector which has been one of the hardest hit in the recession resulting in increasing numbers of people potentially travelling further distances to access employment meaning effective transport interventions will be vital to support people back into work.

Through the implementation of the last Plan, transport provision specifically around tackling congestion and traffic growth has helped to support Nottingham's economic vitality, attract inward investment and given people improved choice and availability in accessing employment, services and goods.

Box 3.A: Key achievements

Measures to alleviate congestion have been delivered through the past Plan, namely:

- Better integration of public transport networks comprising NET Line One of the tram and the commercial bus network (supplemented by over 30 link bus routes including two Worklink services linking major employment sites outside the city centre), leading to growth in bus and tram usage
- Local bus operators have signed up to a city-centre wide Statutory Bus Quality Partnership scheme which was launched in May 2010 to rationalise kerb-space and improve bus reliability and punctuality, bringing significant benefits to passengers
- The Turning Point scheme has redistributed traffic creating an improved environment and priority for pedestrians and providing enhanced interchange opportunities in the heart of the city centre
- A new Traffic Control Centre was introduced fully operational with traffic cameras installed at important junctions
- Bus lane camera enforcement powers leading to an increase in compliance of 61% in its first year of operation
- Use of legal powers to enforce civil parking, digital camera parking and bus lane contraventions
- The first phase of 'Parksmart' real time car park capacity and guidance scheme to encourage traffic to use appropriate park and ride facilities to reduce city centre traffic volumes and complementary city centre navigator maps and signposts installed
- Strategic cycle corridor route improvements involving road space reallocation to allow for on-road cycle lanes along Hucknall Road and Strelley Road
- Big Wheel business club and website detailing travel advice and information for employees, visitors and customers to travel to and from sites

3.2 Problems and opportunities

Nottingham has ambitious plans for growth; however this potential for economic success is severely inhibited by pressure on the transport system that is unable to cope with demand, impacting directly upon existing business and public transport operations. This LTP seeks to encourage the delivery of a strong economy through policy support for emerging economic sectors, tourism, retail, arts and entertainment, as well as more flexible working practices. In order to do so, current and forecast pressures on networks which are presently disadvantaged by problems around the following will need to be addressed:

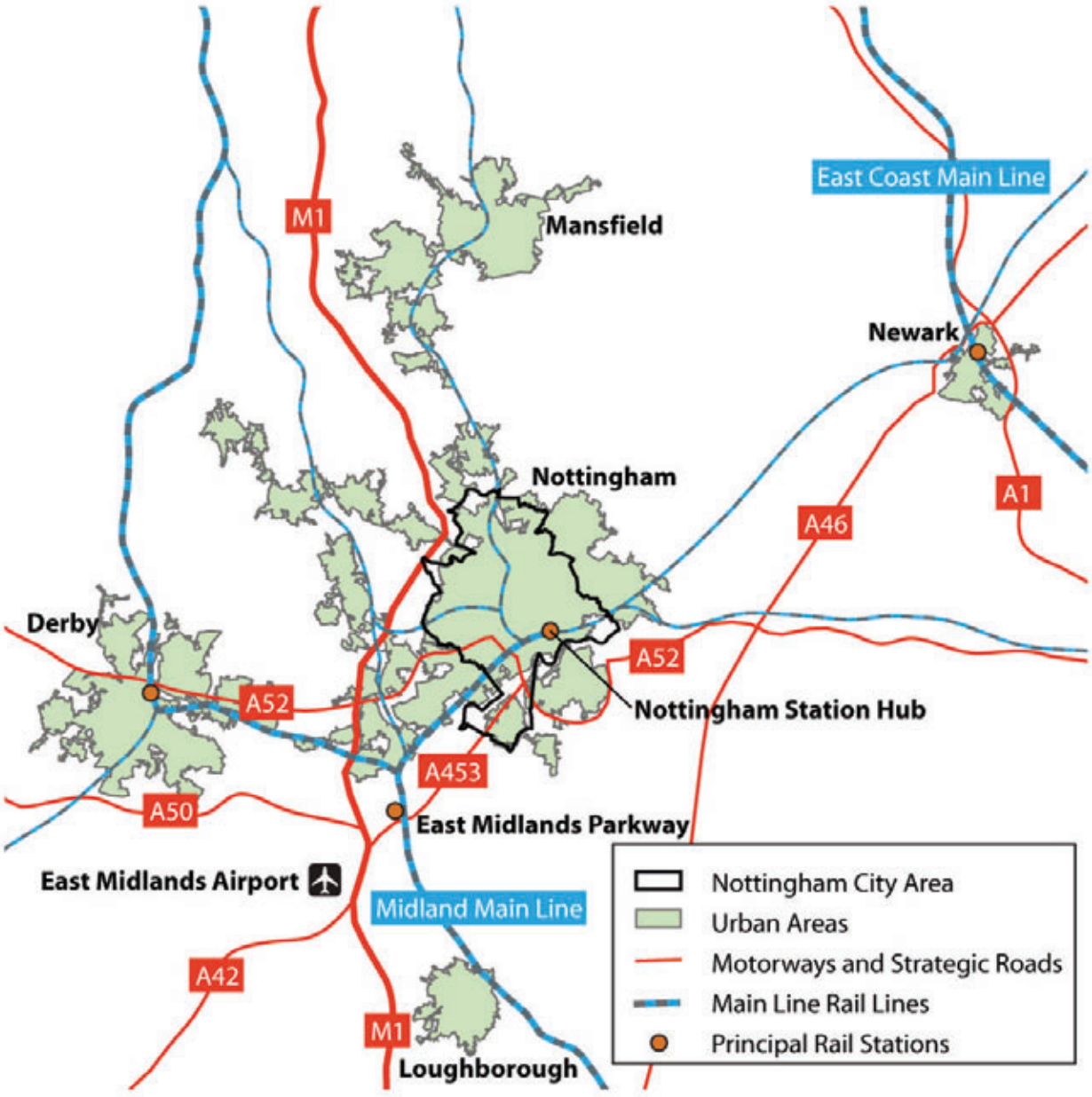
- Connectivity, particularly to national and global markets
- Efficiency and capacity of strategic rail and road networks which are a priority for citizens, business and freight movement

7 Office of National Statistics 2009 Mid-Year Estimates of Population

3.2.1 Connectivity

Although travel demand during the recession may have reduced in the short term, major growth is anticipated on air travel and strategic rail and road networks which will impact upon the traffic flows to and within Nottingham once the economy recovers. This has implications on the effective movement of people and freight to other Core Cities and national and international gateways.

Map 3.1: Strategic connectivity



Air travel

Significant growth is linked to the East Midlands airport, which at its peak in 2008 employed 7,000 people across more than 100 companies on or near the Airport. 2010 saw 4 million passengers travel through the airport connecting them to over 90 direct destinations. The airport has a particular role to play in the sub-national economy, generating significant employment and income. It is particularly prominent in the freight and express delivery sectors being the UK's busiest cargo airport handling over 300,000 tonnes of flown cargo every year. It is the hub for a number of express freight carriers and Royal Mail.

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Access to the airport and strategic road network is important in ensuring the continued success of the airport as a freight hub. Cargo facilities at the airport currently cover approximately 190,000 sq ft and detailed planning permission has been granted for an additional 220,000 sq ft. Given the airports wide catchment area there are potential implications for increased levels of traffic growth on the surrounding road network. Congestion of the A453 is currently a significant problem for people accessing Nottingham to and from the airport.

Progress has been made over recent years to improve connectivity between the airport and Nottingham through the successful Skylink bus service. Skylink operates 24 hours a day and carries approximately 500,000 passengers a year of which approximately two-thirds are airline passengers and one-third work at the airport or surrounding area[8].

Rail network

Nottingham is the busiest station in the East Midlands with a throughput of 6.2 million passengers in 2009/10 up 4% from 6 million in 2008/09[9]. The city centre station benefits from direct rail connections to London, Manchester, Birmingham, Sheffield, Leeds and Liverpool (and more locally to Derby, Leicester, Lincoln and Newark) although there is a lot of investment needed to improve Core City and regional connectivity from Nottingham as journey times are generally much slower than other comparable routes.

A particular strength is the direct connection to Eurostar/High Speed One services to the continent via the International rail terminal at St Pancras and the Channel Tunnel. There are over 30 direct rail services to London St Pancras per day with the fastest journey time currently at round 1 hour 45 minutes, however most journeys during peak hours typically take nearer 2 hours. Nottingham does not compare well with levels of rail connectivity, in particular to the South West, North East and Scotland. Compared to some other routes journey times are uncompetitive and there is a lack of capacity on some services.

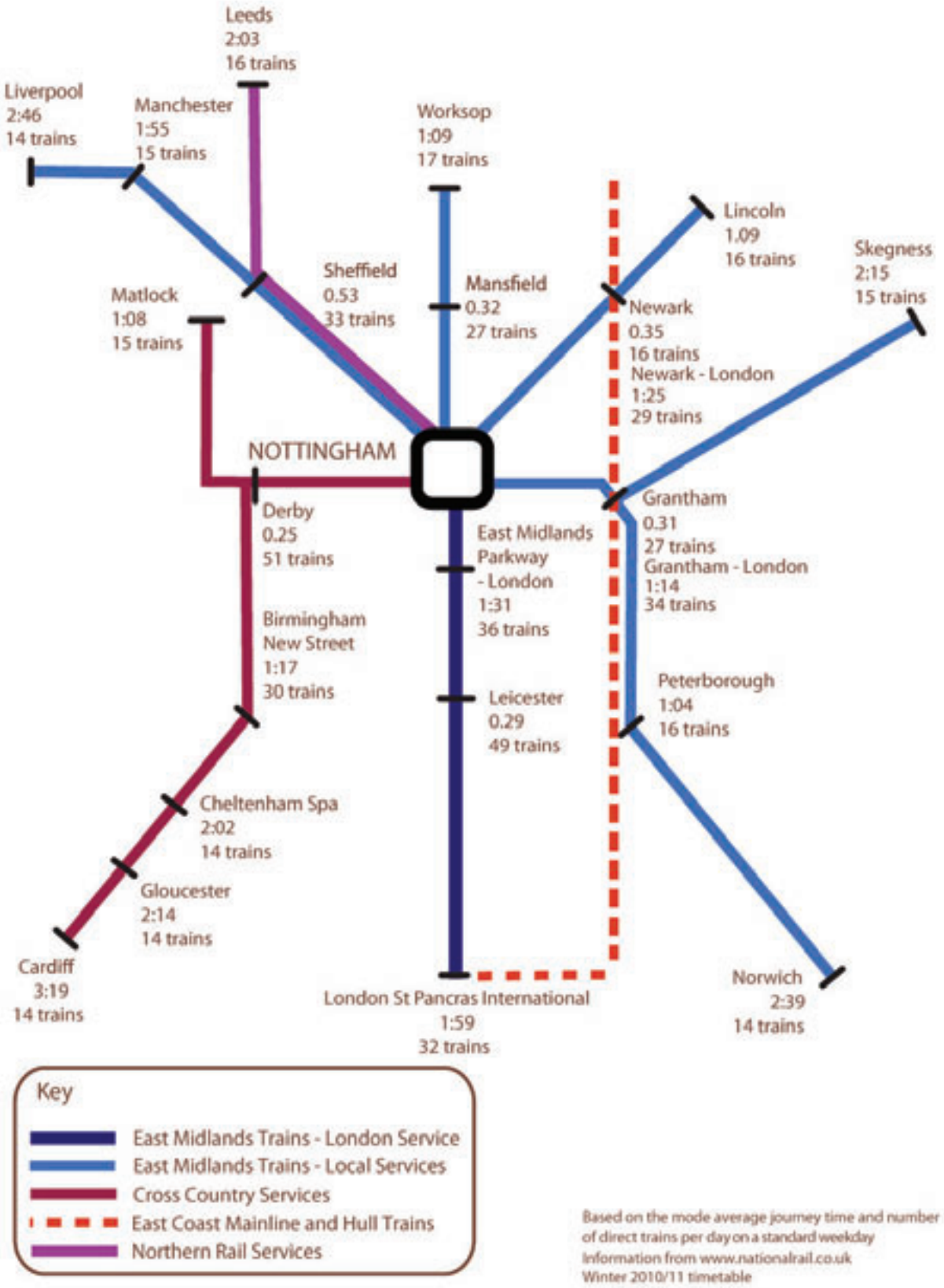
Despite local services such as the Robin Hood Line, which extends from Nottingham north through Bulwell and Hucknall connecting the area to Mansfield and continues to Worksop, Nottingham has a much less developed local rail network compared to other Core Cities.

The East Midlands Parkway station opened in January 2009 as an M1 parkway to London and also acts as a gateway to the city offering a rail based park and ride service into Nottingham helping to take traffic off the M1 and A453. In addition, the station provides a rail connection to the Airport with two direct trains per hour taking 11-14 minutes from Nottingham city centre. Longer term options to provide a fixed public transport link to the airport are being explored. The station car park has been built with 850 spaces and has potential to support congestion reduction objectives by operating as an official park and ride facility. The City Council will work with East Midlands Trains and the Highways Agency regarding opportunities to designate the Parkway as an official park and ride facility.

Direct and fast strategic links to other important airports such as Birmingham, Manchester and Heathrow, however, are not well provided for.

8 East Midlands Airport passenger survey July 2010
9 ORR station usage figures supplied by Delta Rail

Figure 3.1: Rail connectivity and times from Nottingham Station



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Businesses value such connectivity and it is critical that slow train speeds and infrequent or inconvenient timings are addressed through a range of interventions, in particular opportunities offered by the East Midlands Trains franchise renewal process. The City Council also supports improvements identified by Network Rail to improve the rail offer to Nottingham which are outlined in the East Midlands Route Utilisation Strategy and Midland Mainline Electrification Strategy. During the period of this plan the City Council will continue to press for the following:

- 'Nottingham in 90' journey time improvements between Nottingham and London. The City Council, Nottinghamshire County Council and local business will continue to lobby for this investment to be made, in addition to a commitment within the service pattern to ensure the journey time is maintained by the franchise
- As part of the Comprehensive Spending Review the Government confirmed funding for £67 million to achieve a five minute journey time saving for services between Nottingham and London on the Midland Mainline through a series of incremental enhancements by 2014. In addition to this the City Council and other partners are seeking an estimated £27 million of investment to reduce journey times, improve capacity and flexibility. These options are being worked up in discussion with Network Rail and East Midlands Trains and would see the addition of freight loops at Desborough and a speed increase through Market Harborough. Additional options are also being considered
- The Midland Main Line was identified as having the highest business case for electrification by Network Rail, offering a financial return over the 60-year appraisal period[(10)]. The City Council will continue to lobby the Department for Transport (DfT) for a commitment to this as further electrification of the network is essential if the Government is to achieve at least an 80% reduction in greenhouse gases by 2050. This is especially true if the decarbonisation of electricity generation can be achieved
- The City Council supports the case for Nottingham to yield stronger connections to the other Core Cities and the driving economies of the UK. Improvements to Birmingham and the South West, the North West and the North East are all key priorities
- The City Council supports the resignalling of Leicester and Derby stations in 2015-20 and the improvements that this will provide to reliability and connectivity
- The City Council will work with Network Rail to reduce risk at level crossings which can affect train performance and safety whilst also maintaining accessibility and vital walking and cycling routes

The City Council is a member of the East Midlands Rail Forum. This well established group forms an effective lobby for improvements to the rail network within the East Midlands Route Utilisation Strategy area and in addition to other local authorities and agencies; regular attendees include East Midlands Trains, Network Rail and the DfT. As a group, the Rail Forum will continue to lobby for regional and national connectivity improvements and seek effective dialogue with the rail industry.

High Speed Rail

As part of the 2010 Comprehensive Spending Review the Government announced a commitment to develop a national high speed rail network in the form of a 'Y'. A new high speed line from London to the West Midlands will be delivered first with a second phase providing lines connecting westerly to Manchester and easterly to Leeds. The eastern route includes intermediate stops to serve the East Midlands and Sheffield. The Government commenced a five month 'High Speed Rail: Investing in Britain's Future' consultation in February 2011 on the principle of developing a high speed rail network and detail on the phase one route between London and the West Midlands. The outcomes of the consultation will be published towards the end of 2011. Details of the consultation on the second phase which will encompass the East Midlands are expected in 2012. More information on the consultation and the high speed rail strategy can be found at: http://highspeedrail.dft.gov.uk

10 Electrification Route Utilisation Strategy, October 2009 available at: http://www.networkrail.co.uk

The anticipated journey time from an East Midlands station to London has been stated at around 55 minutes and thus potentially could substantially reduce rail journey times not only to the capital but to the other major cities connected by the eastern route. A further benefit potentially being a connection to Heathrow airport, which currently is very difficult to access from Nottingham.

Work commissioned by the East Midlands Development Agency[(11)] identified that high speed rail could generate very substantial economic benefits for Nottingham but is dependent on where a station is located. The location of an East Midlands station is still to be determined and will be subject to further detailed assessment by High Speed 2, the company set up by the Government to develop its high speed rail proposals. Given the scale of the Nottingham economy it is considered a direct connection to Nottingham city centre is warranted.

Subject to the completion of all the necessary statutory and legal processes the first phase of any new network will not be open before 2026 and construction of an eastern route is not planned to be operational until 2032-33.

Due to the lengthy timescales involved in developing a national high speed rail network it is imperative that decisions to upgrade the Midland Mainline are not deferred in the interim and the Council will continue to lobby for improvements to the Midland Mainline as a priority for Nottingham. Future service patterns for the Midland Mainline once a new high speed rail network is established will also need to be considered carefully to ensure connections to important destinations along the existing route are improved as a result of capacity being released.

Nottingham is accessed by express coach services and tour, holiday and day trip operators. Over 50 destinations are available from Nottingham by Express coach. These include London, major cities in the North and Midlands, airports and holiday centres. National Express coach services operating into Nottingham make use of facilities provided within Broad Marsh bus station. This provides an interchange point with local bus services including those to Nottingham East Midlands Airport, rail services at Nottingham Station, private cars and taxis. Megabus services operate from Nottingham terminating on Station Street.

Generally, tour coaches serve two markets. These are operators picking up those travelling out from Nottingham on day trips or package holidays and those operators bringing visitors into Nottingham as tourists. Particular demands include pre-Christmas shopping trips, theatre trips and visitors to major attractions such as the Ice Centre and other sports venues.

To assist both coach operators and passengers, coach pick up points will be made identifiable through the provision of appropriate bus stop infrastructure including bus stop flags and information cases.

Strategic roads

Being centrally located Nottingham has the potential to be extremely accessible to most of the country. Whilst being served by three Junctions of the M1 motorway providing good road linkages into and beyond the city, key parts of the network experience capacity and congestion problems for extended periods presenting unnecessary burdens on business and acting as a brake on economic growth. These include the Ring Road (A6514) between the A52(T) Derby Road and A60 Mansfield Road and the A52(T) Trunk Road between the A46 and Junction 25 of the M1, the A46(T) Trunk Road to Newark, and the A453(T) Trunk Road which connects the city to Junction 24 of the M1. The DfT's UK road delay analysis places the A453 as the most congested inter-urban road in the country in terms of delays, experiencing an average delay per 10 vehicle miles of 11.4 minutes[(12)]. The road also has a poor safety record with an average occurrence of one death per year and one serious injury per week.

11 The Case for High Speed Rail to the Three Cities Report: http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2ltd/stakeholdersubmissions/pdf/eastmidlands.pdf

12 DfT UK Delay on Strategic Route Network

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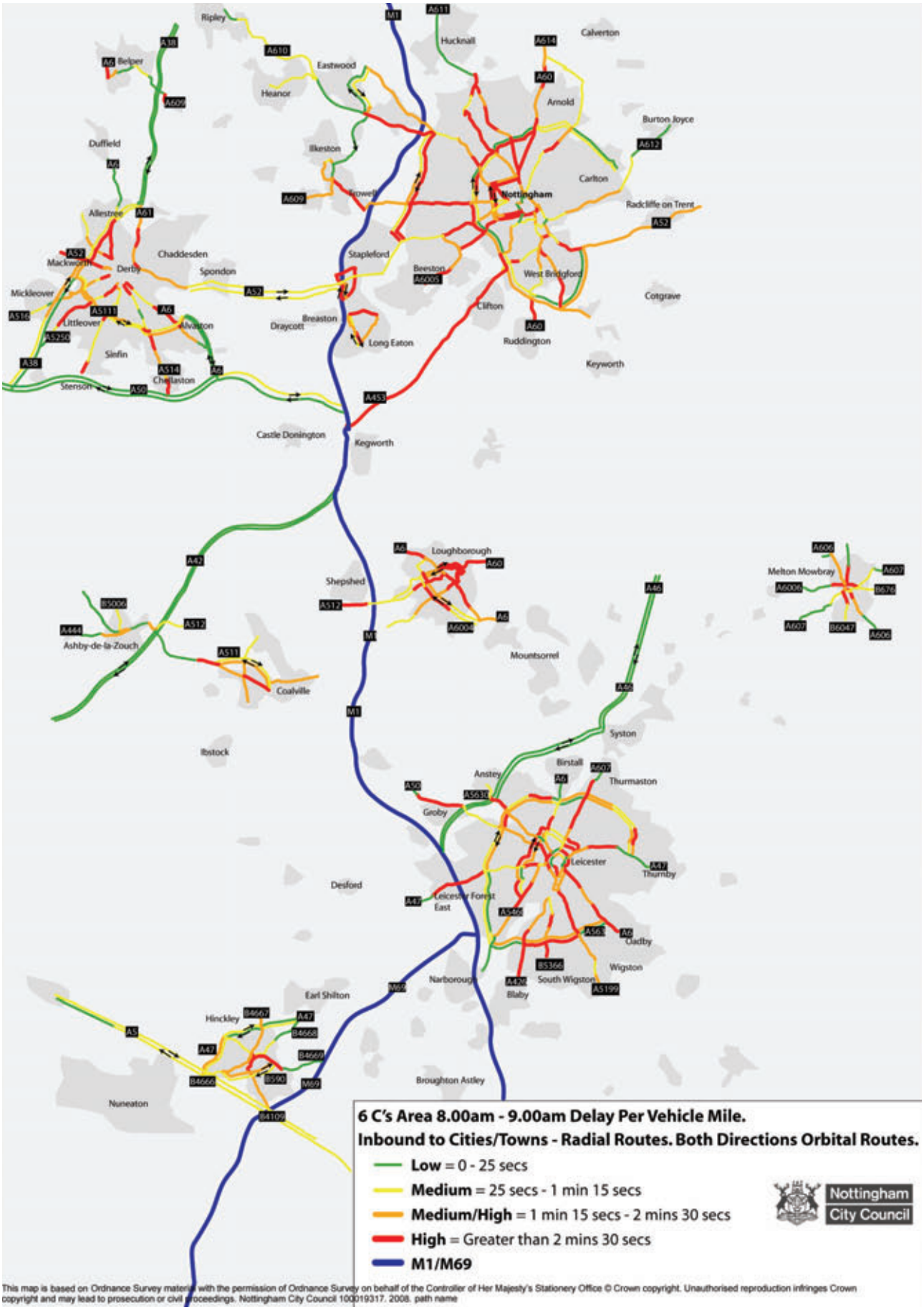
Poor road connectivity serving other Core Cities, national and international gateways inhibits economic performance through slow and inconsistent journey times which have been major concerns raised by local businesses. Works are currently ongoing to upgrade the A46 which will improve access into the east of Nottingham. The City Council will seek to work with the Highways Agency in managing demand and improving the efficiency and effective capacity of the A52 and A453. The Local Enterprise Partnership proposal, covering the administrative areas of Nottingham, Nottinghamshire, Derby and Derbyshire offers cross-boundary potential to coordinate strategic transport investment and help realise the areas economic vision for the future. The partnership proposals and activities are described further in Chapter 6.

The survey results of the Nottingham, Leicester, Derby and its surrounding Counties Congestion Management Study for the morning peak hour (08:00 to 09:00) are shown in Figure 3.3 in terms of delay per mile on each of the routes covered. The survey found that the areas worst affected by congestion are the radial routes running in and out of the three main cities of Nottingham, Leicester and Derby, and on city ring roads, where delays are at their most severe in the peak periods.

Map 3.2: Morning peak hour delay per mile: Nottingham, Derby, Leicester



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The case for the A453

A public inquiry on the Highways Agency A453 scheme was completed in November 2009. The Inspector's report, which was anticipated early in 2010 and subsequent Secretary of State's decision were deferred pending the outcome of the Comprehensive Spending Review in October 2010. Following the Spending Review, the A453 was grouped in the 'future schemes' pool which means it has been delayed due to affordability reasons with construction to start in 2015 at the earliest.

The City Council is working alongside Nottinghamshire County Council, the Chamber of Commerce and other partners to lobby to consider the acceleration of the A453 scheme during this Government's term as it is a crucial improvement needed to help support local enterprise and economic growth. The scheme demonstrates a high level of local support from partners and citizens and is in an advanced state of readiness for construction. Preparations are being made for a high level lobby of the Secretary of State involving City, Nottinghamshire County and Rushcliffe Borough Council leaders and high level business representatives. Potential alternative funding contribution sources are also being explored.

Waterways

The River Trent, River Leen and Nottingham Canal have been highlighted as under utilised transport arteries for water freight and leisure corridors. The River Trent Water Freight Feasibility Study[13] identifies sufficient capacity on the Trent to carry an extra million tonnes of freight per year, particularly for the movement of dry bulks and wastes.

Waterways passing through urban and suburban areas afford commuter opportunity. The creation of green infrastructure links utilising the waterways as leisure walking and cycling corridors to benefit quality of life is described further in Chapter 6.

3.2.2 Efficiency

Reliable, fast and efficient networks are essential to ensure a competitive business environment through reducing lost productive time and meeting customer commitments. The effective management of the road and public transport network plays a role in minimising disruption on the highway and allowing for the efficient flow of traffic for freight and commuting.

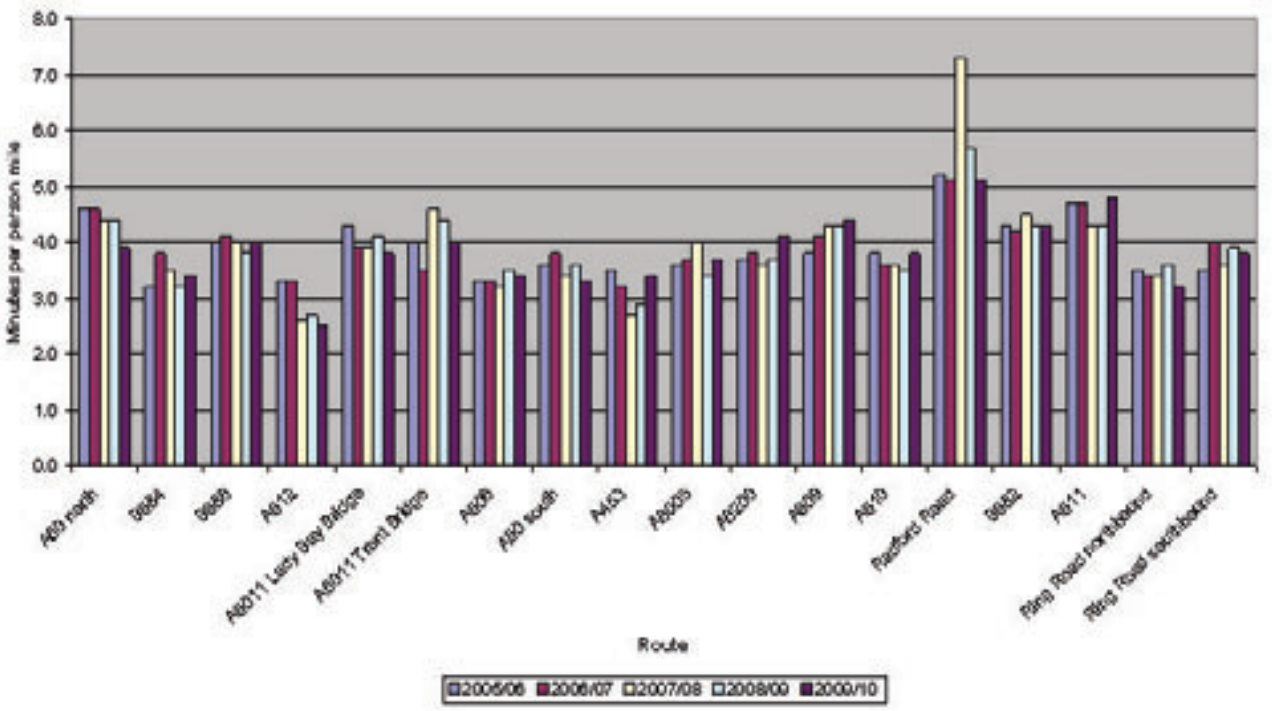
Road capacity

Traffic congestion is a particular problem impacting on the efficiency and movement of traffic along the main routes into and out of the city and around the Ring Road, particularly during morning and evening peak times. Congestion has been contained since 2005 as a result of major transport improvements in Nottingham such as the NET tram and high quality bus network. More recently, the recession has contributed to reduced demand for travel by car and the movement of goods.

Ongoing monitoring of person journey time along 18 key routes has highlighted significant divergence between the key routes monitored ranging from 2.5 minutes per mile on the A612 to around 5.1 minutes per mile on the Radford Road as indicated in Figure 3.2.

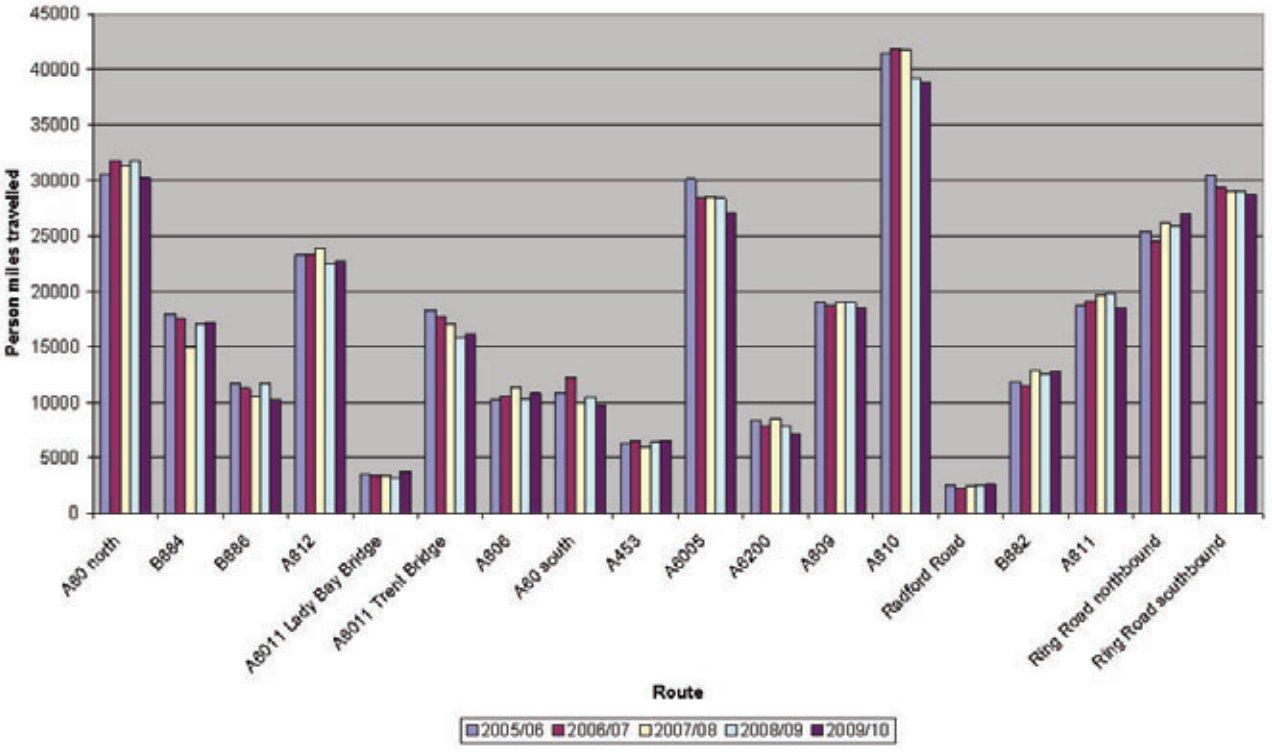
13 Available at: http://www.britishwaterways.co.uk/media/documents/River_Trent_Water_Freight_Feasibility_Study.pdf

Figure 3.2: Person journey time per mile per route



The number of person miles travelled in the morning peak (between 07:00 and 10:00) on each route also differs significantly from around 2,600 on the Radford Road to nearly 39,000 on the A610 as indicated in Figure 3.3.

Figure 3.3: Person miles travelled by route



3 World-class Sustainable Transport System

In the 2008 Greater Nottingham Big Ideas local transport survey, all of the largest businesses interviewed agreed traffic congestion was the main priority for business; 91% of small to medium sized businesses felt access to national transport networks was very or fairly important; and 90% of the public strongly agreed or agreed that reducing congestion was a priority. Congestion was in the top eight issues received from the online survey for the LTP consultation from citizens and was reiterated by partners as a key blockage.

Rail capacity

The East Midlands Route Utilisation Strategy (RUS) identifies that total passenger demand between the East Midlands and London St Pancras is expected to grow by 28% over the next 10 years. In line with the recent high growth experienced, the market for rail travel between the RUS area and Birmingham is expected to grow at a faster rate, with the number of journeys increasing by 40% over the same time frame.

Above average growth in peak passenger demand is set to occur at Nottingham, Leicester and Derby where growth across the three-hour peaks (07:00 to 10:00) is expected to be in excess of 30% over the next 10 years. This sizeable increase in demand will have implications for the ability of the rolling stock and infrastructure to accommodate future passenger numbers for the entire RUS area. Demand for rail travel in the peaks is expected to grow up to 3% per annum for the next 10 years at Nottingham. Based on current capacity some crowding is expected on most of the corridors.

Following successful lobbying and partnership working, the Council welcomes the news that the capacity on most of the services on the Nottingham to Sheffield, Manchester and Liverpool route are to be doubled in 2011/12. The Council will continue to seek further improvements to this line in order for it to gain the inter city status it deserves.

The Nottingham to Lincoln corridor is however a poor regional service and the Council will work alongside Nottinghamshire County Council and other partners as part of the Nottingham to Lincoln stakeholder board to ensure a better level of service and infrastructure improvements are secured to improve journey times and services on the line.

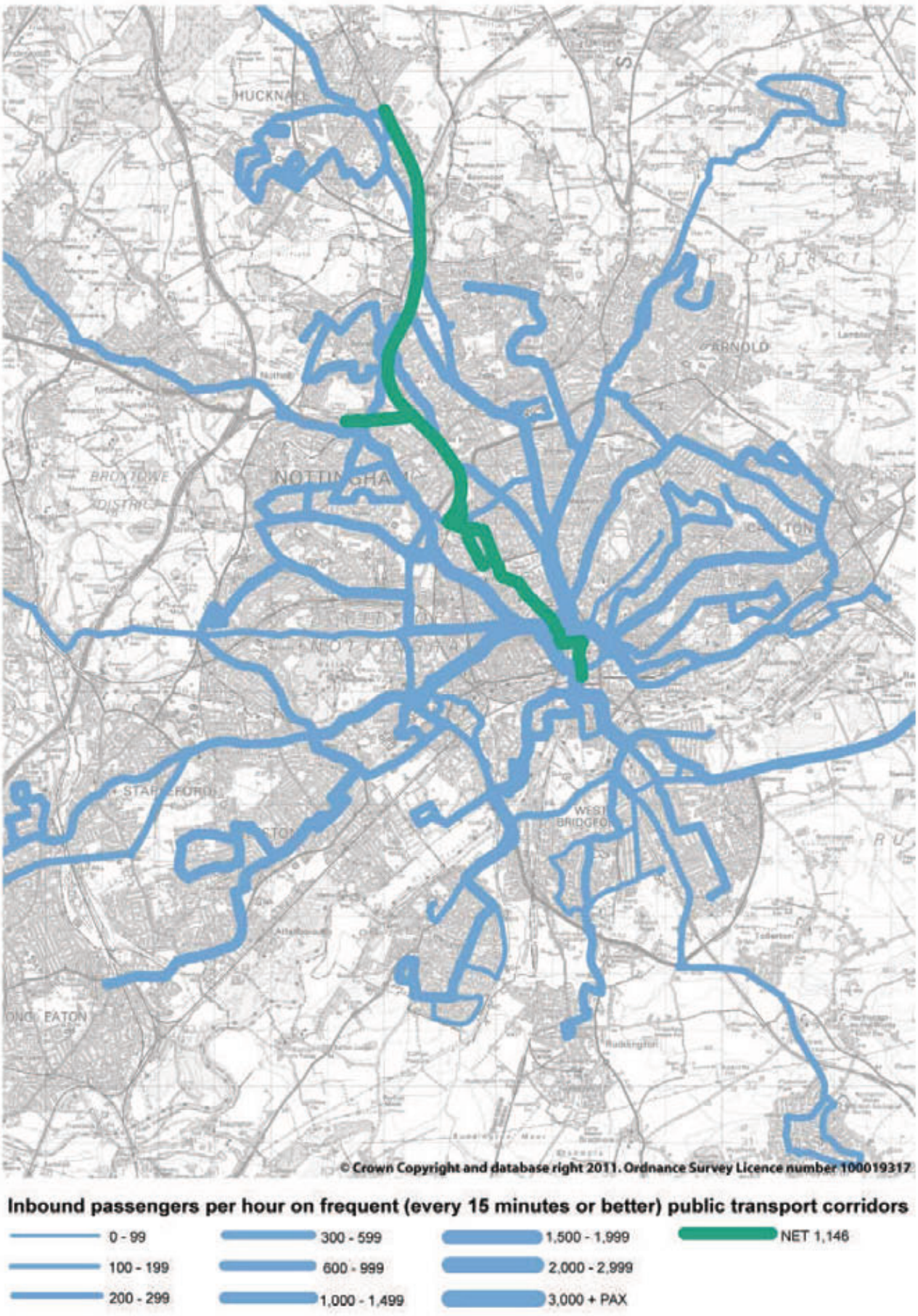
The City Council will continue to work with both the County Council and Network Rail to build on the improvements already made to the speed and reliability of the Robin Hood Line service. In addition to this the Council will explore opportunities for extensions to the line to provide stops at both Ollerton and Bingham.

In order for the Sunday service to operate it is currently funded locally, this is an important part of the offer provided by the Robin Hood Line. The Council will lobby the DfT to ensure that the Sunday service is included as a tendered service when the East Midlands rail franchise is up for renewal to ensure its long term survival.

Public transport capacity

Whilst Nottingham has been successful in delivering a comprehensive bus network in terms of coverage (63 million journeys took place by bus in 2009/10), many high frequency bus services are now operating at or near capacity in the peak periods of demand. The lack of available kerb space in the city centre is a particular constraint given the very large number of services that terminate there. Nottingham's tram system, NET Line One, also experiences crowding during peak periods. Potentially this may constrain growth of the Nottingham area in future years. Consultation with partners and citizens has also highlighted the need for more orbital bus service routes connecting outlying centres to each other to avoid congested cross city routes and improved interchange facilities across modes e.g. bus and coach services.

Map 3.3: Public transport capacity



3 World-class Sustainable Transport System

This LTP seeks to address each of these challenges to support the economic success of Nottingham. The next section goes on to detail the key proposals the Council will be seeking to introduce.

3.3 Strategy and proposals

The key objective of the strategy is to deliver and maintain a world-class sustainable, high quality, cost-effective and efficient transport system to serve Nottingham that facilitates and supports long term economic growth and job creation including helping local people to access good jobs. To achieve this objective the strategy will need to focus on the delivery of journey time savings, improvements in journey time reliability and improve access to jobs and services, shopping, leisure and tourism.

Four areas of intervention will be implemented to manage and balance transport supply and demand, forming the basis of the LTP strategy to support economic growth:

- **Travel demand management** comprising two key areas: parking policy controls over pricing, enforcement and land use planning of parking provision and smarter travel choice measures aimed at changing travel behaviour e.g. through supporting travel planning, travel marketing, awareness and promotions utilising the 'nudge' principle to encourage citizens to make sustainable travel options
- **Encourage sustainable alternatives** through investment in creating a high quality attractive integrated public transport system, and providing support and promotion to encourage more walking and cycling trips
- **Improve the efficiency of the network** using the asset management plan process to maintain our current strategic road network and develop our highway network by exploiting new technology systems, better coordinating road works, traffic management techniques and including improved direction signage
- **Build appropriate additional capacity** for our highway network through targeted improvements at congestion hotspots

These proposals are summarised in Table 3.1:

Table 3.1: World-class sustainable transport system proposals and measures

Proposal	Measure
Parking policy	PP 1: Workplace Parking Levy PP 2: Parking Management and control
Smarter travel choices	ST 1: Support travel planning ST 2: Travel marketing, promotion and awareness
Integrated public transport	HUB: Nottingham Station Hub NET 2: NET Phase Two NET 3: NET future phases
Bus improvements	BUS 1: Bus network development BUS 2: Transport interchange and integration MTA 1: Improvements to public transport waiting facilities (detailed in Chapter 5) MTA 2: Integrated and smart ticketing strategy (detailed in Chapter 5)
Asset Management	AM 1: Highway asset management action plans AM 2: Carriageway maintenance AM 3: Footway maintenance AM 4: Bridges and structures
Highway network management	NM 1: Network management plan improvements

Each strategy area and their related proposals are described in more detail in the following sections.

3.3.1 Travel demand management

A key theme through previous LTPs has been to use demand management techniques to contain growth in private vehicle usage and invest in attractive, sustainable and viable alternatives, i.e. public transport and integrated walking/cycling networks. As Nottingham is a compact city with constrained transport corridors, physical expansion of the highway network is a last resort for investment. Our policy approach is to make the most efficient use of existing infrastructure before investing in new assets, (as set out in section 2.4 in Chapter 2) and adopts a view which balances the benefits and costs of demand management to business and citizens.

Proposals for managing travel demand fall into two policy areas. The City Council's pursuit of the UK's first Workplace Parking Levy to target commuters alongside other parking policy measures will help to cut congestion and further support the economic vitality of the city. This approach is complemented by a package of smarter travel choice measures to encourage sustainable patterns of vehicle use, change people's travel patterns to avoid congested times and locations, and deliver mode shift to public transport, cycling and walking.

Table 3.2: Travel demand management proposals and measures

Proposals	Measures
Parking policy	PP 1: Workplace Parking Levy PP 2: Parking management and control
Smarter travel choices	ST 1: Support travel planning ST 2: Travel marketing, promotion and awareness

Parking policy

Parking policy is one of the most powerful tools available in managing travel demand in terms of location, pricing and times of availability. Parking regulation plays a critical role in supporting economic development and is a proven method in encouraging the use of public transport, walking and cycling trips, which can mitigate the negative impacts of road traffic and car dependency.

Proposal PP 1: Workplace Parking Levy

The City Council is fully committed to introducing a Workplace Parking Levy (WPL) within its administrative boundary having developed a robust business case for the scheme. This demand management tool will influence the travel behaviour of commuters by introducing a levy for employers within the city of Nottingham's administrative boundary that provide 11 or more liable parking places.

The WPL is a charge made for each parking place provided by an employer and used by employees, certain types of business visitors, and pupils and students. The decision remains with the employer as to whether they decide to pass the charge on to their employees. Employers will be required to obtain an annual licence for the maximum number of liable places they provide.

As commuters are the main cause of congestion in Nottingham, the City Council believes that it is only fair that employers accept their responsibility and proactively manage the traffic going to and from their employment sites and contribute to investment in public transport alternatives to the car. Ultimately employers will benefit from less congestion than otherwise would occur and employees will gain better public transport options.

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The WPL will also:

- Further encourage the uptake of travel plans and responsible parking management policies
- Encourage employers to give stronger consideration to the development potential/costs of land used as parking in the city
- Represent a financially efficient, high value for money proposal, with relatively low development costs and shorter implementation timescales than alternative charging mechanisms

The WPL will contribute to the necessary local funding contribution required for Nottingham's extension to the tram system, (NET Phase Two), safeguard the long-term future of supported Linkbus services and contribute to the redevelopment of Nottingham's Station Hub. It is estimated that the WPL will raise in the order of £14 million a year. This revenue will be ring fenced for investment in improving public transport in Nottingham.

The City Council considers that the introduction of an extensive package of improvements as a result of the availability of WPL income will create a modern transport system, which will have a major impact on lessening congestion pressures and provide the necessary network capacity for future anticipated growth.

Extensive modelling has been used to assess both direct and indirect transport impacts of the WPL:

- Direct transport impacts are where employee travel behaviour is altered directly by the imposition of the levy charge. As a tool in itself, it is considered that the WPL would have a positive but modest impact on modal shift. This is because not all employers will pass the levy onto their staff and where they do, due to the low costs involved, the number of affected employees who decide to transfer to public transport rather than use their car is likely to be relatively modest
- Additional and larger direct positive impacts on modal shift would accrue from the wider demand management impacts of the WPL, complementary employer action to actively promote alternatives to the car and by positively managing staff parking provision
- Indirect transport impacts will arise as a result of changes in travel behaviour due to the introduction of public transport infrastructure, integration actions and services funded wholly or in part by the WPL income, including NET Phase Two, Nottingham Station Hub improvements, and maintaining and enhancing bus services (e.g. Linkbus network development)

Nottingham's major employers support the future growth and prosperity of the city. The aggregate transport economic benefits of improved travel conditions, both on the public transport network arising from additional NET and bus services, and on the highway network through increased modal shift and congestion relief, will outweigh the levy cost to businesses. The additional public transport provision and congestion relief will benefit employees travelling on company business and for service and delivery vehicles. Improved accessibility will also benefit employers through access to a larger potential workforce and in retail and leisure businesses to a larger potential market. In economic terms the package of transport measures introduced by the WPL will deliver benefits to business that outweigh the cost of the levy charges themselves.

The WPL scheme underwent a public consultation process, including a public examination, during autumn 2007. Following Full Council approval in May 2008, an updated business case and WPL Order were submitted to the Secretary of State for Transport. The WPL legal Order was confirmed by the Secretary of State on the 31st July 2009 giving the City Council the powers to introduce a WPL scheme in Nottingham on the 1st October 2011 and to introduce a charge for liable places from the 1st April 2012.

Further information on the Workplace Parking Levy can be found at:
www.mynottingham.gov.uk/wpl

Proposal PP 2: Parking management and control

Parking management and control proposals can be broadly grouped into three main areas of intervention:

- Price of parking
- Parking enforcement
- Land use and planning policy

Price of parking

The charging structure of the various types of parking controlled by the City Council seeks to prioritise short-term shopper and visitor parking in the city and district centres, with progressive increases in the charges for longer-term parking. Charges for park and ride are also set to be consistent with the parking strategy. The off-street parking pricing policy seeks to discourage all day commuter parking. Although a certain amount of this is available, the cost is prohibitive to many users and certainly in excess of using the alternative, more sustainable modes.

On and off-street parking demand can be contained through pricing controls. The City Council has been using powers under the Traffic Management Act 2004 to enforce all on-street parking throughout the city. The powers to enforce parking offences and manage pricing effectively has significantly increased the Council's ability to manage the network efficiency and ensure that short-term parking spaces are not exclusively used by commuters and remain available for shoppers and visitors. Limiting alternatives for commuters to commercial off-street parking can help modal shift to more sustainable modes or park and ride use.

Parking enforcement

As city centre parking has become more restrained through pricing and effective enforcement, pressures of parking in residential areas increase and additional restrictions and enforcement need to be put in place. Enforcement can be an effective way of encouraging more pedestrian, cycling and public transport movements. Our approach will be to:

- Consider the level of parking control within residential areas particularly along the routes of NET Line One and NET Phase Two to ensure that informal park and ride associated with the new tramlines does not exacerbate local parking problems
- Review Traffic Regulation Orders and traffic management as part of the implementation of the WPL to ensure employee parking is not displaced into residential areas
- Carry out a review of parking standards for new developments
- Apply for decriminalised powers to deal with moving traffic offences to further support other policies of bus lane enforcement and decriminalised parking as part of efficient network management

Land Use Planning Policies

Land use planning policies are critical to maximise the accessibility of development sites which then ensures that smarter travel choices are realistic and attractive options. Planning sustainable development locations and design are described in further detail in Chapter 4. The City Council recognises the need to take an integrated demand management approach to controlling parking provision and adopts a comprehensive restraint based approach in the context of land use and transport planning, which will maintain economic competitiveness and reduce congestion.

National planning guidance on parking is provided in Planning Policy Guidance PPG13 and Planning Policy Statement PPS4 (Planning for sustainable economic growth) provides additional guidance on parking for non-residential development. PPG13 provides guidance on appropriate parking standards

for new developments based upon floorspace thresholds and land use. The allowable level of new parking for new developments, however, is relatively small compared with the existing parking levels that were permitted historically.

At the local level, guidance is set out in the Local Plan (2005) with updated guidance proposed to be included in the Land and Planning Policies Development Plan Document (LAPP DPD). Proposed major developments are also to be assessed with regards their accessibility to ensure that accessible sites are allocated or ensure problems with accessibility are dealt with through the allocation process. Further information on the LAPP DPD can be found in Chapter 6.

Planning permission for major development that is likely to generate additional journeys will be granted subject to conditions or requiring planning obligations to secure the following:

- The implementation and ongoing monitoring of an approved travel plan for the development to reduce car use
- New or improved public transport access to the site, including the provision of infrastructure and/or financial support for bus, tram, park and ride or rail services
- New or improved pedestrian and cycle access/facilities in the vicinity of the site
- Off-site highway works to facilitate public transport and walking and cycling access to the site and mitigate the impacts of development traffic in local residential areas
- Smarter travel incentive packages for households in the case of residential developments
- Highway capacity improvements to accommodate residual traffic demand

Smarter travel choices

Smarter travel choices encompass a range of travel demand tools that may be employed to influence citizens travel behaviour in favour of more sustainable modes such as walking, cycling, public transport use and car sharing. The strategy for implementing such proposals has been developed through taking advice from the DfT on measures a smarter choices strategy should contain and considering best practice examples referenced in the White Paper ‘Creating Growth, Cutting Carbon’.

Smarter travel choice proposals relate to all five strategic objectives for transport. Interventions discussed in this Chapter cover two main areas:

- **ST 1: Support travel planning**
- **ST 2: Travel marketing, promotion and awareness**

Smarter travel choice measures also comprise the following areas, however to avoid duplication, proposals for these aspects are covered elsewhere in this strategy and demonstrate the importance of smarter travel choices on achieving a range of outcomes:

- Measures to **influence and reduce travel demand** and alleviate congestion encompass a broad range of interventions including parking restrictions and land use planning policies which have been described above. Sustainable transport solutions best developed at the early stages of planning allow greater opportunity for behaviour change and travel avoidance measures are essential to creating a low carbon economy. The Council will seek to incorporate effective sustainable solutions in the planning process and advance technology solutions in order to influence and reduce the need to travel. This is covered in more detail in the next Chapter
- **Integrated public transport promotion** includes bus service improvements, fares and ticketing and better interchange and integration between modes. The full range of activities are covered in greater detail in the Integrated Public Transport section further on in this Chapter

- **Sustainable car use** consists of car clubs and car sharing, eco driving, low carbon vehicle choice and electric vehicle infrastructure. This is covered in more detail in Chapter 4
- **Active travel choices** through the provision of walking and cycling infrastructure and facilities, cycle training, cycle hire schemes, and walking/cycling information and mapping. The strategy is covered in Chapter 7

Further information on smarter travel choices can be found at:
www.mynottingham.gov.uk/smartertravel

Box 3.B: 'Nudge' principle

Government wants to encourage and enable more sustainable transport choices. In the White Paper 'Creating Growth, Cutting Carbon', the 'nudge' concept was referenced as an enabling tool allowing people to make better travel choices. Examples of 'nudge' principles could be reducing unnecessary signs, posts and other street clutter to improve road safety and encourage walking, by travel planning, or by presenting information in such a way as to encourage choice. Interventions should be easy and not forbid choice. In addition to the application of 'nudge', the Government strongly believe packages of measures, designed to complement each other, often work well in encouraging people to make sustainable transport choices because packaging enables a broader spectrum of transport users to be targeted for the benefits of individual initiatives to be considerably enhanced.

Proposal ST 1: Support travel planning

Workplace travel plans aim to reduce the number of cars arriving at employment sites by encouraging staff to travel to work by public transport, on foot, by bike, by car share or through reducing the need for commuters and businesses to travel by encouraging teleworking and teleconferencing. The City Council will seek to:

- Continue to provide a travel plan business support programme
- Prioritise support given to WPL liable businesses ahead of the WPL coming into effect
- Provide grant schemes such as 'TransACT' where funding is allocated to support small and medium sized businesses to develop travel plans and implement improvement measures

School travel plans also make a significant contribution to reducing congestion around schools as well as promoting active travel and improving accessibility to education, through encouraging and promoting sustainable travel options. The City Council will seek to continue to develop a programme to:

- Support schools to refresh their current school travel plans
- Encourage those schools without an approved travel plan to develop one
- Respond to the WPL by developing staff travel elements of the school travel plans

Personalised travel plans are an extremely effective, albeit resource intensive, method to reduce car use. This approach involves one-to-one sessions with individuals to gauge their travel needs and then to educate and inform them of alternatives they may not have considered. This personalised approach can provide information and incentives to encourage people to try alternative more suitable and less congested transport options. Introducing such plans is funding reliant having significant revenue implications, however the City Council will look to:

- Develop a costed menu of personal and residential travel plan measures for new residential developments, linked to the Strategic Housing Land Availability Assessment programme available at www.mynottingham.gov.uk/shlaa
- Develop support to broaden travel horizons by utilising online journey planners and establishing a smarter travel champions network
- Develop incentivised personal journey planning information through the Easyrider Citycard smartcard platform

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Residential travel plans apply a travel plan approach to the journey origin rather than the journey destination and are largely focused on providing information and incentives. The City Council will seek to:

- Formalise guidance for developers through the Local Development Framework and associated LAPP DPD and Section 106 developer contributions review, e.g. cycling provision, public transport and cycling promotion and offers (introductory tickets, cycle training and incentives)
- Encourage broadband provision as standard for new residential developments
- Support homeshoring (support for people to work from home) proposals

Destination based travel plans encourage the development of travel plans for key locations which generate significant travel demand including visitor attractions by:

- Developing visitor travel plan guidance for developers through the Local Development Framework and associated LAPP DPD
- Developing event based travel plans
- Encouraging opportunities to improve interchange and links to low carbon options e.g. cycle hub facilities and proposals for electric vehicle private hire services

Proposal ST 2: Travel marketing, promotion and awareness

Travel marketing and awareness campaigns use a wide range of media and are highly successful at improving general public understanding of problems resulting from different transport choices, and what can be done to solve these problems, including changing their own behaviour. The City Council will continue with a comprehensive package of travel marketing, promotion and awareness raising for all transport users to inform them of travel choices using the successful Big Wheel brand established in 2001. The City Council will focus on three strands of providing information on travel choices to influence citizens travel decisions as follows:

Information and support on travel choices:

- Review and refine the dedicated Big Wheel transport website
- Raise the profile and promote the use of online journey planners such as Walkit, Transport Direct cycle journey planner and East Midlands Travelline and seek to integrate journey planning resources
- Develop a suite of cycle maps for key destinations
- Explore opportunities for closer working with health promotion colleagues and partners on active travel messages
- Continue with the dissemination of public transport information in various formats in line with the Bus Information Duty
- Develop a smarter travel champions network to create a community network and information and support hubs for sustainable travel choices

Travel awareness, marketing and promotion campaigns:

- Develop a programme of community engagement activities using the Big Wheel brand to support Decade of Better Health, Change4Life, Parklife, TravelWise and In Town Without My Car campaigns
- Support the Greater Nottingham Transport Partnership (GNTP) working
- Continue the GNTP Forum and Big Wheel business club and explore opportunities to maximise club membership and service element of the Big Wheel business club

Consistent transport branding

- Refresh the Big Wheel branding toolkit
- Deliver cross-campaign branding on parallel initiatives such as the Decade of Better Health and Change4Life programme

Box 3.C: The Big Wheel

The Big Wheel is an award winning transport marketing campaign for Greater Nottingham. Since 2001 the Big Wheel team has delivered an extensive programme of engagement and marketing for sustainable transport with business, partners and the public on behalf of the City Council and Nottinghamshire County Council aimed at promoting the integrated and sustainable transport system. This has been achieved through making people aware of the benefits of using sustainable transport and the choices they have available and understanding how to use those services effectively through the use of tools such as media campaigns and online information sources including:

- Managing the Big Wheel website, a hub for local sustainable travel information and travel planning resources which receives an average of 2,500 hits per month
- Organising bespoke public events to celebrate national campaigns such as European Mobility Week and well as providing a presence at a range of other business and community events around Greater Nottingham to promote the Big Wheel message. Providing businesses and the public with the tools to enable them to choose more sustainable modes of transport
- Organising local support and events for national initiatives such as Bike week, Walk week and National Liftshare week
- Co-ordinating the Greater Nottingham transport partnership and GNTP Forums with the business community and providing opportunities for the Councils to consult with stakeholders
- Developing partnerships with many major leisure destinations to market travel choices to their customers including Nottinghamshire County Cricket Club, Nottingham Forest Football Club, Notts County Football Club, the Nottingham Ice Arena, the Women's FA Cup, the Nottingham Panthers, Nottingham Rugby Club, the outdoor ice rink, The Royal Centre and Theatre Royal, Broadway and Nottingham Playhouse

3.3.2 Encourage sustainable alternatives

A core aspect of this strategy is encouraging the take up of travel by more sustainable modes, meaning walking, cycling and public transport options as viable alternatives to car use, which can help reduce congestion and support economic vitality. Provision of high quality sustainable alternatives and integrated/through ticketing will be integral to successfully delivering the strategy objectives.

The City Council is committed to maintaining and enhancing the quality and reliability of Nottingham's public transport network through buses, trams, taxis, coaches, park and ride and easy interchange, which will be crucial to delivering economic benefits whilst also contributing to a low carbon transport system and improving people's accessibility to services and employment.

Active travel choices are also an important strand of this work. Provision and support for more walking and cycling can increase accessibility and overcome affordability barriers many citizens face. The full strategy for how we will be prioritising walking and cycling is covered in Chapter 7.

Table 3.3: Integrated public transport proposals and measures

Proposals	Measures
Integrated public transport	HUB: Nottingham Station Hub NET 2: NET Phase Two NET 3: NET future phases BUS: Bus improvements

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Proposal HUB: Nottingham Station Hub

The Nottingham Station Hub project is to provide a state of the art public transport interchange and gateway to Nottingham by delivering a high quality transport hub for trains, trams, and bus and taxi services. This involves the comprehensive improvement and redevelopment of the station to transform facilities for passengers.

The scheme complements work being undertaken by Network Rail to provide an improved track layout in and around Nottingham station as part of the Trent re-signalling project. The Hub scheme safeguards provision for an additional platform to enable all currently envisaged future capacity requirements to be accommodated. The Station Hub will act as a catalyst for the regeneration of the Eastside and Southside areas of the city by creating many new job opportunities.

The scheme planning application was approved in 2009 and the project funding has been confirmed by partners. At a visit to Nottingham in October 2010, the Transport Under Secretary formally announced the start of the project. The associated highway works have commenced and work on the multi-storey car park is also underway. Network Rail are seeking to appoint the main station contractor in June 2011 with all programmed work to be complete by November 2014.

Local businesses have welcomed the redevelopment of the railway station as it is recognised as being key to the future success of Nottingham's economy. Realising the station's potential will help to boost the economy and draw more passengers to the railway by connecting people with employment opportunities.

Key features of the Station Hub include:

- Improved passenger and operator facilities, including upgraded travel information, displays, new toilets, ticket office, shops, cafes and waiting areas
- A new concourse connecting trains, trams and the car park
- New and improved facilities for disabled people, cyclists and taxis
- A new 950 space multi-storey car park
- 830^2 m of new retail space within the station
- Improved public realm around the station
- The release of brown field land within the station site enabling the comprehensive redevelopment of approximately 16,000m^2 of mixed-use development, generating approximately 900 jobs
- A new cycle parking area accommodating approximately 100 bikes, more than doubling the previous facilities

More information can be found at: www.mynottingham.gov.uk/hub

Box 3.D: Case Study Nottingham Express Transit (NET) Tram

Nottingham Express Transit Line One, connecting Hucknall to Nottingham Station with a branch to Phoenix Park close to junction 26 of the M1, has been in operation since March 2004.

The system has been very successful, with 10 million journeys per year in the first five years of operations, equating to more than 30,000 trips per average weekday. It has demonstrated the substantial accessibility, congestion, economic development and regeneration benefits achievable with light rail when it is established as part of an integrated public transport network.

A survey carried out in 2010 found that 94% of passengers were satisfied with tram travel. Passengers indicated they felt secure and safe both at the tram stop and on the route to their stop giving higher scores for both tram stop lighting and cleanliness compared to previous years.

The research shows that tram passengers continue to use the service extensively for commuting to work, school, college and university, and also for leisure purposes.

Proposal NET 2: NET Phase Two

Nottingham Express Transit (NET) Phase Two expansion of the tram was confirmed through the 2010 Comprehensive Spending Review albeit subject to a reduction in funding.

The 17km extension shown in Map 3.4 will provide substantial new public transport capacity, capable of moving large numbers of people quickly from the densely populated south west (Clifton) and west (Chilwell) of the city and from the wider region through proposed park and ride sites serving Junctions 24 and 25 of the M1 motorway thereby having a significant congestion reduction impact on the A52(T), A453(T), A6005, A6200 and A6514 corridors.

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Map 3.4: NET Tram lines two and three

At present, park and ride facilities do not comprehensively serve the southern and western areas of the city. The additional sites proposed as part of NET Phase Two are located at Clifton South on the A453 corridor and at the Toton Lane Roundabout on the A52 corridor. These will provide a total of 2,400 additional spaces and will provide congestion relief to Clifton Bridge, the A453 and A52 Trunk Roads and other local roads in the south west quadrant and will result in all three approach routes into Nottingham from the three M1 junctions being served by tram based park and ride.

Following a public inquiry held in 2007, with a short re-opening in 2008, the Nottingham Express Transit Order was made in May 2009. 'Conditional approval' for the scheme was granted by the DfT in July 2009 and this allowed the tender process to commence in September 2009. The preferred bidder was announced in March 2011 with the contract expected to be let in August 2011. Services on the extended network are expected to commence in 2014 after a three year construction period.

The expansion of the NET tram system will result in a step change in the reliability, safety and capacity of public transport across Nottingham raising the quality of local public transport to meet the expectations of modern passengers. NET Phase Two will ease the effects of traffic congestion, enhance the economic competitiveness of the city and district centres and contribute to a more sustainable urban future. NET Phase Two will build on the best practice design for NET Line One and will result in substantial transport benefits with the expected transfer of over 20 million passengers to travel on NET per year, including:

- Around 30% of users changing travel behaviour by moving from car to NET directly or using park and ride. NET Phase Two will reduce the growth of traffic congestion by taking a further three million car journeys off Nottingham's roads
- The reductions in car use as a result of introducing NET Phase Two will have most impact in the busy south west quadrant of the city. The three corridors served by NET Phase Two (the A453, A52 and A6005) are three of the busiest traffic routes in Nottingham and are key to maintaining the connectivity of Nottingham to the national road network, in particular the M1, A52 and A42/M42
- 28 new tramstops will be provided, with over 50 stops on the network providing access to nearly 2,000 workplaces, and 20 of the 30 largest employers including the University of Nottingham and Queens Medical Centre

Further details on the NET project can be found at: http://www.thetram.net/

Proposal NET 3: NET future phases

Future phases of the NET tram system will be explored linked to the consideration of new developments through the development plan process. As part of the NET Phase Two agreements, the Council has included the possibility of opportunities of further tram extensions arising from future development proposals or requests from neighbouring authorities that may wish to consider extensions in their area.

Bus Improvements

Nottingham already enjoys a comprehensive high quality network of bus services, operating high frequencies on the key transport corridors provided commercially by local operators. The core bus service is supplemented by the supported Linkbus network, which interchange with the Line One of the NET tram. Nottingham's buses carried around 63 million bus passengers in 2009/10 and a further 10 million passengers on Line One of the tram. Overall public transport passenger levels have increased 11% in the past five years.

The key drivers for success of bus travel, in particular in providing a network enabling realistic competition to the car, are that it must be:

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- Comprehensive in coverage
- Frequent, reliable and fast
- High quality, safe and accessible
- Easy to understand and use
- Affordable
- Integrated (including park and ride)

These key aspects to success are delivered through partnership arrangements between the City Council and the local bus operators. Proposals to develop and improve the bus network to contribute to delivering an integrated public transport system are as follows:

Table 3.4: Bus improvement proposals and measures

Proposals	Measures
Bus improvements	BUS 1: Bus network development BUS 2: Transport interchange and integration MTA 1: Improvements to public transport waiting facilities (detailed in Chapter 5) MTA 2: Integrated and smart ticketing strategy (detailed in Chapter 5)

Proposal BUS 1: Bus network development

The Council's strategy will be to continue to work in partnership with Nottingham's bus operators to bring improvements to the commercial bus travel offer. Elements include:

- Improvements through quality partnerships
- Journey time reliability improvements

In addition to working with the commercial bus network operators on improving the bus offer, the City Council supports the Linkbus network which currently carries over 6 million passengers per year. Linkbus developments are vital to encouraging more public transport use however to avoid duplication these are discussed in Chapter 5.

Quality partnerships

The City Council benefits from having developed strong and long lasting partnership working with local bus operators, neighbouring local authorities, the Greater Nottingham Transport Partnership, businesses and the Highways Agency. These have allowed for the delivery of quality improvements through the Bus Quality Partnership and Statutory Quality Partnership Schemes.

Bus Quality Partnership

In return for bus operator commitments to invest in high quality modern low floor vehicles, customer care training and better information provision, the City Council has invested in bus priority measures, bus shelters, real-time information, bus boarders/raised kerb stops and improved interchange facilities.

Bus operators have identified key locations where congestion has created service unreliability. Through this process a comprehensive programme of bus priority measures, including bus lanes and traffic signal priority, will be identified and continue during this LTP period.

Statutory Bus Quality Partnership Scheme

Nottingham's new city centre Statutory Bus Quality Partnership Scheme (SQPS) came into operation in May 2010. The SQPS is a partnership between the City Council and local bus operators aimed at bringing benefits to passengers by improving the quality of services and facilities within the city centre area.The scheme will operate for 10 years and covers 96 bus stops. As future growth places additional

strain on the city centre the introduction of the slot booking system and improved enforcement will ensure a more managed and efficient use of the limited kerb space. The City Council and bus operators have signed up to maintaining the following standards of service under the scheme:

Table 3.5: Statutory Bus Quality Partnership Scheme standards

City Council standards	
Stops	• All to have new shelters, lighting, electronic departure displays, accessible kerbs, co-ordinated mapping and plate information, timetable cases and CCTV • All designated as local bus only - to exclude coaches and minibuses
Slot booking system	• All stops subject to formal slot booking system with maximum 12 buses an hour at each stop • Traffic Regulation Condition Clearways with all stops nominated with either 2-minute or 10-minute (stand) maximum waiting times
Staff	• Council officers to enforce slot booking, provide on-street customer queries, monitor maintenance and information and provide peak marshalling facility to allow buses through zebras at busy times
Enforcement	• CCTV controlled in-house enforcement of bus lanes, bus gates and stops that are often used illegally by taxis and private vehicles • Bring in police checks for areas, which cannot be defined as bus lanes/gates but where general traffic is excluded
Free environmental Centrelink bus provision	• Connects two bus stations and shopping centres to Market Square and near to train station • Allows through journeys for those services that have to be cut short at one of the stations because they do not meet the standards
Information	• All services to show printed departure information and on-bus ticket costs at stop • All services shown as chronological departures on electronic screens (unless shown as real time) • All stops to have 'continuing your journey' and network planning map information • All stops to have mini (credit card sized) summary timetables with holders
Bus operator standards	
Buses	• All buses must be low floor • All buses must meet Euro 3 emissions standards at particulate level • All buses must meet other detailed specification regarding branding, destination blinds, cleanliness and customer care
Information	• All services to show printed departure information and on-bus ticket costs at all stops. All services numbers/names shown on bus stop plates • All services to have on-board timetables available to the public. • All service timetables to be provided in electronic form at least two weeks before service changes. • All service to provide suitable on-bus information to indicate that they are low floor
Ticketing	• All services must be part of the integrated multi-operator Kangaroo and Plusbus tickets

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Governance of the SQPS

The scheme is managed and monitored by the City Council's public transport team with the Traffic Commission holding powers to enforce those aspects not covered by Traffic Regulation Orders. Evidence suggests the system is meeting many of its objectives and is coping with issues relating to the current competition. A formal review of the SQPS scheme, together with the desirable measures to improve and develop it further will be consulted upon with all operators in spring 2011.

Journey time reliability improvements

Bus reliability measures are important to the punctuality of bus services operating and can help aid capacity problems through improving network efficiency. The City Council will seek to:

- Implement bus priority lane measures along major bus corridors
- Improve bus lane enforcement techniques with the use of an Automatic Number Plate Recognition System (ANPR), which logs the car automatically as it enters into a bus lane and issues fines for violations
- Increase the use of the mobile CCTV unit in use at bus lanes in areas where the fixed cameras currently are not in place
- Continue to develop the use of the TransXchange/Electronic Bus Service Registration data format produced by major bus operators to assist the automated integration into the electronic journey planners and real time information systems

Punctuality Improvement Plans

In 2006, an agreement was signed between the City Council, Nottinghamshire County Council, Nottingham City Transport, Trent Barton, Stagecoach, and the Confederation of Passenger Transport. The contractual agreement aims to continuously improve the punctuality and reliability of bus services benefiting all partners. The partnership will seek to progress the following:

- Make use of real time information systems
- Make use of global positioning systems through electronic ticketing systems
- Continue on bus services and 'mystery customer' and contract compliance checks
- Continue off bus monitoring through roadside observation surveys

The Punctuality Improvement Plan can be downloaded from: www.mynottingham.gov.uk/busstrategies

Proposal BUS 2: Transport interchange and integration

Efficient interchanges are an essential element in achieving an integrated public transport network. Successful interchange has been achieved at key stops with NET Line One such as at Wilkinson Street with the Ring Road Medilink bus service and in the Lace Market in the city centre. The focus of the Nottingham Station Hub project is to achieve a state of the art interchange between bus, coach, rail, tram and taxi services for the Southside city centre area.

Park and ride facilities support transfer of car to public transport and are a very important component of the transport system in Nottingham. Nottingham is served by six city park and ride sites and one at Hucknall in the County; five are associated with NET Line One tram and two are bus-based sites. In total they provide almost 5,000 spaces and have been successful in attracting car users onto public transport for at least part of their journey, improving accessibility to the city centre and reducing traffic volumes on key congested radial routes. The pricing strategy makes the services competitive with city centre car parks and the ticketing arrangements enable flexibility and interchange between other bus services and NET tram system.

Bus stations play an important part in access and connections for citizens. The Council will continue to work with bus and coach operators to improve interchange opportunities not only across public transport but also to improve pedestrian and cycling facilities.

3.3.3 Improve efficiency of the network

Effective highway management is crucial for allowing the efficient movement of people and goods whilst poor condition of our network can lead to journey time unreliability and road safety issues that inhibit economic performance. Effective management of the existing transport network can provide significant congestion benefits and represents a cost-effective alternative to the provision of large scale new infrastructure. Integrated planning and transport measures to manage highway development control can ensure new developments do not have a detrimental effect on the road network with the added benefits of creating an environment for active travel to be the natural mode of choice.

Table 3.6: Efficient networks proposals and measures

Proposals	Measures
Asset management	AM 1: Highway asset management action plans AM 2: Carriageway maintenance AM 3: Footway maintenance AM 4: Bridges and structures
Highway network management	NM 1: Network management plan improvements

Asset management

The Highway Asset Management Plan (HAMP) forms the overarching management framework for the delivery of the highway service being designed to guide the planning of management and investment in the highway asset base. The HAMP has been developed over the last five years and will become an integral part of this strategy. Further information on the development of the HAMP will be available on the City Council's website at: www.mynottingham.gov.uk/ltp3

The document describes how decisions are made to employ capital investment and operational management, to prolong the life of the City Council's assets and to keep them safe and fit for purpose and to enhance the urban historic environment of Nottingham.

The Council will seek to:

- Adopt the HAMP as the management framework for implementation of an asset management approach to best meet the needs of current and future citizens
- Carry out an annual review of the HAMP to determine progress and inform future focus and direction

Proposal AM 1: Highway Asset Management Plan (HAMP) action plans

The HAMP provides a strategic overview as to how the whole highway network is managed and comprises of 'working' documents such as lifecycle and level of service plans and winter maintenance strategies. It also includes financial reports, risk registers and an improvement programme. One key role of the HAMP is to make the connections between the higher-level legal and strategic context governing the Council's work and the day-to-day decisions made to maintain its road network.

Guidance on the structure and content of the plan was taken from the County Surveyors Society's 'Framework for Highway Asset Management', 'Guidance Document for Highway Infrastructure Asset Valuation', 'Manual for Streets' and the Highway Lighting, Maintenance and Structures Codes of Practice and other nationally published documents.

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The City Council's highway network management regime comprises of key elements of:

- **Network safety** which is fulfilled by the Network Management Plan to comply with statutory obligations and meet with road users needs
- **Network serviceability** ensuring availability of networks, maintaining reliability and enhancing quality
- **Network sustainability** aimed at minimising cost over time and maximising value to the community and environment including the maintenance of trees

The HAMP will form the critical tool for asset management practice within the city to enable improved long-term planning and cost effective service delivery. Using the HAMP improvement programme will allow for better co-ordination of and integration with new-build and other transport schemes to identify potential conflicts and enable joint schemes to be progressed wherever possible, thereby reducing disruption as well as costs.

Identifying potential schemes

Highway services are currently working through a concept appraisal on improvements to the scheme selection process to produce realistic scheme extents, which:

- Prolong the life of the asset
- Provide a treatment making efficient use of limited resources
- Minimise corporate risk
- Ensure transparency
- Provide an audit trail
- Reduce environmental impact

The length of the forward works programme will be dependent on several factors including asset data availability, security of funding levels and advancement of levels of service.

To assist in future schemes we plan to make greater use of following information:

- Maintenance safety inspections
- Works history
- Neighbourhood priorities
- Ward councillor/Local citizen enquiries

The long term objective is to adopt a value management approach that incorporates all of the above as part of a robust and repeatable methodology. Improvement actions include:

- Review the process of scheme prioritisation to document and review the processes used for scheme identification and selection. Highway services are currently working through a concept appraisal which will form a vital part of this process
- Develop a highway maintenance policy to ensure service provision is set within the wider contexts of integrated transport, best value and the corporate vision of the Council
- Develop a Skid Resistance Strategy in line with recommendations in the Code of Practice (Well Maintained Highways) and a risk-management based skid resistance system
- Develop value management and other forms of deterioration modelling to facilitate the options of not only identifying and prioritising the type of treatment to undertake, using 'what if' scenarios

Proposal AM 2: Carriageway maintenance

The carriageway network is central to the vision outlined in the LTP of being an ambition, international city by assisting in providing for an integrated transport system and well-connected neighbourhoods and centres. In the past five years £9.4 million has been spent on maintenance work on carriageways and residential roads.

Condition assessments are carried out annually in accordance with requirements issued by the DfT. Since 2004/05, data for the principal and the non-principal roads has been collected using the 'SCANNER' (machine) survey and data for the unclassified road network collected through coarse visual inspections carried out by accredited survey contractors.

This data is processed by the Council's pavement management system to prepare scores of the principal, non-principal and unclassified road network condition reports.

Progress has been made to develop a GIS digitised representation of the network using SCANNER survey results which provide the ability to view road condition data through mapping. The results are banded into three groups as illustrated in Map 3.5.

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Map 3.5: Nottingham classified road condition

Road Condition Index (SCANNER survey results) 2007 - 2009

- Less than 40 - generally good condition
- 40 - 100 - plan investigation soon
- Greater than 100 - plan maintenance soon

Proposal AM 3: Footway maintenance

The main aims of footway service provision are broadly similar to that of the carriageway network. To assist in determining the up-to-date serviceability of the network and prioritising the need for maintenance, the City Council undertake both planned inspections by its own staff and condition assessments by accredited survey contractors.

Highway Services will be working from results taken from the new footway network survey in 2011. This will replace the Detailed Visual Inspection survey method currently in use. The survey will provide value for money and that the outputs will easier to understand and communicate with neighbourhood colleagues, ward councillors and to local citizens.

Results from the survey will be used to:

- Determine condition of footway network and identify possible treatments
- Prioritise scheme selection and support works programmes
- Support asset management and network valuation

As with carriageways, the footway network must facilitate access to employment, education and leisure facilities, as well as other modes of transport.

The City Council has adopted a policy of maintaining slab/modular/block-paved footways on a like-for-like basis only in the city centre and other key shopping areas. Slabbed footways in other areas such as residential streets, when programmed for maintenance, will be replaced with a macadam construction. This policy has been adopted to allow the highest level of maintenance with available resources.

In the last five years up until 2010, approximately £18 million has been invested on planned footway improvements, facilitating the treatment of around 866,853 square metres of footway, which has significantly enhanced the overall condition of the footways in Nottingham.

Proposal AM 4: Bridges and structures

Bridges form an integral and often critical part of the highway network and require adequate funds to be available for managing and maintaining these vital assets. The City Council regularly carries out general inspections, principal inspections and strength assessments of bridges and culverts on the highway network to inform appropriate maintenance, refurbishment and strengthening work to ensure they can safely carry traffic loads.

General inspections take place every two years and capital funded principal inspections take place at frequencies not exceeding 10 years (except for significant structures which are inspected every 6 years). Underwater inspections are carried out after severe flooding and at intervals preferably not exceeding 3 years.

In order to improve the decision making process regarding the effective expenditure of maintenance money available and to assist in their effective management, bridges and highway structures have been included in the HAMP.

As bridges and highway structures have long lives, the valuation document recommends valuing these assets on the basis of the depreciated replacement cost. The cost is calculated by subtracting the impairment costs from the gross replacement cost. In addition, it is recommended that the valuation is based on the deterioration of individual components that make up a bridge as these have very different service lives.

The outcome of deferring bridge maintenance does not necessarily have an immediate effect. However, the extent and cost of the maintenance will inevitably rise if funding is deferred. The floods in Cumbria have shown the importance of bridges to the highway network and the effect on a community should these vital links be severed.

The main priority in managing the City Council's highway bridge assets is to ensure that they can safely carry the anticipated loading from highway vehicles without the risk of structural collapse. The maximum weight of vehicles using the highway network is now 44 tonnes, but occasional abnormal loads heavier than this have to traverse parts of the highway network. Ensuring the safety of these structures will be carried out by a combination of measures:

- Carrying out detailed strength assessments to determine the strength of a structure and any reserve capacity
- Carrying regular inspections, as deterioration is inevitable principally due to the effects of weather, road salts, and loading
- Assessing whether this deterioration has adversely affected the load carrying capacity
- Carrying out maintenance work to repair deterioration

At a time of limited funds the most urgent maintenance need is to protect steel structures from corrosion. Corrosion of steel structures is generally the quickest deterioration mechanism to lead to a loss of load carrying capacity for a structure. However it is also important to carry out timely intervention on reinforced concrete and brickwork structures to preserve structural integrity and avoid much greater expense in the future.

Highway network management

Proposal NM 1: Network Management Plans (NMP)

In response to the City Council's obligation to fulfill the Network Management Duty, a Network Management Plan (NMP) was introduced in 2008. The NMP details the City Council's approach to improve systems and procedures that will provide both proactive and reactive response to network management. It includes network-wide measures to help tackle congestion through allowing for efficient management of street works and incident management. Another key objective of NMPs includes providing a more equitable allocation of road space among:

- People moving along a road and those moving across it
- People using the street and surrounding environment as a place to be
- Freight movement
- Manage access for utility companies

The NMP includes measures put in place to ensure optimum use of the network to ensure the duties of the Network Manager are met under the requirements of the Traffic Management Act 2004 and includes:

- **Intelligent transport systems:** The City Council will seek to maximise the potential from intelligent transport systems such as SCOOT and MOVA, to improve the performance of signal controlled junctions and their linkages. The technology gains through the Urban Traffic Control Centre which allow a number of traffic management technologies to be integrated at relatively low cost, help to smooth the flow of traffic, and can be used to ensure the better use of the existing highway capacity and addressing congestion hotspots
- **Road permit scheme:** The City Council will pursue opportunities to introduce a road permit scheme applicable to all agencies working on the highway to minimise disruption and allow for improved coordination of street works for maintenance and new infrastructure projects
- **Area based road signage strategy:** This is aimed at reducing the amount of 'lost' traffic in the network by providing strategic route signing, encouraging the use of sustainable modes through

providing information on park and ride sites and dynamic (parksmart) direction to city centre car parks and improved signing to local facilities. The City Council will develop the parksmart electronic car parking management strategy to help to minimise unnecessary traffic circulation by providing motorists with real time information to improve route choices and inform them of the availability of off-street parking

- **Moving traffic offences:** The City Council will be looking to broaden its enforcement to cover other moving traffic offences in line with the Traffic Management Act 2004 when the necessary regulations are adopted by Government which will help to support wider network management initiatives. The City Council encourages Government to enact the necessary powers for local authorities to enforce moving traffic offences which will improve compliance on the highway network that are currently undertaken by the Police. Enforcement will bring overall benefits to safety and the ability for people and services to move around the network more efficiently, in particular benefit pedestrians, cyclists and public transport users.

The DfT are carrying out a review of traffic signs to help reduce the burden on local authorities whilst ensuring that greater care is taken in the design and maintenance of clear traffic signing. The review will recommend proposals to significantly streamline the Traffic Regular Order process, reforming the way consultation is carried out. The DfT will provide new advice on auditing and removing unnecessary traffic signs enabling authorities to deliver improvements to their streetscape and reduce maintenance costs. The review will be completed by the end of May 2011. The Council will consider the DfT's recommendations following the review and look to reduce or remove traffic signs as deemed appropriate for safety and efficiency benefits.

Further information on the Network Management Plan can be found at:
www.mynottingham.gov.uk/networkmanagement

3.3.4 Road capacity improvements

The approach included in the previous Chapter highlights that capacity increases on the highway network, in particular the radial route network, will only be considered as a last resort where public transport capacity increases are not a realistic or viable option. The emphasis should therefore be on increasing total person trip capacity, focused on sustainable transport modes. Whilst major infrastructure projects are expensive, they pay dividend in their ability to deliver maximum benefits through comprehensive and integrated delivery of transport and streetscape improvements.

Table 3.7: Building appropriate additional capacity proposals and measures

Proposals	Measures
Road capacity Improvements	RC 1: Target capacity improvements at congestion hot spots RC 2: Improvements to the Ring Road

Proposal RC 1: Targeted capacity improvements at congestion hot spots

The City Council will seek to introduce small scale junction improvements, for example:

- Works at congestion hotspots as identified through the annual congestion monitoring survey and through consultation with transport operators
- Smoothing the traffic flow and where possible, increasing priority for public transport.
- Upgrading pedestrian facilities and junctions, in particular treatment for some older junctions that have no pedestrian facilities with the provision of tactile paving and rotating cones for disabled users
- Upgrading of signal equipment to utilise the latest technology including low voltage equipment

3 World-class Sustainable Transport System

Proposal RC 2: Improvements to the Ring Road

The Ring Road Major integrated transport scheme was developed and progressed during the previous LTPs to improve bus reliability and journey times, which would make the Ring Road an attractive route for cross-city trips and help alleviate city centre congestion and capacity problems.

The scheme will provide orbital and radial capacity improvements, enhanced interchange opportunities, integration with NET Line One and a package of measures improving the environment for pedestrians and cyclists including upgraded street lighting.

A business case for the £30 million scheme was submitted to the DfT in the summer 2009 and was awarded 'programme entry' in March 2010. Following the 2010 Comprehensive Spending Review, the Ring Road project was one of the schemes put into a 'development pool' competing nationally for a pot of £600 million. Development Pool schemes are those for which the DfT have completed a value for money assessment in the last four years. The business case for the Ring Road demonstrates a high value for money score based on its performance in meeting congestion reduction objectives.

The City Council prepared an expression of interest for the Ring Road which was submitted to the DfT in early January 2011. It included confirmation of delivery timescales, risks and funding. A best and final funding bid will now need to be submitted by autumn 2011 with the Government likely to make decisions by the end of 2011.

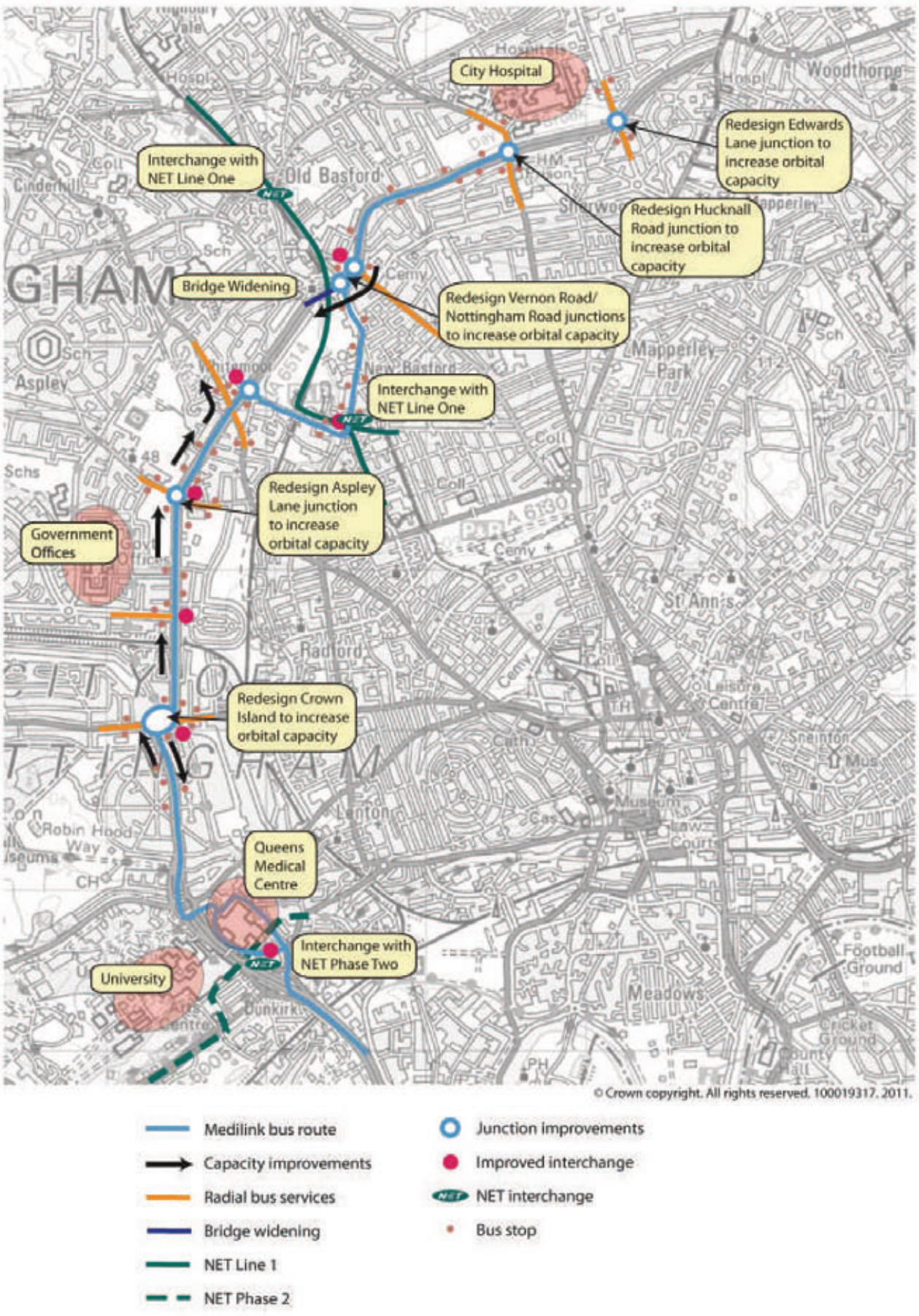
The broad criteria against which development pool schemes will be assessed are:

- Value for money
- Proportion of overall funding coming from non-DfT sources
- Deliverability
- Strategic importance
- Consideration of modal and regional balance across the programme

Schemes that are accepted will then receive reactivated programme entry approval, subsequently progressing to a 'full approval' decision after which construction can commence.

The Ring Road scheme business case and further information can be found in the LTP Implementation Plan and at the following website: www.mynottingham.gov.uk/ringroad

Map 3.6: Ring Road major improvements plan



3 World-class Sustainable Transport System

3.4 Summary

This Chapter has considered the key problems and opportunities for transport in its role to help deliver a world-class city which supports a thriving economy, facilitates growth and supports local people to access good jobs by mitigating congestion and capacity pressures with the underlying aim to better connect people to employment opportunities and services.

The broad areas of intervention for the strategy relate to:

- Managing demand through the Workplace Parking Levy, parking management and regulation, and promoting smarter travel choices
- Encouraging the use of sustainable alternatives through the integrated public transport provision including the extension of the NET tram system, upgrading of Nottingham Station and improvements to walking and cycling networks to free up capacity on roads
- Improving the efficiency of the network by making best use of our current public transport and highway assets
- Building additional capacity where deemed necessary to better improve the transport offer including the proposed Ring Road major scheme

The proposals put forward in this Chapter will support the economy to recovery and help achieve the city's priority of a world-class sustainable transport system. In addition the proposals set out here will be fully realised with the integrated delivery of the measures described in the following Chapters around low carbon, accessibility, quality of life and active travel.

The matrix below summarises how the proposals set out in this Chapter help to meet the LTP challenges, which were set out in Chapter 2.

Table 3.8: World-class sustainable transport proposals and links to meeting key challenges

Proposals	Challenges			
	Maintenance	Congestion	Connectivity	Capacity
Travel Demand Management				
Parking Policy				
Workplace Parking Levy		✓		
Parking management and control		✓		
Smarter Travel Choices				
Support travel planning		✓		✓
Travel marketing, promotion and awareness		✓		
Encourage Sustainable Alternatives				
Integrated Public Transport				
Nottingham Station Hub		✓	✓	✓
Nottingham Express Transit (NET) tram Phase Two		✓	✓	✓
NET future phases		✓	✓	✓
Bus Improvements				
Bus network development		✓		✓
Transport interchange and integration		✓	✓	✓

Proposals	Challenges			
	Maintenance	Congestion	Connectivity	Capacity
Improvements to public transport waiting facilities		✓		
Integrated and smart ticketing strategy		✓		
Improve the efficiency of the network				
Asset Management				
Asset management action plans	✓			
Carriageway maintenance	✓	✓	✓	
Footway maintenance	✓			
Bridges and structures maintenance	✓			✓
Highway Network Management				
Network management plan improvements	✓	✓		✓
Build appropriate additional capacity				
Targeted capacity improvements at congestion hot spots		✓		✓
Improvements to the Ring Road	✓	✓	✓	✓

Chapter 4:
Low Carbon and Resilient Transport

Low Carbon and Resilient Transport System 4

Low Carbon and Resilient Transport System 4

This Chapter explains the challenge for transport in mitigating the impacts of climate change and in particular reducing carbon emissions. The City Council's strategy for minimising and adapting to the impacts of climate change is set out with the key set of proposals and measures will be progressed to create a low carbon and resilient transport system.

4.1 Context

Climate change is one of the most important issues facing the world today with reducing emissions of greenhouse gases presenting a global challenge for every country. It is now widely accepted amongst the scientific community that if global emissions of greenhouse gases due to human activity continue at today's levels, then average global temperatures could rise by 4°C by as early as 2060 and up to 6°C by the end of this century[14]. Alongside frequent and unpredictable extreme weather events, these temperature rises will bring severe and long lasting changes to local climates. Early action could prevent some of the worst impacts of climate change and resilience.

Road transport is a major and growing contributor to UK carbon dioxide emissions, one of the harmful greenhouse gases released into the atmosphere and make up around 21% of total carbon emissions. To reduce these emissions to levels sufficient to meet national and international targets a mix of measures will be required ranging from travel demand management techniques to reduce overall traffic volumes, supporting the development and use of alternative fuel technology to make vehicles cleaner, ensuring sustainable development takes place (e.g. making places accessible by means other than private car), and using technology solutions to promote more efficient travel, reduce or even eliminate travel.

In recognition of the impacts of climate change, the UK has committed to cut its own greenhouse gas emissions by 80% by 2050 compared to 1990 levels. This commitment has resulted in the Government setting detailed carbon budgets nationally and, effectively, for large organisations, through the Climate Change Act 2008[15].

The Low Carbon Transition Plan published by the Department for Energy and Climate Change in July 2009 set out the high level strategy for meeting the UK's legally binding carbon budgets. It states over two thirds of carbon savings from transport are likely to come from new car/van carbon emission standards and the use of renewable fuels, with the remainder coming from other vehicle design and measures for cars[16]. The main approaches for how carbon emissions savings from road transport have been identified are being made through:

- Making engines more fuel efficient
- Supporting low carbon vehicles
- Changing travel behaviour

The City Council was one of the early pioneers in showing a commitment to tackling climate change demonstrated through the Nottingham Declaration on Climate Change now signed by over 230 authorities and organisations. Created in 2000, this vision has contributed to establishing a framework for reducing carbon emissions from transport through investment in integrated public transport provision, changing travel behaviour techniques and trials in alternative fuels and technologies.

14 United Nations Environment Programme (UNEP) (2009). Climate Change Science Compendium. Available at: http://www.unep.org/compendium2009/

15 Further details available at: http://www.hm-treasury.gov.uk/bud_bud09_carbon.htm

16 Low Carbon Transition Plan available at: http://www.decc.gov.uk/

4 Low Carbon and Resilient Transport System

Box 4.A: Key achievements

Nottingham is the UK's most energy self-sufficient city generating 4% of energy from renewables and waste including powering the tram system from spare capacity in the electricity generated by the district heating system. The following are existing local good practice examples:

- Integrated public transport system consisting of Nottingham Express Transit Line One tram and comprehensive bus network
- The City Council successfully secured £520,000 capital funding from emda to purchase three ethanol powered buses and associated fuelling infrastructure. The trial continues in partnership with Nottingham City Transport on the Linkbus service 30 to assess the technical, environmental, business and customer impacts
- Carbon emission reduction year on year due to increased mode shift onto more sustainable modes such as walking, cycling and public transport
- Development of over 400km of cycle lanes and routes across Greater Nottingham
- Over 230 solar powered parking meters installed across the city in 2001
- Two I-Miev electric cars in the City Council fleet with another two electric vehicles on order
- Two publically available electric vehicle charging points in Victoria Centre car park, promoted on the national electric vehicle network website
- Over 5,000 park and ride spaces available across seven sites
- The designation of the city's central core area as a 'clear zone' is also helping to encourage the take up of electrically powered and low emission local delivery vehicles

4.2 Problems and opportunities

The overarching issue for the City Council and its partners is the commitment to reduce emissions from transport and the transport system's reliance upon oil. However, there are also other transport related problems and opportunities around energy, water and waste. The City Council will need to seek ways to adapt the transport network to changes in climate patterns and ensure the system remains resilient.

4.2.1 Weather and climate

Changes in weather could have some very severe consequences for the city resulting in hotter drier summers and wetter milder winters.

Higher summer temperatures:

- Increase in travel relating to leisure and tourism in the summer months and also increasing use of bicycles and cars as people use public transport less in hotter temperatures leading to a higher usage of highway networks
- Damage to structures from higher temperatures leading to a requirement to frequently inspect the highway
- Hot and unpleasant temperatures within transport vehicles, whilst waiting at passenger transport facilities and stations, transport depots, garages and storage facilities. This can lead to citizens suffering from heat related stress, and employees suffering from reduced productivity, as well as an increased demand for effective cooling systems and risks of explosion from volatile substances exposed to excessive heat

Milder, wetter winters:

- Increasing winter mean temperatures and winter precipitation leading to increased storminess with more severe high winds and increased flash flooding
- Passenger transport services, routes and schedules may be delayed and unreliable due to heavy snow/ice, flash and pluvial flooding making dangerous driving conditions

- Storms and high winds can damage transport infrastructure e.g. road surfaces, public transport waiting facilities
- Fog, mist and low cloud can impact driver visibility potentially increasing road traffic accidents as a result of hazardous driving conditions

4.2.2 Floods

The Greater Nottingham Strategic Flood Risk Assessment[17] (SFRA) as amended in 2010 and the River Leen SFRA[18] (2008), represent the best currently available flooding information for the city of Nottingham. They supplement the flood zone maps produced by the Environment Agency and together these documents form the starting point for establishing the risk of flooding to sites in the city.

Particular river corridors especially parts of north-west and south Nottingham are vulnerable to flooding events. Strategic flood risk assessments show that key strategic transport corridors are at risk of flooding and require increased levels of protection. Flooding occurrences in scale and severity are expected to significantly increase with climate change. During a climate change scenario, it is expected that the new defences will overtop and there will be major flooding of parts of the city. Major infrastructure such as the A453 would also be affected.

Detailed analysis of the information available on flood risk is included in the baseline report of the Integrated Impact Assessment Final Report, which has been produced alongside this LTP. The document can be found at: www.nottinghamcity.gov.uk/ltp3

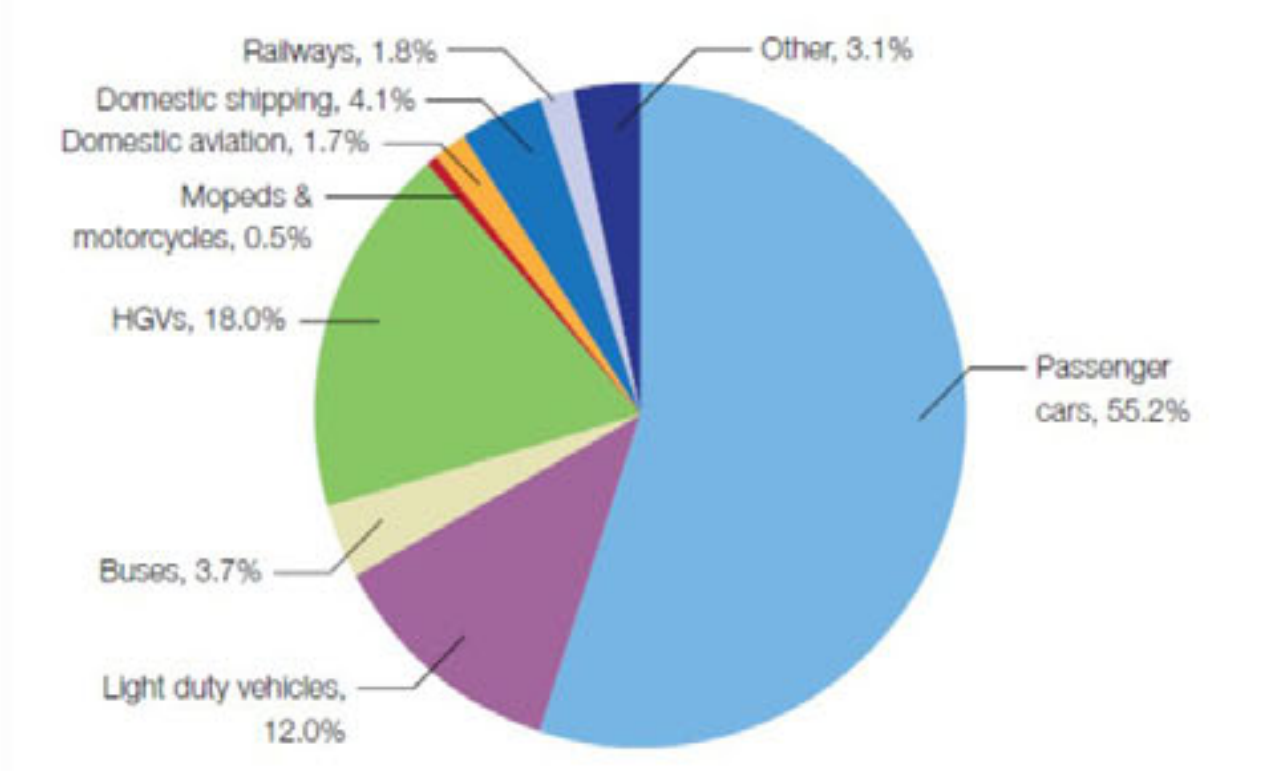
4.2.3 Carbon emissions from transport

In terms of carbon, transport is the fastest growing source of greenhouse gas emissions in the UK, and commuter and business travel constitute nearly 40% of all miles driven by car. Our domestic transport currently contributes 21% of total UK greenhouse gas emissions with the majority of this produced by cars. Transport emissions from journeys made in the UK have increased by 12% since 1990[19]. Figure 4.1[20] gives a breakdown of carbon emissions in the transport sector. Over 50% are generated from private cars.

17 Greater Nottingham Strategic Flood Risk Assessment, Summary of Key Findings for Nottingham City Council, as amended 2010
18 River Leen and Day Brook Strategic Flood Risk Assessment, Summary of Key Findings July 2008
19 Low Carbon Transition Plan available at: http:///www.decc.gov.uk
20 Taken from White Paper 'Creating Growth, Cutting Carbon', Department for Transport, 2011

4 Low Carbon and Resilient Transport System

Figure 4.1: Breakdown of carbon emissions in the transport sector

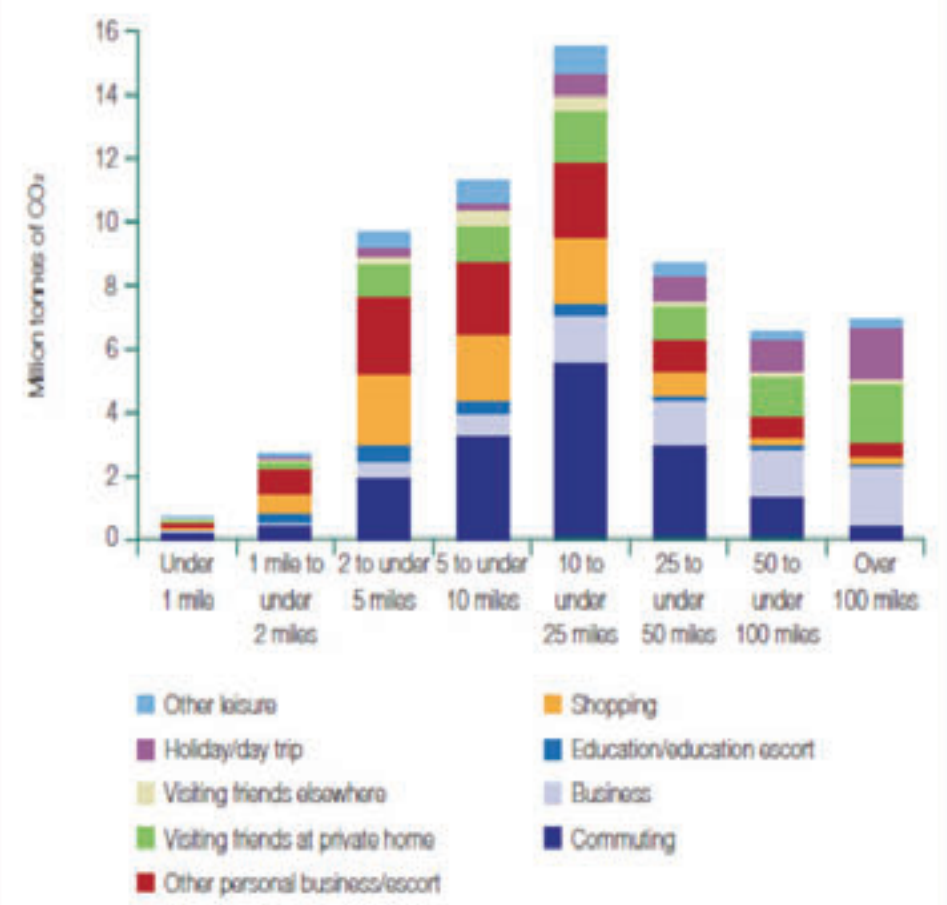


Within the East Midlands, carbon dioxide emissions are highest along main traffic routes and urban centres including Nottingham. The annual carbon emissions from transport for the city was 72,861 tonnes in 2003 which decreased to 68,400 tonnes in 2009 representing a 6.1% reduction and in Greater Nottingham dropped from 259,656 tonnes to 238,352 tonnes, representing a 7.7% reduction.

Evidence quoted in the White Paper 'Creating Growth, Cutting Carbon' states around two out of every three trips made are less than five miles in length. Many of these can be easily cycled, walked or undertaken by public transport. Figure 4.2[21] illustrates data taken from the White Paper showing the volume of carbon emissions generated by trip purpose and length. Commuting and business trips generate over a third of car emissions however leisure, shopping and education trips also play a major part. Medium distance (10 - 25 mile) trips are responsible for the highest volume of carbon emissions. Whilst green technology advances will contribute towards decarbonising transport in the long term, opportunities exist to encourage shorter trips to be made by sustainable modes.

21 Taken from White Paper 'Creating Growth, Cutting Carbon, DfT, 2011

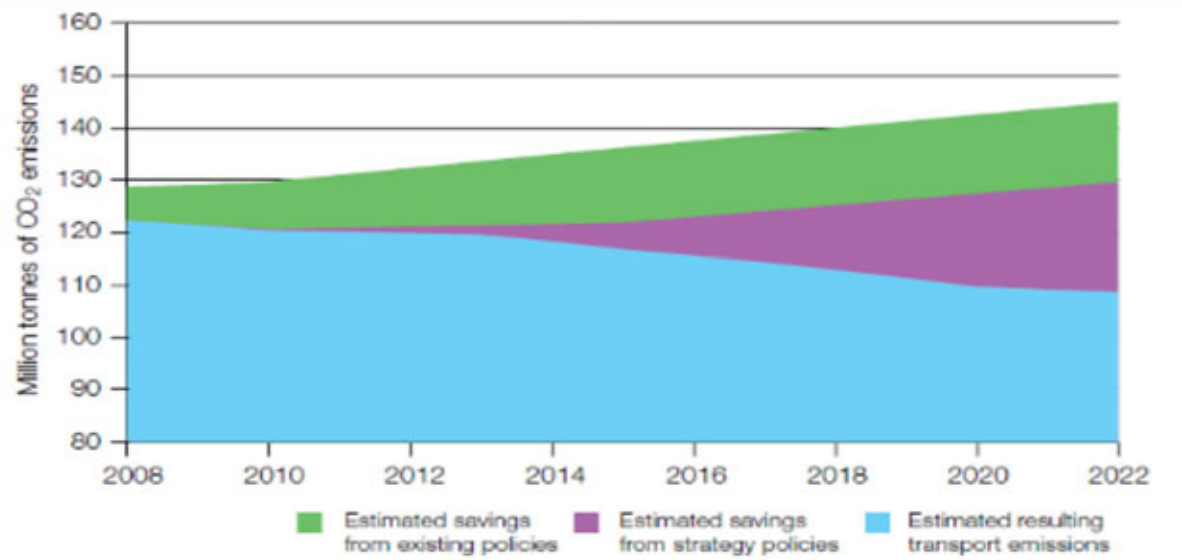
Figure 4.2: Carbon emissions by journey purpose and length



The Low Carbon Transition Plan details national targets for reducing carbon from transport: 14% reduction in carbon emissions by 2020 and 10% transport energy renewables by 2020.

By 2020 European regulations will require new cars to produce 40% less carbon dioxide per kilometre travelled than 2007 levels. From 2012, the target for average emissions from new cars sold in Europe will be 130g of carbon dioxide per kilometre, phased in to ensure full compliance by 2015. From 2020, average carbon dioxide emissions from new cars sold in the European Union must further reduce to 95g of carbon dioxide per kilometre traveled.

Figure 4.3: Domestic transport emission forecasts to 2020 compared to 2008



4 Low Carbon and Resilient Transport System

Nottingham city citizens produce significantly less carbon dioxide emissions per capita than the regional and national average. Cycling England calculate that 'if all the commuters in England with a journey of under five miles went by bike rather than car or bus, they would save a collective 44,000 tones of carbon dioxide, the equivalent emissions produced by heating nearly 17,000 houses. And that would be in the first week'.

In February 2011, the DfT commenced consultation on a basic carbon capture tool. It aims to help local authorities:

- Generate carbon and cost saving information for business cases (based on estimates of take up and effects of interventions)
- Explore policies to see which policies may be worth researching and pursuing further
- Explore sensitivity of carbon savings using a range of assumptions about take-up

Information on the DfT carbon tool is available online at:
http://www.dft.gov.uk/pgr/regional/policy/carbon-tool/

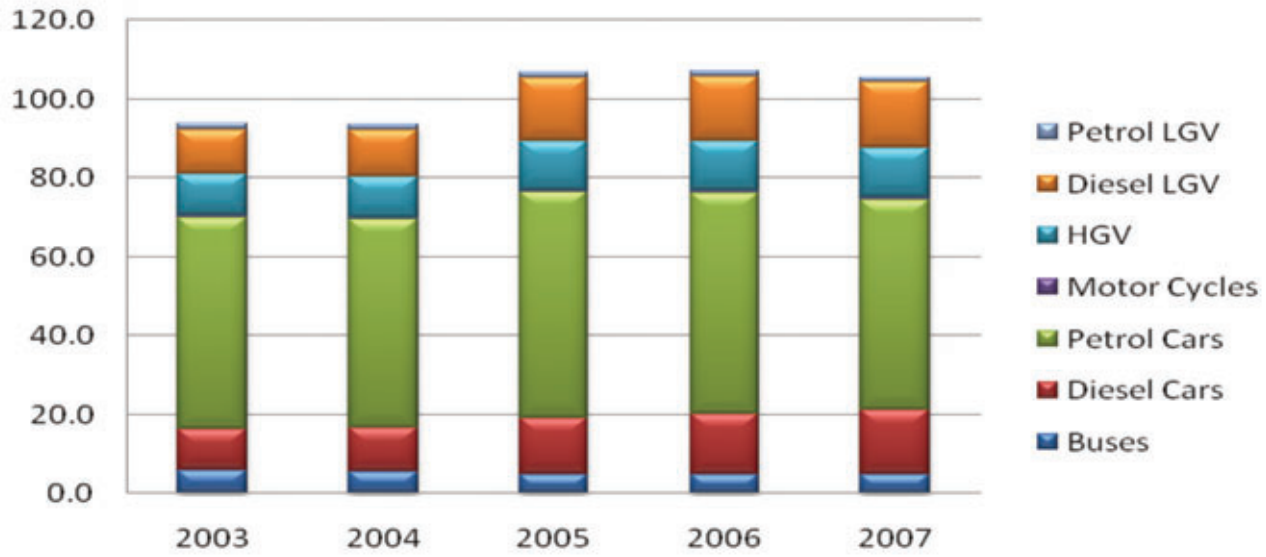
The City Council is part of the Local Carbon Framework and is currently participating in a pilot software project designed to model energy demand and supply and carbon emission data related to land use and transport planning policy interventions to assist decision making. The ESTEEM (EStimation of Transport Energy and Emissions Model) is seeking to build a spatial mapping and quantification tool for Nottingham hosted on the core GIS system which the Council will test. The project underpins the DfT's commitment to developing a National Sustainable Travel Strategy and makes two key recommendations:

- Give greater attention at an early stage to analysing locational options for major development: selecting places likely to generate low trip rates and the greatest potential to offer a competitive alternative to car use
- New developments should be planned to achieve levels of car distance travelled per head rather than being limited to a single weekday peak hour that are lower than the average for the transport authority area and that are good practice benchmarks

4.2.4 Energy

The Nottingham Energy Partnership has calculated that the transport sector is responsible for 21% of the energy consumption in Nottingham. In terms of road transport, although Nottingham's transport fuel consumption rose between 2004 and 2006, the trend has since been reversed. In particular, the use of petrol is falling, whilst the use of more efficient and lower carbon emission diesel is increasing.

Figure 4.4: Road transport energy consumption, thousands of tonnes of fuel



Figures for the city as a whole show a continued reliance on gas and oil as energy sources (77% of all energy use)[22]. However, Nottingham is home to Enviroenergy, one of the largest energy service companies in the UK. Enviroenergy Limited is a company wholly owned by Nottingham City Council which operates the long-established Eastcroft power station and associated district heating network. It converts domestic and commercial waste collected in the area to energy, and has been supplying electricity and heat to around 5,000 households and 150 businesses since the 1970s. As a result the City Council is now one of the 25 largest users of renewable energy in the European Union[23].

In 2010, the Nottingham Energy Partnership prepared the 2020 Energy Strategy for the City Council. The strategy sets out possible transport improvements to help reduce carbon emissions and maximise energy output including:

- Developing the city's electric vehicle charging infrastructure including conducting feasibility of using open area car parking for photo voltaic arrays to power electric vehicle charging stations
- Incentivising and supporting electric vehicle options for public and private transport
- Developing work in partnership e.g. with the University of Nottingham, Enviroenergy and the local distribution network operator to use electric vehicles to buffer supply and act as energy vectors
- Establish the city as a centre for energy efficient technology businesses and innovation
- Developing options for water borne freight

4.2.5 Peak oil

Peak oil is defined as the point in time when the maximum rate of global petroleum extraction is reached, after which the rate of production enters terminal decline. The International Energy Agency now believe that we will pass geological peak oil for conventional crude oil within 10 years, then all oil, including non conventional sources, within 20 years. The transport sector is over reliant on oil and is particularly vulnerable to a peak oil crisis. Spikes in the price of oil impact on the local economy by increasing business costs and business uncertainty. It has significant social implications with those on low incomes, inevitably being the most severely affected.

22 BERR Total Final Energy Consumption Statistics, 2004
23 See Nottingham City Council Corporate Assessment 2007, p.22, Audit Commission

4 Low Carbon and Resilient Transport System

By 2025, the UK will be importing 57% of its oil up from 15% in 2010[24]. There has been no appreciable increase in global conventional crude oil output since 2005 despite increases in the drilling rig activity. The economic crisis has also reduced global crude oil output and investment in new exploration. This issue was recognised by the Council in the December 2008 motion[25] acknowledging the forthcoming impact of peak oil.

4.2.6 Waste

The links between waste and transport are quite complex. The construction of transport infrastructure has the potential to generate construction waste and it is important that transport policy seeks to minimise the amount of waste arising from transport projects (for example by balancing cut and fill requirements) and to use recycled products (particularly aggregates) wherever possible. Furthermore, recycling materials for construction on site can have beneficial impacts by removing the requirement to transport them elsewhere.

Research by the Nottingham Energy Partnership shows that Nottingham is well placed to exploit opportunities to use waste to generate low carbon renewable energy and fuel which could power public transport and fleet vehicles, for example:

- Anaerobic digestion of food and garden waste could generate biogas. Part of the generated renewable energy could be used to fuel electric vehicles. It is also possible to concentrate the methane biogas so it can be used to fuel vehicles, whilst this practice is undertaken in Europe, it is not yet applied in the UK
- The city's energy and heat systems may have spare capacity at times of low energy demand. During this period, the electricity generated could power electric vehicle options, particularly for fleet vehicles, including public transport and community transport

Transporting waste to facilities that will transform the substance into a renewable fuel source can also have negative impacts, as can the waste (e.g. bottom ash) from such plants. Therefore, it is important to locate these facilities in areas where it is possible to transport material by rail and water, in order to achieve a more sustainable solution.

4.3 Strategy and proposals

Tackling climatic issues to achieve lasting change will require a culture of local and international responsibility. Reducing our impact on the environment whilst also supporting economic growth, would appear to be directly conflicting. However there are a number of measures which are complementary to the successful achievement of both. This strategy and its proposals make provision for reducing carbon emissions from transport through creating a transport environment that is fit for the future, whilst ensuring that economic growth is not stifled.

Chapter 3 described the key proposals for smarter travel choices and integrated public transport improvements that the City Council will progress, which can help to promote sustainable travel modes for all journeys associated with new developments. The City Council is committed to ensuring that the necessary infrastructure is in place to support increased levels of trips by carbon efficient modes such as walking, cycling and public transport. Travel demand management measures to restrain parking have a very important role to play.

This is supported by our strategy for creating people friendly streets through attractive safer streets and public spaces and measures to support more active travel is discussed in greater detail in Chapter 7.

24 Analytical Annex, Table 19, UK Low Carbon Transition Plan (2009). Available at: http://www.decc.gov.uk/
25 Motion in the name of Councillor Bull – Forthcoming impact of Peak Oil. Internal minutes of the meeting 8/12/08, Nottingham City Council, 2008

Additional proposals and measures for tackling carbon emissions include:

- **Influence and reduce travel demand** through determining the location of new developments in sustainable locations, designing them in a way that reduces total distance travelled by carbon intensive vehicles and maximises the use of sustainable alternatives e.g. walking, cycling and public transport and greater use of technology to remove or reduce the need to travel
- **Improve operational efficiency** through trialling alternative fuels for fleets and public transport, making use of location technology to maximise the efficient use of vehicles, and providing greener infrastructure e.g. more use of recycled materials and low voltage technology
- **Sustainable car use** consisting of car clubs and car sharing, eco driving and low carbon vehicle choice
- **Adapt the network to a changing climate** through introducing better drainage and permeable road surfacing to improve water runoff and introducing measures to future proof the current transport network

Table 4.1: Key Low carbon proposals and measures

Proposal	Measure
Influence and reduce travel demand	RTD 1: Travel avoidance
Improve operational efficiency	IOP 1: Foster clean and carbon efficient vehicle use IOP 2: Promote eco-driving practices
Sustainable car use	SCU 1: Car clubs and car sharing
Improve transport resilience	ITR 1: Better drainage and permeable surfacing ITR 2: Future proof transport networks

4.3.1 Influence and reduce travel demand

Influencing and reducing travel demand covers a range of interventions including smarter travel choices such as making trips using more sustainable modes which can alleviate congestion during peak times and over crowding on public transport. Some smarter travel choice proposals were discussed in Chapter 3. Another aspect to reducing travel demand is aimed at travel avoidance. The use of technology and the design of streets and developments to make them as accessible as possible are essential to eliminating the need to travel at all.

Proposal RTD 1: Travel avoidance

Interventions to avoid unnecessary trips comprise of two key areas:

- Planning and design of new developments
- Use of technology

Planning and design of new developments

Through planning policies set out in the Aligned Core Strategies and emerging Land and Planning Policies Development Plan Document (discussed in Chapter 6), the City Council will seek to resist development in unsustainable locations where insufficient capacity exists on transport networks to accommodate impacts.

Parking management and control guidelines (discussed in Chapter 3) will be adhered to when considering new developments however the Council will optimise opportunities so developments are accessible and connected to the wider network allowing for travel by sustainable modes to reduce car dependence.

4 Low Carbon and Resilient Transport System

In addition, sustainable transport solutions best designed during the early stages of planning allow greater opportunity for behaviour change. Well designed developments can eliminate the need to travel through locating key services and destinations closer together. Designing streets and public spaces in a way that citizens can be easily served by public transport, walking and cycling facilities more efficiently can reduce travel and in some cases remove the need to travel altogether. Guiding citizens' choice through changing their 'default' behaviour by creating the appropriate environment around them, supported by information provision and education enabling them to make healthier choices is what this strategy is fundamentally about. Accessibility planning and the development management process is described further in Chapter 5.

Use of technology

Modern technology advances offer a realistic alternative to travel by reducing business miles and the need to travel to one physical location whilst allowing people to stay connected. The use of technology and high speed access to IT (broadband and telecommunications) is an effective tool to avoid unnecessary trips with benefits of alleviating congestion, improving air quality, reducing carbon emissions and improving quality of life.

Teleworking, video and teleconferencing and internet shopping measures can be an effective and low cost approach to reducing the need to travel. The LTP proposals aim to:

- Encourage broadband provision as standard for new residential developments
- Support initiatives for homeworking enabling people to work from home or community hubs
- Provide awareness and advice for business on teleworking, and video and teleconferencing
- Support a culture of smarter working and promote benefits of flexible working hours, remote and flexible working locations
- Champion and lead on teleconferencing for business
- Support internet shopping proposals
- Foster delivery/collection hubs
- Improve access to local food by working in partnership with the Food Initiatives Group

Access to high speed broadband is particularly important to support the growth of knowledge based economies and has an increasing role in enabling sustainable home working patterns and supporting residents to be part of a digital community with easy access to online information and services.

A Digital Infrastructure Strategy for Nottinghamshire and Derbyshire is under development by Nottingham City Council (on behalf of the Local Enterprise Partnership). The strategy will consider future business needs and how best to plan for and deliver high-speed networks to employment sites and regeneration areas. The strategy may consider how transport infrastructure assets could be used as potential routes for new fibre networks – to serve both existing and new developments. An early draft of the strategy is expected in summer 2011.

Planning permission (subject to developer contributions through Section 106) has been granted for the development of a 90,000 sq ft fibre-optic data centre called The Portal within the Southside regeneration area in Nottingham. The Portal has the potential to become one of UK's largest centres for the storage, pooling and transmission of national and international high-speed data. The development of data centres elsewhere in the UK have been a stimulus to new high tech global employment opportunities as blue chip companies seek to be located as close as possible to the data centre for reasons of connectivity. This development can not only secure the provision of employment during construction, generate training opportunities and also attract new businesses to locate in the area. Securing these digital infrastructure gains for local businesses and individuals can positively impact upon the transport network by removing the need to travel as businesses utilise alternative means of communicating and staying connected.

4.3.2 Improve operational efficiency

The City Council will seek to improve the efficiency of how the current and future transport systems operate to reduce unnecessary carbon emissions. The emission reduction benefits from cleaner vehicles will however only be realised if the growth in the total volume of traffic and the levels of congestion are contained. Elements identified within Chapters 3, 5 and 7 will also contribute to reducing congestion whilst encouraging more travel by walking, cycling and public transport contributing to reductions of carbon emissions from transport.

Smoothing traffic flow was also set out in Chapter 3 as part of preserving the overall efficiency of the highway network. It can help to eliminate the stop start traffic conditions and associated congestion, which can increase the level of carbon emissions produced. The City Council will seek to:

- Improve the effective management of the highway, for example through directional traffic signal and junction improvements through the Traffic Control Centre
- Maximise the use of Global Positional Systems location technology to track real time movements of the public transport fleet and increase their punctuality by manipulating traffic flow to prioritise and ensure timely and smooth flowing bus movements

The Committee on Climate Change emphasises the link between reducing speeds with carbon savings[(26)], e.g. a car driven at 70mph emits 19% more carbon dioxide per kilometre than when driven at 50mph. This provides additional benefits for road safety and network capacity which is discussed in greater detail in Chapter 7.

Proposal IOP 1: Foster clean and carbon efficient vehicle use

Due to technological improvements and stricter control standards, new vehicles through stricter car manufacturing standards now emit much lower carbon dioxide than old vehicles. Therefore, over time the quantity of emissions for a given number of vehicles can be expected to reduce.

Through joint working with transport operators the City Council will encourage the take up of more clean and carbon efficient vehicles. In terms of public transport, the City Council is already in the positive position and benefits from a sustainable electronically powered tram system. Due to sustained high investment levels by the two main bus operators the average age of the bus fleet in Nottingham is less than six years old and the new Statutory Bus Quality Partnership Scheme (discussed in Chapter 3) places an obligation for all bus fleets to be Euro Standard 3 if services are to operate in the city centre.

Box 4.B: Ecolink bus service ethanol fuel trial

Three ethanol powered buses have been running on Nottingham City Transport Route 30 Ecolink service since April 2008, carrying 1.3 million passengers over 390,000 miles. So far the three ethanol buses have saved over 774 tonnes of carbon dioxide emissions. As the ethanol is burned cleaner than carbon based fuel, typically nitrogen dioxide is reduced by 28%, carbon dioxide by 80% hydro carbons by 50% and particulates by 60% when compared to diesel. The project was supported by the East Midlands Development Agency and is operated in partnership with Nottingham City Transport.

26 Building a Low Carbon Economy: the UK's contribution to tackling climate change, 2008 available at: www.thecccorg.uk

4 Low Carbon and Resilient Transport System

The City Council will also:

- Green the transport fleet through working with bus operators to introduce more carbon efficient buses and improve vehicle standards
- Support the case of the electrification of the Midland Mainline
- Support the use of sustainable biofuels on mass transit and examine the feasibility of the use of sustainable biofuels in vehicle fleets
- Investigate the use of local energy generation to power the Nottingham Express Transit system
- Consider parking policies to encourage greener vehicle use e.g. a carbon based permit scheme to monitor the make up of private vehicle make up
- Explore ways of incentivising and providing advice to employers to promote the use of carbon efficient vehicles e.g. in the case of pool cars and fleet vehicles
- Explore opportunities to work with local research establishments/Universities on hydrogen research and infrastructure propositions
- Promote and signpost national advice and grants schemes to those who are eligible

Electric vehicle charging infrastructure

Electric vehicles have been identified by the Department for Transport (DfT) as a key approach to deliver reductions in carbon emissions through reducing traditional vehicle reliance on fossil fuels. The City Council will encourage the switch from conventional to low carbon road vehicles and fuel sources where feasible. However a mass shift requires commitment from Government to establish an integrated package of incentives to ensure low carbon road vehicles are price competitive with conventional technology. The City Council's initial strategy therefore is to invest resources into greening transport fleet with a view to rolling out improvements for private electric vehicles once the technology is forthcoming which will impact on the potential rate of change and scale of impact. The approach will be to:

- Focus on the public transport network as a priority e.g. electrifying the Centrelink bus service
- Explore potential electric vehicles for contract bus services and special education needs/contract transport
- Encourage journeys where there is no public transport or cycling/walking choice to transfer to electric vehicles e.g. fleets, disability vehicles
- Look to providing electric vehicle charging facilities at park and ride sites and transport hubs, where appropriate

Plugged in Places bid

In October 2010 the City Council participated in the Midlands bid submission to the DfT for Plugged in Places funding. The fund aims to create a critical density of charging infrastructure in locations where it will best support electric vehicles owners, such as on-street and public and private car parks, including those at work, retail and leisure facilities.

The funding will enable the city to trial electric vehicles for fleet, public transport and public transport interchange as part of its wider strategy to develop a low carbon transport network. An announcement on the successful bid came in December 2010.

The City Council is also developing a programme to install photo voltaic panels on properties across the city. Phase one is programmed to commence installation in April 2011 and will focus on City Council properties and the social housing stock. Phase two will look at other locations including the potential for photo voltaic panels arrays at park and ride sites so there is the opportunity to offer a carbon neutral supply for electric vehicle charging at these locations and develop a model that could be promoted to other businesses in Nottingham through Phase three of the photo voltaic panels programme.

The Eastcroft energy from the waste facility can help deliver the Energy Strategy aspirations for sustainable transport. The Enviroenergy private wire network has excess power at certain times that is currently sold back to the grid. This power could be sold on for electric vehicle charging in the city, particularly to City Council fleet vehicles.

The Energy Strategy highlights that there are a number of additional actions that can be pursued to protect the city's energy security. Electricity will increasingly be required for vehicle use, especially in cities where most journeys are shorter and recharging infrastructure can be established to serve a high density of users – the Enviroenergy facility not only provides energy security for buildings but also for transport.

The electrification strategy set out in Table 4.2 details the likely short, medium and long term interventions the City Council intends to pursue across public transport, fleet and private vehicles.

Table 4.2: Electrification strategy actions

	Quick Wins	Medium Term	Long Term
Public Transport	Centrelink: 4 electric vehicles funded by Green Bus Fund 1	Explore feasibility of using District Heating ring main to power Nottingham Express Transit Phase Two	High Speed Rail
	Medilink: 2 electric/diesel hybrids to be purchased through Green Bus Fund	Midland Mainline electrification Explore potential for requiring electric vehicles for contracted bus services and special education needs/contract transport	
Fleet vehicles	Council Offices: Proposal to install electric vehicle charging points for pool vehicles and grey fleet	Consider role of electric vehicles within the City Council's fleet	
	Castle College and Experian have started to explore opportunities to improve their operation using electric vehicle for deliveries and inter-site travel	Explore opportunities through the development control policies to encourage provision of electric vehicle charging at new developments Encourage fleet operators to use electric vehicle travel plans	
		Support proposals to offer a private hire electric vehicle taxi service from the Station Hub	
Private vehicles	Explore opportunities through Residential Travel Plans to encourage provision of electric vehicle charging at new housing developments	Provide electric vehicle charging facilities at park and ride sites Explore feasibility of powering charging points using renewable energy e.g. solar power via photo voltaic arrays	Provide on-street charging infrastructure
		Establish city car club – test potential to include electric vehicles within the fleet	Use city car club to enable widespread access to electric vehicles for individual households

Proposal IOP 2: Promote eco-driving practices

Improving driver techniques on private and public transport modes by teaching drivers how to maximise fuel efficiency will enable carbon savings to be made. The Council will signpost training and advice on efficient driving styles including:

- Direct citizens and businesses to the Energy Saving Trust's eco driving services through the Big Wheel website
- Use the Big Wheel brand to promote more environmentally friendly choices about the forms of transport they use and the vehicle purchased

4.3.3 Sustainable car use

Proposal SCU 1: Car clubs and car share schemes

Car clubs and car share schemes offer individuals the same freedom private motorised transport does, however it is more environmentally sensitive and cost effective to pay into a club for the use of a car without the full cost of owning one. Car clubs can help lower income households gain access to a car, help employers travel to meetings and offices by encouraging staff to use car clubs or car share schemes. To progress this approach, the City Council will:

- Work with partners to develop and implement a car club scheme if economically viable in the city and encourage the use of low carbon vehicles
- Review the promotion and delivery of the 'Nottinghamshare' car share scheme for the city and look at car sharing and pool vehicles for the City Council through staff travel plan and corporate transport review

4.3.4 Improve transport resilience

The city's infrastructure is our most valuable transport asset. The City Council's efforts will be focused on protecting our current and new networks from the impacts of a changing climate. The City Council will seek and introduce ways to future proof the system and improve its resilience from any potential impacts and minimise disruption to citizens and business. In addition to increased risk of flooding, storm damage, droughts and extreme hot weather, ground instability and poor air quality, climate change is anticipated to bring health impacts for Nottingham residents ranging from heat-related illnesses to injuries, stress and anxiety, in particular affecting the poorer communities.

The Council will continue to work with partners to ensure that the transport system is able to operate efficiently in a future, which may see different, and in some cases more extreme, climate conditions.

Proposal ITR 1: Better drainage and permeable surfacing

Better drainage can be achieved through the development management process for example by ensuring new developments come with sustainable urban drainage systems. This can also be achieved through planning policies that require the use of sustainable urban drainage systems.

Permeable surfacing is a term related to the use of certain materials on roads, cycle paths and footways that allow the movement of water and air around the material. Permeable surfacing is effective in managing water run off which can cause erosion and flooding. The City Council will seek to use permeable surface materials as part of its highway maintenance strategies and in new transport infrastructure schemes to minimise water run off and protect the environment.

Both the River Trent SFRA and Rive Leen and Day Brook SFRA highlight that there are areas within Nottingham that are potentially subject to flooding, based upon different extremities of events. The River Trent SFRA has recently been updated to take the Left Bank flood alleviation scheme into account. This has shown a reduction in flood risk across the majority of the area, with many areas moving into lower flood risk categories.

Three Cities highway drainage asset management project

In 2009, the three Cities (comprising of Nottingham, Derby and Leicester City Council) were awarded £700,000 by the DfT to carry out a highway drainage study over two years, across the three local authority areas. The funding covers resources for the collection of a targeted drainage inventory and for analysis of the data to help with the resolution of drainage related flooding and hot spots.

Nottingham, Derby and Leicester have similar problems with urban flooding and possess limited knowledge of their highway drainage systems and other watercourses. This project aims to share expertise, pool costs and collect a drainage inventory. All three authorities carry out routine and reactive gulley cleaning work, however very little is known about the capacity, condition or extent of the pipe work that connects these gullies to public sewers and watercourses. In addition the data on any other highway drainage assets such as soak ways, ditches and pumping stations, is limited. The project will look at innovative ways to manage this important asset by collaborating as a group to learn from each others successes and failures.

Highway drains perform a vital role in flood conditions and need regular maintenance to ensure that they are operating effectively. Since effective highway drainage can often make the difference between a property being flooded or not, the importance of this work in the future will increase if the predicted changes in weather patterns occur.

Gathering information on the condition of all 35,000 gulley connections within the city is an unrealistic expectation for the project, so the aim is to concentrate on those areas that are most prone to highway flooding.

Key tasks include:

- Bring records of the existing situation up to a common standard
- Adopt a consistent method of prioritisation
- Establish the methodology and specification of data capture
- Record non traditional highway drainage e.g. slot drains, kerb drains and footway drains
- Establish a method and specification for CCTV surveys

The project will improve the cities' abilities to build comprehensive drainage data inventories, prioritise flooding hotspots and develop drainage works programmes to reduce the impact of urban flooding. It will also allow improved monitoring of drainage maintenance, provide the ability to target drainage maintenance and improve response to customer complaints.

The project will provide reliable data to engage with elected councillors and allow preparation of investment business cases for improvement of drainage systems if this is found to be necessary. A good practice guide for use in all urban areas will also be produced.

Surface water management plan

Following the 2007 floods, the Government set up the Pitt Review[27] which went on to make a total of 97 recommendations for local authorities. In the 2007 floods that occurred in Nottingham, approximately 60% of those homes that flooded were away from main rivers. The Pitt Review recommendations have made significant changes to the management of floor risk with some of the changes enacted in the Floods and Water Management Act 2010.

27 http://www.environment-agency.gov.uk/research/library/publications/33887.aspx

4 Low Carbon and Resilient Transport System

Since October 2010, local authorities now have a new role as a Lead Local Flood Authority. This includes undertaking a preliminary flood risks assessment and setting up a strategic flood board. In order to perform this new role, the City Council needs a much better understanding of where flooding is likely to occur, and what the consequences of that flooding are likely to be. The Council is in the process of developing a forum to manage key actions required as a Lead Local Flood Authority.

Nottingham was selected as one of 77 local authorities to receive a share of £15 million Government funding to produce a Surface Water Management Plan on the basis of the cumulative number of properties deemed to be at risk from surface water flooding. Surface water flooding is defined as flooding from sewers, drains, small water courses and ditches that occur during heavy rainfall in urban areas. It includes:

- Pluvial flooding as a result of high intensity rainfall when water is ponding or flowing over the ground surface before it enters the underground drainage network or watercourse, or cannot enter it because the network is full to capacity
- Sewer flooding which occurs when the capacity of the underground system is exceeded, resulting in flooding inside and outside of buildings, roads, open spaces and gardens. Normal discharge of sewers and drains through outfalls to watercourses may be impeded by high water levels in receiving waters
- Flooding from small open-channel and converted urban watercourses which receive most of their flow from inside the urban area
- Overland flows from the urban/rural fringe entering the built-up area, including overland flows from groundwater springs

Key partners in the project include the Council drainage team, Environment Agency and Severn Trent Water. The City Council's emergency planning and Greater Nottingham Growth Point provide steering, evaluation and coordination.

The project aims are to understand more closely the risk of surface water flooding within the city, and develop an action plan of targeted improvements by looking at the risk of flooding by considering the contribution of all drainage assets – highway drains, Severn Trent Water sewers, watercourses, and main rivers. The initial task is to carry out a risk assessment of those locations where significant flooding is likely to occur.

The potential with any flood alleviation work is that the problem is not solved just moved, often to the detriment of people living downstream. Hence careful consideration will be needed before the action plan can be prepared. Bids to funds for any work identified in the action plan will then be submitted to Government from April 2011. Defined cost benefits will need to be demonstrated against a pool of schemes nationally.

Key outputs of the project are:

- A source-pathway-receptor flood risk approach for the Council to establish the flooding mechanisms during an extreme event
- Flooding risk maps showing the hazard variation
- Action plan for flood risk reduction strategy and flood alleviation
- An options appraisal methodology for the evaluation of flood risk and a guide to the outcome measures scoring for various approaches or schemes
- A hierarchy of proposed and available development areas with respect to the flooding hazard
- A framework to assist critical infrastructure planning
- Information to assist local resilience forums
- A narrative detailing the relationship to other strategic development documents within Nottingham and also Greater Nottingham
- Increased coordination between Severn Trent Water and the Environment Agency
- Improved flood risk mapping capability within the City Council

Proposal ITR 2: Future proof transport networks

There is a need to determine the vulnerability of the city's transport assets to the impacts of climate change and maintain existing infrastructure which includes remedial works where effective and affordable to improve resilience. The City Council's climate change adaptation risk assessment identified the need to design new transport infrastructure built with climate change in mind to ensure value for money and to protect the transport network from future changes in climate.

The City Council is currently preparing a Climate Change Strategy which will consist of network-wide and local area interventions. The strategy will be made available in the summer 2011 followed by a period of consultation. The final documents will be adopted in autumn 2011.

Likely measures to adapt the transport networks to prepare for hot weather and heatwaves include:

- Seeking to ensure public transport facilities and vehicles are appropriately ventilated
- Installing reflective glazing on building and vehicle windows
- Ensuring all staff are aware of the health risks of heatwaves
- Providing heat wave information at passenger transport stations e.g. ensuring people drink adequate water to stay hydrated

In the case of increased frost, ice and snow during winter, the City Council will seek to:

- Ensure grit stores are fully stocked
- Regularly consult on winter service priorities
- Issue information on correct preparation for severe weather .e.g. ensuring snow shovels/ploughs to clear site access are stocked
- Provide information for drivers on safe driving and for pedestrians on appropriate clothing and footwear in cold winter conditions
- Ensure the public are fully informed of any possible/actual cancellations to services so that they can plan ahead and organise redirect resources
- Develop a contingency plan to ensure extra services can be deployed in bad weather during delays

4.4 Summary

This Chapter has described the key problems and opportunities around creating a low carbon and resilient transport system. The overall transport strategy outlined in this document seeks to deliver a transport system that is fit for the future hence attempting to adapt to anticipated changes in climate. Key proposals the City Council will take forward include:

- Integrated transport and land use planning when considering new developments to reduce the need to travel and design them in a sustainable manner where low carbon travel (i.e. walking and cycling) is the dominant form. This includes greater use of modern technology to provide solutions and alternatives to travel
- Improve operational efficiency to foster clean and carbon efficient vehicle use and promote eco-driving techniques
- Support sustainable private car use through car clubs and car sharing
- Improve transport resilience through better drainage, use of permeable surface materials and adapting the transport network to changes in the weather

The links between these proposals and the key challenges are outlined in the Table 4.3.

4 Low Carbon and Resilient Transport System

Table 4.3: Low carbon transport system proposals and their links to meeting key challenges

Proposals	Challenges			
	Carbon reduction	Adapt to climate change	Address peak oil	Mitigate flood risk
Influence and reduce travel demand				
Travel avoidance	✓	✓	✓	✓
Improve operational efficiency				
Foster clean and carbon efficient vehicle use	✓	✓	✓	
Promote eco-driving practices	✓			
Sustainable car use				
Car clubs and car sharing	✓		✓	
Improve transport resilience				
Better drainage and permeable surfacing		✓		✓
Future proof transport networks		✓		✓

Chapter 5: Access to Key Services

Access to Key Services, Employment and Training 5

5 Access to Key Services, Employment and Training

This Chapter sets out how transport in Nottingham plays a key role in enabling citizens and visitors to access the jobs, learning and services they need in ways that help to improve lives and will help us to achieve a fairer more equal society. The Chapter draws on local evidence, data intelligence and digitised accessibility mapping to establish current levels of accessibility and identify the areas and communities in need and the barriers they face. The final section of the Chapter outlines the key areas of intervention to be delivered through this Local Transport Plan (LTP) to continue to improve access to jobs and services.

5.1 Context

In 2003 the Social Inclusion Unit published a report 'Making the Connections' which clearly illustrated the critical role accessibility to jobs, learning, affordable food, essential services, health care, and leisure and cultural facilities have on life chances and well-being. Linking citizens' more effectively with where they need to get to can help to achieve inclusion in society and improve equality of opportunity for the whole community. The goal that opportunities and benefits should be available to everyone is a cornerstone of this LTP and a key element of the Sustainable Community Strategy.

Accessibility depends on the inter-relationship of three components: service users (origins), the services they need to access (destinations) and the available transport and communications links (physical and virtual networks). Transport integration however should be considered within the following hierarchy:

- **Reducing the need for people to travel** through the delivery of services in new ways through the smarter choices programme e.g. on-line, call centres, tele-working, video-conferencing, home-working and home deliveries
- **Making access to transport services easier** through ticketing, marketing, travel information and infrastructure improvements to improve safety, quality of services and perceptions of public transport for everyone
- **Using the planning process, partnership working and accessibility mapping** to ensure key services are located in the right places that are easy to get to including those without access to a car

Nottingham is a compact city with good connectivity and a multi award winning integrated public transport network. Over the past 10 years Nottingham has progressed a consistently strong policy objective of improving sustainable access to work, education, shopping, cultural and leisure facilities by addressing all aspects of accessibility – physical, geographical, financial, information and safety.

Box 5.A: Key achievements

Accessibility has been improved through measures implemented during past LTPs, including:

- High quality integrated public transport system carrying 73 million passengers a year
- Linkbus network carrying 6.8 million passengers a year
- Citylinks 1 & 2 introduced in September 2004 placed 85% of city residents within 45mins of 25% of the city's jobs and 96% of all city centre jobs are now accessible by bus based park and ride links; Citylink 1 carries 1.5 million passengers per annum and Citylink 2 carries 600,000 passengers per annum; the Skylink service introduced in 2004 placed 60% of city residents within 1 hour of airport jobs and patronage has tripled from 186,000 journeys in 2005 to 500,000 journeys per annum in 2010.
- Nottingham Express Transit Line One of the tram fully accessible and 100% low floor bus services
- Public transport information is available in large print and multiple formats. Printed timetable information is available through the travel centres, on the buses and at the stop - over 6,000 mini timetables are distributed each week and 21% of bus stops in the city currently have electronic timetable information
- Public transport information provided on East Midlands Traveline
- Web-based journey planners provided for pedestrians and cyclists through Walkit and the Transport Direct cycle journey planner
- 97% of households in the city are within 30 minutes travel time of a town centre by bus, tram or rail with no more than a 400m walk to the stop (including walking to the stop and waiting time)

- Joint award with Nottinghamshire County Council for Beacon status for Improving Accessibility
- Citycard rollout programme to all city residents with over 200,000 cards issued
- Campaign for Better Transport top ranking as least car dependent city of all major cities
- Big Wheel marketing brand running nearly 10 years helping to disseminate transport information and change travel behaviours

5.2 Problem and opportunities

5.2.1 Low car ownership

The 2001 Census showed that 45% of households in Nottingham do not have access to a car, which is high compared to the average in Greater Nottingham (32%), the East Midlands (24%) and England (27%). It is predicted that even by 2026 car ownership in the city will still remain amongst the lowest in the East Midlands[28].

Car ownership varies greatly between wards in the city: Wollaton West has the highest percentage of households with access to more than one car or van (77%) whereas 67% of households in St Ann's and over half of households in the Arboretum, Bestwood and Bridge wards do not have access to a car or van. Car ownership is also much lower amongst some types of household than others. The two groups with the lowest car ownership rates are pensioners living alone, 81% of which do not have access to a car or van and lone parents with dependent children (66%). Couple family households tend to have the highest rates of car ownership with 81% having at least one car[29].

This is illustrated further by analysis of the 'Mosaic' geo-demographic dataset which shows that a number of groups and types are over represented in the city when it comes to not having access to a car, particularly young people, lower income workers and elderly people. These Mosaic groups are concentrated around the Meadows, St Ann's and Sneinton, Lenton and north of the city centre, with the older group also concentrated around Bilborough.

Furthermore, the baseline household car ownership figures do not give the complete picture. For example, where a household has one car, if that car is predominantly used by one person for commuting to work or other purposes, other members of the household will not in the most part have access to a car for most of the day. Using the 2001 Census data for no car and one car households and an average household size in Nottingham of 2.2 people, it can be estimated that up to 60% of residents at any one time do not have access to a car, particularly in wards with non-car ownership levels above the Nottingham average.

Of course not owning a car is not necessarily a disadvantage if a good range of local services are readily available and for some residents of inner city Nottingham this will be a positive lifestyle choice. However it is important to ensure that vulnerable individuals within more affluent areas and those areas where overall service provision and public transport connections are poorer are considered.

5.2.2 Public transport coverage

The Greater Nottingham Perception Study in 2004 showed that 64% of city respondents thought it was easy or very easy to get to the city centre by public transport. The majority of services in Nottingham are provided through the commercial bus network.

In particular the inner city areas and Bulwell are well served by public transport including Nottingham Express Transit (NET) Line One tram. However accessibility analysis has consistently shown that the outer estates, particularly in the west area of Nottingham such as Bilborough ward and also parts of Aspley, Wollaton West and Bulwell Forest wards, are less well connected both to the city centre

28 Three Cities DaSTS Agglomeration and Accessibility Study (May 2010)
29 2001 Census, key statistics. Crown copyright 2003

and in terms of orbital routes within and across these areas. This is of particular concern in view of the high levels of deprivation and lower levels of car ownership in these areas. Also the layout of these large estates of predominantly social housing limits the options for developing viable commercial orbital routes within and across these areas.

The Locallink bus network including bespoke services such as Shoplink and Collegelink which serves Bilborough College and the Worklink services to Nottingham Business Park and Blenheim Industrial Estate is helping to address the gaps in the commercial network.

5.2.3 Access to employment and essential services

DfT Core Accessibility indicators show that the city has high levels of access by public transport to employment opportunities and local services (hospital and GP services, primary, secondary and tertiary education and supermarkets). However this data only measures ease of travel to the nearest facility or location and does not take account of the suitability of the services on offer or that education and health policies actively encourage people to choose which services they use.

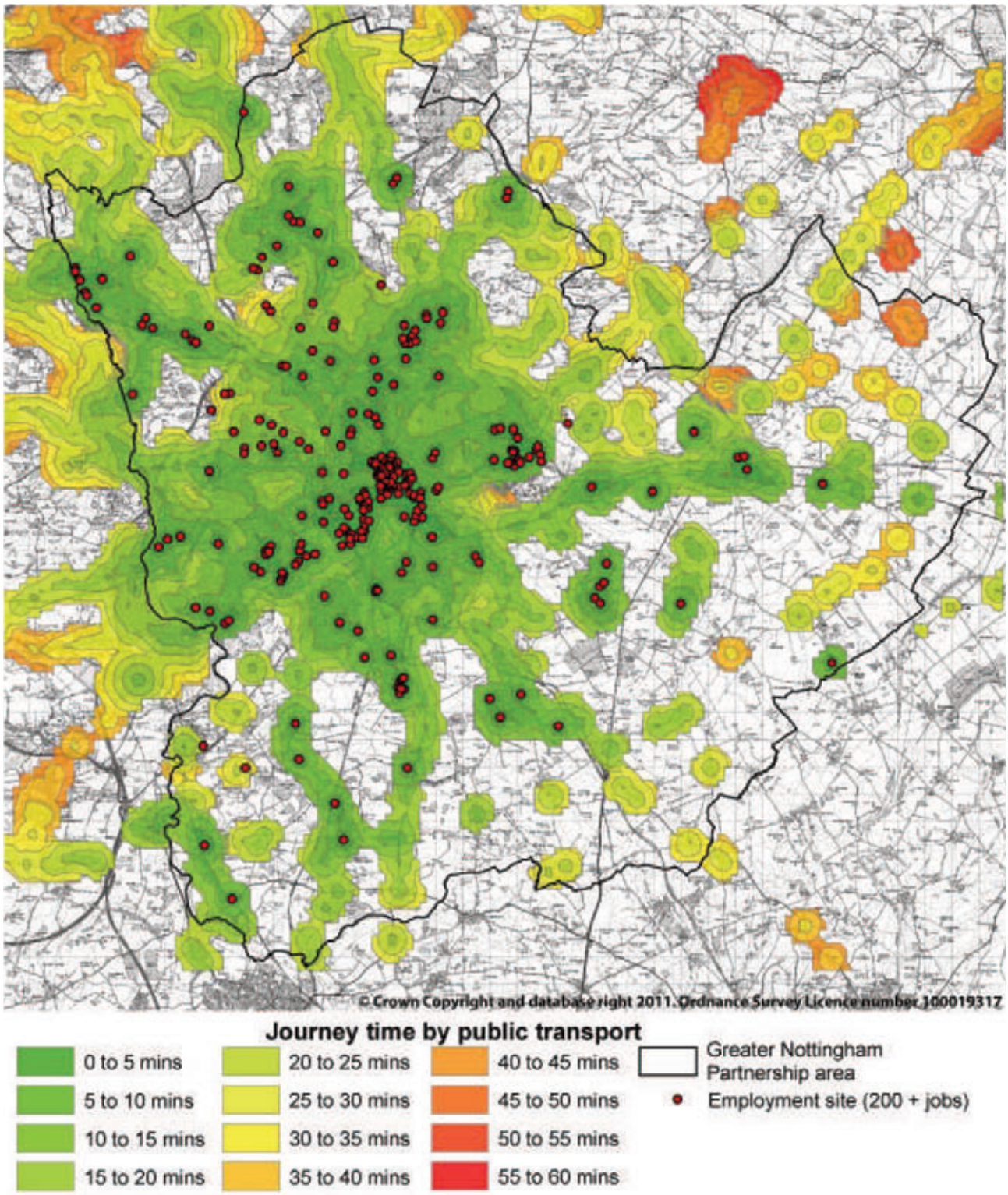
Specialist treatments and lengths of waiting lists are just two of the factors which determine a patient's choice of healthcare provider under the NHS Choice Agenda. The 2006 Education and Inspections Act and the 14-19 diplomas introduced in 2008 both promote parental choice. Furthermore, access to food and a healthy diet is a complex issue which is affected by a number of factors in addition to transport and supermarket locations, including cultural influences, the availability of healthy foods, affordability of healthy food options and cooking skills.

Access to employment and training

The city centre and other key employment sites such as the two Nottingham Universities Hospital Trust sites and the airport are highly accessible by bus as shown in Map 5.1. The core commercial network is complemented by Linkbus services such as CityLinks 1 and 2, SkyLink and 4 Worklinks, which have been developed to specifically improve access to employment sites. NET Line One of the tram has appealed to people who would not usually use a bus.

However the western outer estates and peripheral employment sites at Nottingham Business Park and Blenheim Industrial Estate are less well connected both to the city centre and to other neighbourhoods by public transport.

Map 5.1: Public transport access to employment sites in the Greater Nottingham area



Access to employment is more complex than simply providing public transport services. The One Nottingham study Accessibility of Employment and Training Opportunities in Greater Nottingham (July 2007) highlighted that accessibility barriers are experienced differentially. The greatest difference is between people on low incomes and those with moderate to high incomes. This is reinforced by inability to drive, lack of access to a personal vehicle, mobility problems, disability, gender issues, age, poor language ability, low educational attainment and limited life aspirations. There are also

5 Access to Key Services, Employment and Training

large variations between different people regarding their perceptions of 'acceptable distance'. Interchange, cost of travel and journey time are more important factors than actual distance. Confidence and aspirations also influence willingness to travel outside of a person's known local area.

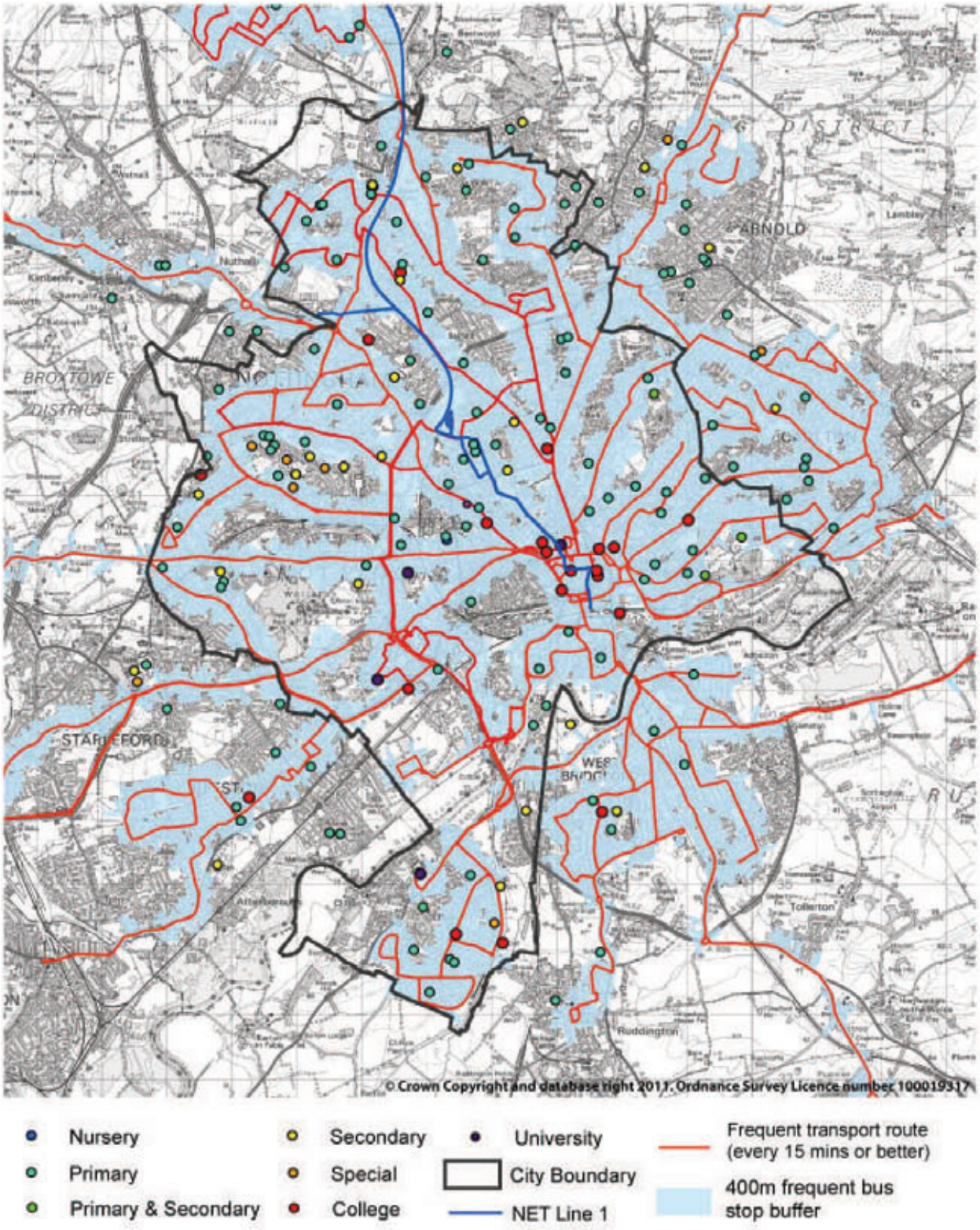
Access to learning

The introduction of the new 14-19 diplomas in 2008 has significantly changed travel demand within education and is generating an increase in inter-site journeys throughout the school day. Despite these changes, Nottingham currently has the highest level of walking to school out of the Core Cities and the joint second highest level of walking to school nationally with 63% of all journeys to school made on foot[30]. When this is disaggregated into primary and secondary school pupils, 72% of primary pupils and 58% of secondary pupils walk to school. These rates indicate that city schools are relatively accessible for city residents and that many pupils attend a local school. However this trend is at risk from the parental choice agenda and the creation of fewer schools.

The City Council's travel plan programmes for business and schools provide support and guidance to reduce car dependency for journeys to these destinations. Providing services and infrastructure which promote travel choices improves the accessibility of these locations for those who do not have access to a car and enable employers to widen their recruitment pool. The location of educational sites in relation to public transport services is shown in Map 5.2.

30 Department for Transport, 2008

Map 5.2: Nottingham city education sites and frequent public transport services



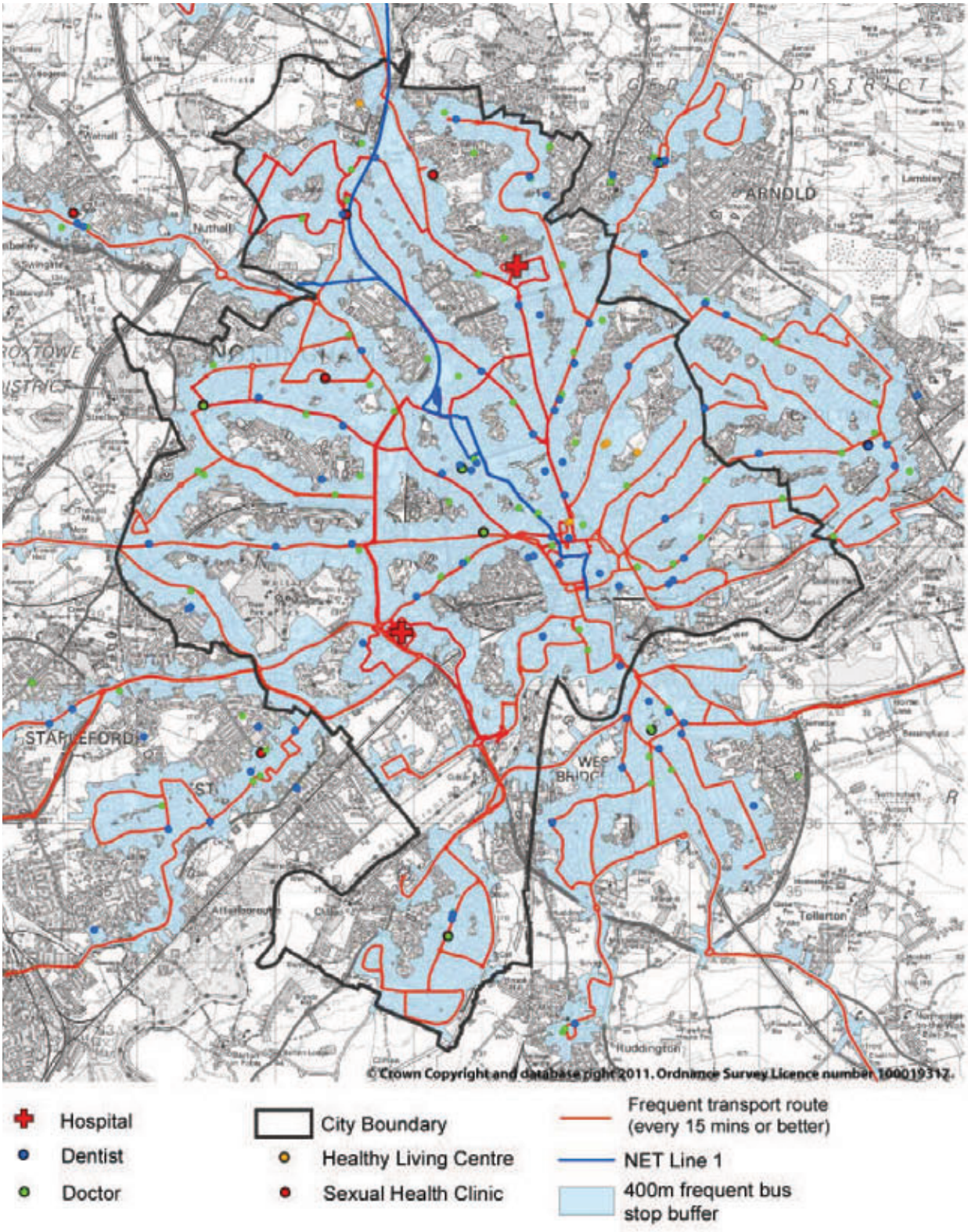
Access to health and healthy lifestyles

Access to health and social services tend to vary inversely with the need for the population served whereby those with the greatest need receive the poorest services. Unequal access to services is not restricted to social class and geography. People in some minority ethnic communities are less likely to receive the services they need.

5 Access to Key Services, Employment and Training

The NHS Choice Agenda gives patients more choice about how, when and where they receive treatment. Patients needing elective treatment are offered a choice of appointment and at least four providers following a GP referral. A MORI survey has found that 68% of people aged over 40 would choose a non-local NHS hospital within their strategic health authority if it could deliver treatment in half the time of their nearest NHS provider. This is likely to result in patients with access to a car traveling further to receive treatment, whilst those patients without cars are restricted to their local facility. The location of health services in relation to public transport services is shown in Map 5.3.

Map 5.3: Nottingham city health service locations and frequent public transport services



There is much that can be done to ensure that key healthcare destinations are well serviced by public transport and to improve opportunities for walking and cycling for local journeys. There is also a high reliance on taxi and private hire vehicles for health related journeys that need to be accommodated.

The city has three LIFT funded joint access centres which offer a one-stop shop for local health and social care services including GP surgeries. Accessibility mapping has been used to identify locations of staff and service users to help inform and promote sustainable travel options. Wayfinding Groups were set up at the Mary Potter (Hyson Green) and Bulwell Centres to report back any difficulties or barriers that could obstruct access to visitors in the vicinity of the sites. Staff and users of the Mary Potter Centre were engaged using a community street audit approach and improvements to pedestrian crossing, traffic light timings and local footways have been completed as a result.

Box 5.B: Medilink

The Medilink bus operates in partnership between Nottingham University Hospital Trust and Nottingham City Council is part of the linkbus network providing a free 10 minute frequency service between 08:00 – 18:00 Monday to Saturday between Queens Drive Park & Ride, Queens Medical centre campus, Wilkinson Street Park & Ride and the City Hospital campus.

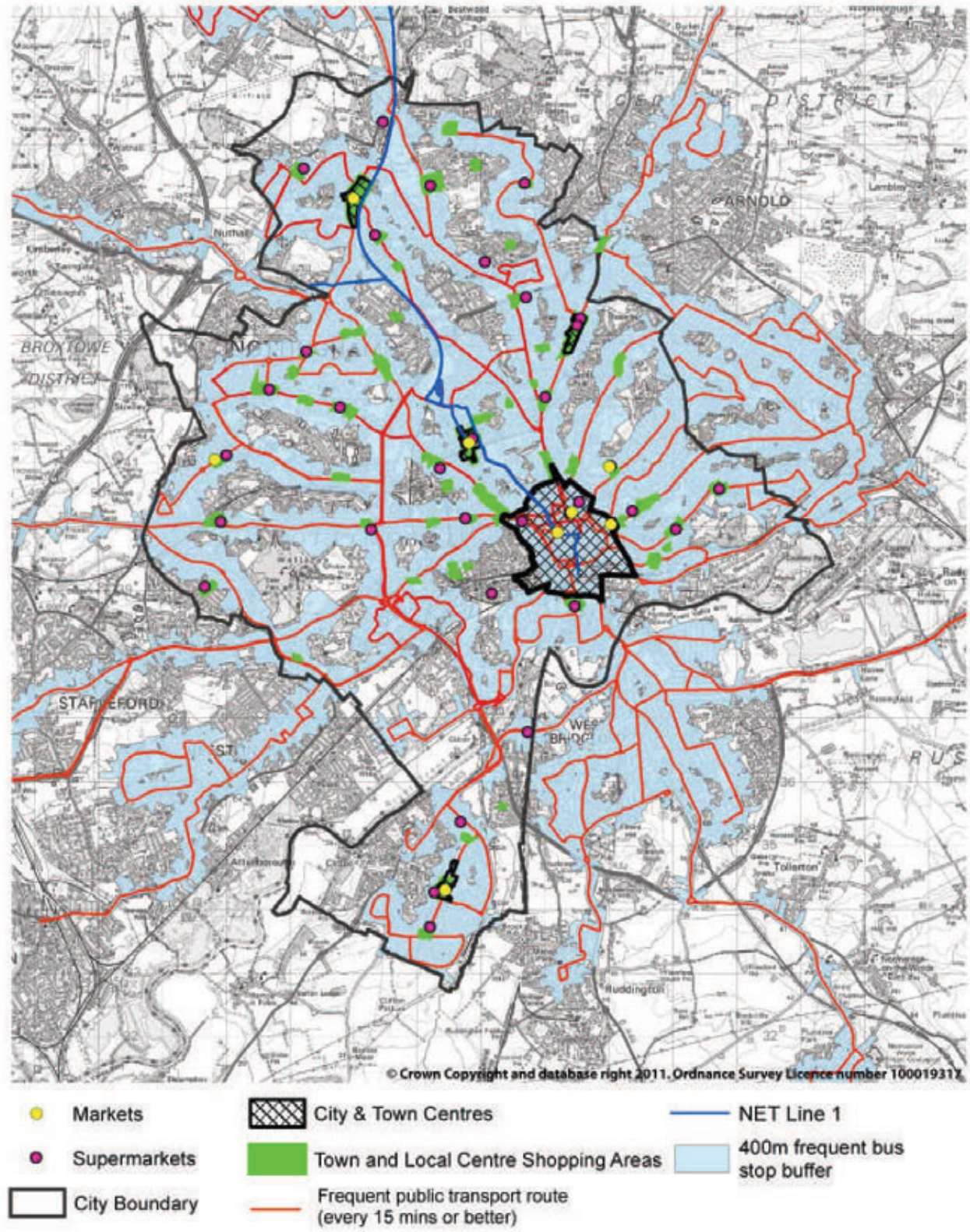
The service carries around 23,000 passengers per week (approximately 1 million passengers p.a) and a 2009 survey found that the service has high levels of satisfaction: 98% of passengers thought that the drivers and vehicle comfort was excellent or good whilst 71% of passengers felt vehicle capacity was excellent or good.

Access to healthy food and locations providing opportunities for physical activity and exercise are also important for a community's wider health and well being. The role of active travel to meet healthy lifestyle targets is covered more fully in Chapter 7.

However this analysis does not take account of the other issues which determine access to a healthy affordable food nor does it assess the provision of local food outlets which could be accessed on foot. The Food Initiatives Group's (FIG) study of access to healthy food in Nottingham in 2008 concluded that there was a limited choice of healthy food sold in local shops and convenience stores in the west area of the city and that the goods that were available were significantly more expensive than the equivalent food sold at supermarkets outside the area. Therefore those without access to a car only had access to a limited range of food products at a significantly higher cost. By comparison it was very easy to access takeaway food. These findings are reinforced by the Greater Nottingham Retail Study which was prepared to investigate retail capacity to inform the Aligned Core Strategies and Site Allocations for the Local Development Framework for the city.

5 Access to Key Services, Employment and Training

Map 5.4: Nottingham city shopping areas and frequent public transport services



A number of Shoplink bus services were introduced across the city in June 2008 to supplement the commercial and locallink networks, including routes serving the FIG study area. Not all of these services were successful and the Shoplink network was reviewed in June 2009. Currently there are 16 Shoplink services operating 1 or 2 days per week on each route. Six of these services are supported by the Council utilising one vehicle. This demonstrates that solutions to improve access to food are as much about the supply and affordability of food as about improving transport networks.

With regard to shopping habits, 'Mosaic' analysis shows that it is the most deprived household types that are more likely to use a home delivery service for groceries, which may reflect a lack of access to a car. The two most prevalent types in Nottingham, are families, (mainly single parents), in deprived social housing and families with school age children, living in large social housing estates accounting for over 20,000 city households, comprising 16% of the total households, compared to just 4% in England generally.

5.2.4 Disability

Despite its young age structure, Nottingham has a higher than average rate of people with a limiting long-term illness or disability: 20% compared with 18% for England in 2001. The percentage reporting that their health was 'not good' was 11% compared with 9% nationally. The same is true for people of working age: 16% had a limiting long-term illness in Nottingham, compared with 13% nationally. Not surprisingly, the percentage with a limiting long-term illness rises with age from 33% of people in their 50s to 67% of those aged 80 and over and older people with physical disabilities or difficulties are the largest social care client group.

Department for Health data records 770 people registered as blind in Nottingham and 1,090 people registered as partially sighted. There are 615 people registered as hard of hearing and a further 555 registered as deaf, the largest group of which will be aged 65 plus due to increased incidence of hearing impairment with age. This figure is likely to be an undercount as registration is voluntary with no immediate benefit to the individual

Developing a transport network which enables citizens with complex disabilities to lead fulfilling and independent lives is an important issue for the strategy to address.

Box 5.C: Confidence building with vulnerable users

Work has been undertaken to specifically support the needs of vulnerable user groups including disabled, blind and partially sighted, elderly people and people with learning disabilities. User groups have been established to provide confidence training and the new mobile Travel Centre which became operational in September 2010 will support the ongoing provision of this service.

Raised tactile lettering has been installed at 97 stops in the city centre so that blind and partially sighted people can read the stop numbers and work is underway to install raised lettering at a further 1,200 stops along key radial routes as part of a national pilot developed in partnership with RNIB. All bus drivers have to take a Certificate of Professional Confidence every 5 years which includes accessibility training.

Learning disabilities

It is estimated that there are nearly 6,000 people aged 18 and over with a learning disability in the city. The South Asian community has a three times higher prevalence of learning disability due to complex factors. The Health Joint Service Needs Assessment 2010 highlighted that the number of day service users could increase by 73% by 2020.

One Nottingham/GNLP research Accessibility of Employment and Training Opportunities in Greater Nottingham[31] reported that the format in which information is provided is often unfriendly for dyslexics, people with learning difficulties or low literacy levels. Tailor made information would be helpful to many people. Work is now being developed to provide timetable information in a format suitable for people with learning disabilities.

31 Accessibility of Employment and Training Opportunities in Greater Nottingham, SRA Ltd, July 2007

5 Access to Key Services, Employment and Training

Following a review of school travel arrangements and transport for pupils with special educational needs the City Council will be:

- Phasing out the free denominational travel concession for new pupils from September 2011
- Phasing out dedicated school contract services and transferring these journeys to the main public transport network
- Issuing Citycard easyrider under 18 travel cards to qualifying pupils providing unlimited access to Nottingham city transport, NET and link bus networks
- Providing travel training on a two year trial basis from September 2011 for Special Education Needs to equip those pupils for whom this is appropriate with the skills to make independent journeys

The City Council is also exploring opportunities through the self-directed care budget to better coordinate special education needs transport with adult social care transport.

5.2.5 Affordability

The average income of citizens in Nottingham is below the national average for both individuals and for households. The median gross annual earnings for residents who were in full-time employment in 2008 was about £22,700, compared with £26,100 for England. 10% of people earned below £12,500 and 20% below £15,000. Looking at gross household income and including those city households with no-one in employment, the mean income in 2009 was £28,500, compared with £35,000 for the UK. 2.6% had incomes below £5,000 and 11% below £10,000. Many of the households with the lowest incomes will be retired people dependent upon state pensions. The ward mean varies from £38,200 in Wollaton West to £22,900 in Aspley. There are also high levels of child poverty in the city. In 2008, 39,000 children and young people lived in workless or low income households.

The affordability of public transport is a barrier for disadvantaged groups. One Nottingham and the Greater Nottingham Learning Partnership (GNLP) commissioned research to look at barriers to accessing employment and training opportunities[32] in 2007 which found that the cost of public transport was perceived to be a significant barrier to people on low incomes. Cost is also a deterrent to using public transport for people who have the option of personal transport. There was consensus that the cost of a day ticket (which was £2.70 at the time of the study) is 'too much' for people on low incomes. It is perceived to be more expensive to use the bus than a car for the same trip.

Although fare level in Nottingham still compares favourably with many other areas of the country, the cost of local bus travel has risen compared with cost of living, particularly for short journeys. The majority of bus services in Nottingham are provided on a commercial basis, with fares determined by each private bus, tram or train operator. Analysis and consultation has shown that although prepaid single operator season tickets are competitive, there are several areas of inequality:

- Family and child fares have risen by double the rate of inflation over the past 10 years
- Cash fares are up to 50% higher than prepaid fares, disadvantaging those unable to purchase travel upfront
- Multi-operator journeys are significantly higher than multi-route journeys within one operator

There are also strong indications that the high cost of public transport is a barrier for young people from deprived areas preventing participation in leisure activities. There are no discounts on adult day tickets for children resulting in a reduction in non-school related travel by 15% in the past 2 years with up to 25% reduction in use on routes serving more deprived areas, compared with no reduction on routes serving more affluent areas[33].

32 Accessibility of Employment and Training Opportunities in Greater Nottingham, SRA Ltd, July 2007
33 Nottingham City Council Public Transport Team analysis of NCT data

5.2.6 Low travel horizons and access to information

The One Nottingham and GNLP study of barriers to accessing employment and training opportunities[34] found that within disadvantaged communities there is reluctance to travel to take up employment and training opportunities. This is in part due to misconceptions about the length and cost of journeys but is also due to a 'culture' of people not wanting, as well as lacking the confidence, to travel outside of their known home area. The link between infrastructure, knowledge and travel horizons is complex and requires further research but the study indicated that different sectors of the population have different 'mental maps' of travel horizons which also vary by journey purpose.

The study also identified that people will travel further for better paid positions and for positions they see as having prospect for future development, but not for low wage/low prospect positions. Acceptable travel distance for education and training opportunities is lower than for work. However, many job seekers are prepared to undertake difficult and lengthy journeys in the short term to access a good opportunity for training or a necessary qualification.

Access to information about travel options is one factor that determines people's travel horizons. The One Nottingham/GNLP study found that although there is a lot of information available it is not always accessible for hard to reach communities. More affluent households and those with higher levels of education tend to have better knowledge of where to gain information and assistance and greater confidence to access it.

Car ownership is much lower amongst households comprising pensioners living alone, 81% of which do not have access to a car. Public transport alongside voluntary and community transport as well as taxi and private hire services, plays an important role for this sector of the community ensuring they can reach essential daily services such as shopping and healthcare as well as providing a vital link to more social activities and journeys. The Locallink buses, a network of socially necessary bus services funded by the City Council to complement the commercial network, plays an important role in social inclusion: 65% of Locallink passengers travel 2-3 times per week and a quarter travel daily; 75% of passengers use the service for shopping trips.

Community transport in Nottingham is provided by Nottingham Community Transport who operates the Dial-a-Ride service. They also currently operate transport for youth services, a group hire service and seven of the city's Locallink services. These Locallink services carry 198,000 passengers per year which equates to an average of 3,600 passengers each week. The Locallinks run with smaller vehicles (13 - 18 seats) and have a demand responsive element to their routes which is used by 1 in 10 users. By providing a service that is flexible has high levels of customer care and are also accessible to disabled people means that Nottingham Community Transport can redeploy key Dial-a-Ride resources more effectively elsewhere in the city. Taxis also provide another transport option for this group.

5.2.7 Location of development

It is important to remember that transport provision is only one element of the accessibility equation and the role of the wider planning framework in determining the location and delivery of services is crucial. Working with local partners responsible for providing key services in the employment, learning, health, retail and leisure sectors such as Jobcentre Plus, Further Education colleges, the NHS and community and third sector agencies is important to ensure that services are located and delivered in the most appropriate way for the people that need to use them.

The planning and development management process will continue to play an important role throughout the LTP to ensure that new development in the city is as accessible as possible. The Local Development Framework (LDF) provides the mechanism to ensure that the right planning policies are in place to support accessible and sustainable development in the city as shown in Figure 5.5.

34 Accessibility of Employment and Training Opportunities in Greater Nottingham, SRA Ltd, July 2007

5 Access to Key Services, Employment and Training

The LDF 'Core Strategy' is the key strategic spatial planning document and includes strategic policies to ensure accessibility is considered from the outset for new developments in terms of site allocation. This document provides the framework for development management policies. The City Council has prepared a Strategic Housing Land Availability Assessment (SHLAA) which provides part of the evidence base from which future land for housing is allocated in development plan documents.

Accessibility mapping and analysis is being used to provide an assessment of appropriate densities on the sites identified in the SHLAA. Highly accessible areas will tend to be those within easy walking distance of town and local centres and public transport. Additional housing in these areas would help reinforce the areas and would be likely to lead to less additional traffic than would otherwise be the case and could be built at higher densities with reduced car parking. The Land and Planning Policies Development Plan Document (LAPP DPD) currently in preparation will draw upon the SHLAA. All the sites put forward in the LAPP issues and options paper will undergo a detailed site assessment. Accessibility is one of the assessment criteria. The LAPP DPD will also contain more detailed non-site specific local policies which expand on the Core Strategy. These may include policies on accessibility where there is an identified requirement for them.

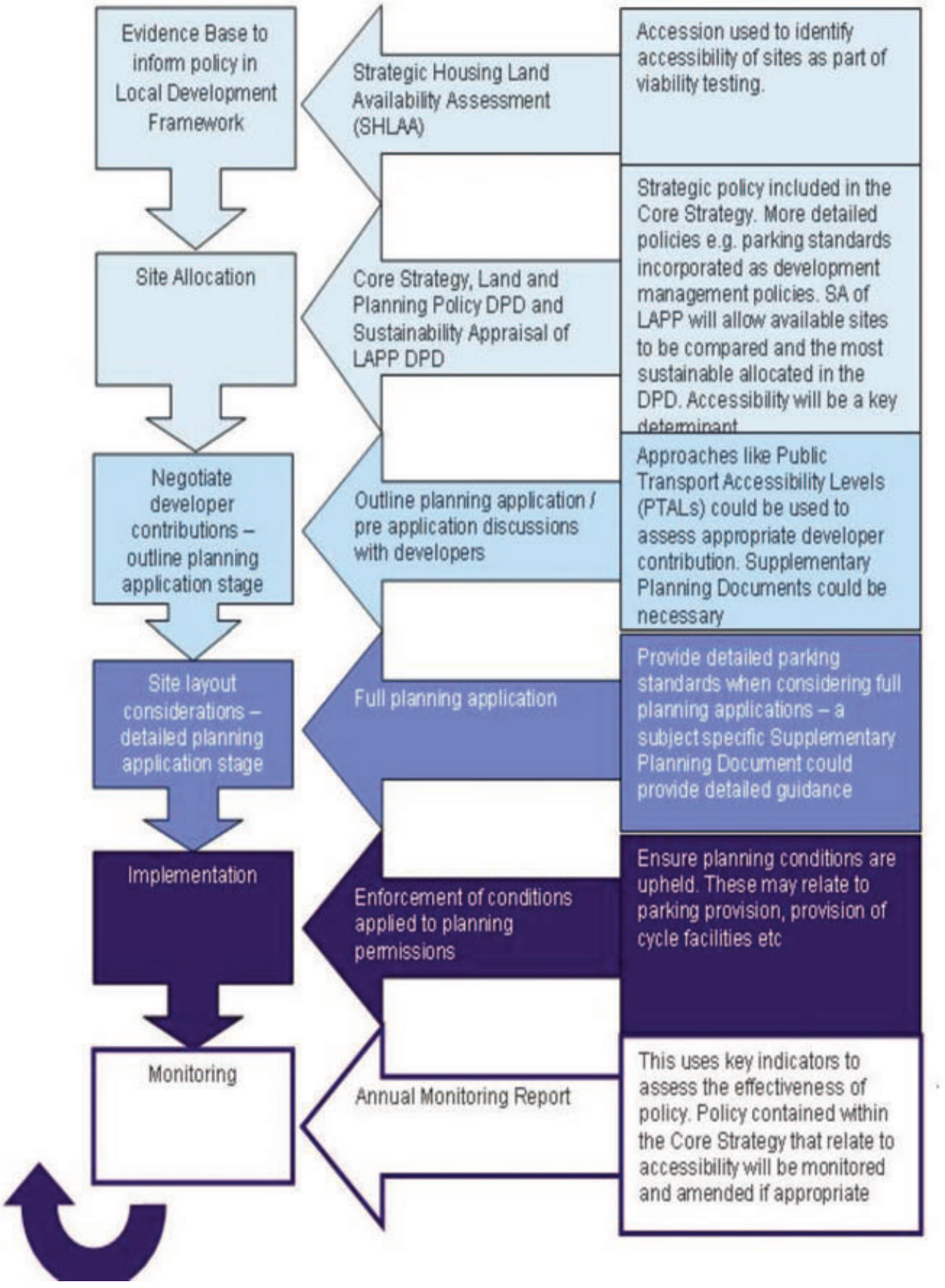
The SHLAA database will be used to inform the development of a programme of residential travel plans and personalised travel planning activities to promote smarter travel options for new developments. There is also potential to use accessibility planning to determine the level of developer contributions. The Council will look at how this has worked in other planning authorities to determine how this could be applied in Nottingham.

There are four key stages at which accessibility can be considered during the lifetime of a development:

- **Feasibility:** Consider accessibility planning and local planning policies to choose the right site in the first place. Accessibility mapping can inform this stage using mapping software such as Accession. The SHLAA data base considers accessibility as one of the viability criteria for future housing sites
- **Site development:** Maximise sustainable access by locating the building in the right place on the site by considering: Where the key users are travelling from; Where the main access point will be; Orientation of buildings in relation to the locations of existing transport facilities
- **Detailed design stage:** Provide the right facilities both within and around the site. Safety for vulnerable users should be paramount. Consider provision for pedestrians, cyclists and bus users, safer routes to school, traffic management, parking and use of space within the building and potential of IT solutions to reduce the need to travel for staff and users
- **Operational:** Implementing a travel plan to promote sustainable commuting and business travel options for staff, visitors and customers for the ongoing life of the buildings. This will be much easier if the site is accessible and the layout and facilities make sustainable and healthy travel choices a realistic and attractive option

The long term objective is to formalise the consideration of accessibility and transport needs into the planning process so that any opportunities for better integration of planning and transport are fully realised at each of the development stages thereby creating an environment in which it will be possible to offer people realistic transport choices through the delivery of travel plans and the smarter choices agenda.

Figure 5.1: Using the planning framework to build accessibility into development management



Key to stage:	Feasibility		Site development		Detailed design		Ongoing	

5 Access to Key Services, Employment and Training

5.3 Strategy and proposals

Over the past 10 years Nottingham has progressed a consistently strong policy objective of improving sustainable accessibility to work, education, shopping and leisure facilities by addressing all aspects of accessibility – physical, geographical, financial, information and safety – for all citizens and visitors to Nottingham.

Accessibility is determined by the suitability and cost of transport options, whether people know what transport is available for them in terms of routes, stops and timetables, whether information and services are suitable for the cultural and language profile of local communities, whether people feel safe making that journey and how, when and where services are delivered. Other barriers affecting access to services are limited travel horizons and the affordability and perceived safety of different transport options, all of which will vary depending on the individual's gender, age and cultural and socio-economic background. Therefore to build up a truer picture of access to opportunities we also need to consider physical accessibility, affordability, information and awareness. These aspects are covered in the remainder of this Chapter.

Personal safety to improve perceptions of safety it is important to consider the whole journey experience and the walking environment at interchange points and at either end of a public transport journey. Measures to improve community safety, the safety of public transport journeys and the attractiveness of walking and cycling are set out in Chapter 7.

Smarter travel choices are an integral part of the LTP strategy which complements public transport improvements. Smarter choices can reduce congestion, give people genuine travel choices and contribute to improving accessibility and social inclusion. The City Council's travel plan programmes for business and schools provide support and guidance to reduce car dependency for journeys to key destinations. The smarter choices approach focuses on influencing people's travel behaviour towards more sustainable options. This includes giving people better information about their existing travel options; marketing sustainable travel options more effectively; making improvements to the way services are organised; providing new transport services, which can be focused at a particular target market such as a workplace or residential area; and providing new options that reduce the need to travel at all. The proposals set out in this Chapter will complement the smarter choices measures outlined in Chapters 3 and 7 of the strategy and together will provide a comprehensive package of activities which will maximise access to opportunities for all citizens.

New development that can help to reduce unnecessary journeys is an essential element to creating a low-carbon economy and was detailed in Chapter 4. Through planning policies the City Council will seek to resist development in unsustainable locations where insufficient capacity exists on transport networks to accommodate impacts. Well design streets and public spaces which bring services and destinations together in a way that citizens can easily access by public transport, walking and cycling can help to change their 'default' behaviour and remove car dependence. The use of technology is also fundamental to travel avoidance reducing the number of unnecessary journeys by allowing people to stay connected without needing to travel to one location.

Key proposals and measures to maintain and improve access to opportunity for all are set out in Table 5.1.

Table 5.1: Access to key services proposals and measures

Proposals	Measures
Improve public transport coverage	PTC 1: Linkbus network development PTC 2: Integration with taxi and private hire vehicles PTC 3: Voluntary and community transport
Make transport more accessible	MTA 1: Improve public transport waiting facilities MTA 2: Integrated and smart ticketing MTA 3: Travel buddying and training initiatives

5.3.1 Improve public transport coverage

Following the successful introduction of Line One, further lines of the NET system, out to Clifton and Chilwell, are proposed for implementation within the Plan period. NET Phase Two will enhance accessibility by providing cross-city services linking residential areas, including some of the priority communities. In addition the development of the commercial bus network will enhance accessibility levels. Further information is described under the integrated public transport proposals detailed in Chapter 3.

Proposal PTC 1: Linkbus network development

Nottingham has a well developed commercial network with all main routes focused on connecting into the city centre. The Linkbus network was developed to plug the mainstream public transport system to improve accessibility to jobs, health, education and shopping facilities outside the city centre. At its core lies a host of measures designed to integrate into the mainline public transport services, park and ride sites and car parks. By reducing walk and journey times the whole package is not only improving accessibility, but also helped relieve congestion by making public transport an attractive alternative to the car. Implemented with a range of partners, all Linkbus services have joint ticketing, co-ordinated information, fully branded buses and easy interchange facilities along their routes.

The services are fully marketed as 'links' to another service – often necessary in order to complete a trip. There are a range of partners involved, with their roles dependent on the link in question – each link has been established differently, tailored to local conditions and resource availability. The main aims of the Linkbus strategy are to:

- Provide safe, sustainable access to employment sites both in the city centre and on key corridors outside the city centre
- Fully integrate both the park and ride and works services into the public transport network providing linkages to all parts of Nottingham
- Relieve congestion along key commuting routes and within the city centre
- Provide user-friendly access to the city centre for work, shopping, tourism and entertainment by connecting into park and ride sites
- Be fully accessible to those with mobility problems
- Be financially accessible to low paid workers and those without access to a car

5 Access to Key Services, Employment and Training

Map 5.5: Linkbus network (showing high frequency services)

The City Council will maintain and enhance the current level of high accessibility through the development of the Linkbus network to complement the connecting mainline services with branded low floor services, through ticketing, integrated information and high quality level interchange facilities by:

- Maintaining the successful support link bus network, giving access to educational, work and health facilities to over 6 million travellers per year
- Developing additional Work link services to out-of-city centre employment sites
- Developing more demand responsive localink services connecting inaccessible areas of the city to local district centre
- Developing the Shoplink network to connect non-car owners to the nearest large supermarket
- Continuing the Nottingham Dial-a-Ride service to over 1000 users
- Providing for integration with taxi and private hire services
- Integrating services with Nottingham Express Transit Phase Two

Further information on the Council's Linkbus strategy can be found at:
www.mynottingham.gov.uk/busstrategies

PTC 2: Integration with taxis and private hire vehicles

Taxis and Private Hire Vehicles (PHVs) play an important role in the overall provision of transport services, particularly for those without access to a car and people with disabilities. They help fill gaps in public transport provision and may form part of more sustainable longer distance multi-modal trips. The distinction between taxis and PHVs is that taxis can work from a rank, be hailed in the street or undertake pre-booked work. PHVs must be pre-booked.

The number of Hackney licences is limited by the city where applicants for a licence are required to undertake a knowledge test and a driving assessment. During the Plan period measures to better integrate taxis and PHV services with public transport services such as with NET, rail services, SkyLink bus service and with coach services will be further investigated including discounted fare promotions and combined ticketing.

PTC 3: Voluntary and community transport

The support and development of community transport is an important way for the Council to cater for the transport needs of those who are unable to use conventional services. In Nottingham this exclusion tends to be predominantly as a result of a disability.

Community transport services including Dial-a-Ride and voluntary car schemes are supported within the City. Demand far exceeds the supply of services currently available and it is recognised this is a cause of frustration for many users. As the provision of services is closely linked with both health and social care this is an area that will be further developed.

5.3.2 Make transport more accessible

Transport can improve accessibility by improving the design and function of streets to enable people to walk and cycle more and to use public transport networks with ease through ticketing, marketing, travel information and infrastructure improvements which improve safety and quality of service.

Quality spaces can play an important role in reducing anti-social behaviour improving safety and designing out crime, while improvements to the public realm will increase civic pride and create positive social interaction resulting in more people likely to take to travelling by foot and bicycle. Improving the local transport environment and public realm is a key feature in improving quality of life and these measures are discussed in Chapter 6.

5 Access to Key Services, Employment and Training

Mosaic analysis of the household groups and types in the city who are less likely to have access to car identifies the media channels these households are most receptive to range from telemarketing, internet, local television channels, post office/health centre noticeboards and on street advertising/local newspapers. These can be used to inform future communication and marketing of transport information which can help extend people's travel horizons.

Best practice in other cities such as Liverpool and Birmingham has demonstrated the value of providing more tailored travel information through community networks and agencies, as well as working in partnership with key agencies such as Job Centre Plus, to broaden the travel horizons of hard to reach communities and build confidence in using public transport. These approaches provide some interesting models which could be adapted to Nottingham's needs.

A high quality public transport network also needs to be complemented by other schemes to support the transport needs of citizens. The City Council will seek to support more people to travel by public transport and therefore extending their travel horizons by delivering a programme of supported travel initiatives.

Shopmobility

This service provides a free wheelchair loan and motorised scooters for disabled people using the city centre from bases at the main shopping centres. The service is well established and an important element in the ability of many residents to access services. Shopmobility provision will be considered as part of integrated public transport service improvements.

Disabled parking

For many disabled people it is recognised the car remains an essential means of access to facilities and services. The Council will continue to ensure new developments comply with the parking standards for disabled parking and provide a reasonable balance of both long and short stay disabled parking within controlled on-street and off-street facilities. The Council's parking policy was set out In Chapter 3: World-class sustainable transport.

Proposal MTA 1: Improvements to waiting facilities on public transport networks

Improving customer waiting facilities for public transport can influence people's decisions to choose to travel more sustainably. The Council's strategy approach will be to improve the bus stops and shelters, real time electronic information provision and level of public transport printed and electronic information available.

Providing people with information about travel options, including timetable and ticketing information to help them to plan their journeys and select the best ticketing options is an important strand of improving accessibility by widening people's travel horizons. Different people require access to different types of information. Some people want information to help them plan their journey in advance whilst other people want information at the point of travel or along the journey. Timetable and real-time information at the stop or by phone text help to improve perceptions of reliability and build confidence in public transport. Typically older people prefer paper-based information whilst younger people and business travellers prefer web and mobile phone based applications.

Bus stops and shelters

To provide information and reassurance to customers already on a journey or to help customers plan a journey in the future, key information will be provided at all bus stops and bus shelters from timetable information to integrated mapping and journey planning information including:

- CCTV programme to be developed and expanded to cover more stops and shelters
- New shelters installed to improve waiting facilities for customers, e.g. the old Collin Street canopy removed and replaced with 20 new shelters

- Increase font size of bus stop plate information to improve visibility to partially sighted users, remove branding and operator logos to improve clarity in the city centre. This will be expanded along the main frequent corridors and eventually into estates and residential areas
- Real time information displays will be developed with the Council moving to sole operation of the technical system allowing for more effective management. The roll out programme of real time information displays will be implemented to fill gaps along main bus corridors and new developments, large multi-line displays will be investigated for the Market Square area and for Bulwell Bus Station. Electronic bus/tram/train departure boards will be investigated for major employers in Nottingham. The City Council will work with the County Council to develop real time roll out on cross-boundary routes to achieve a consistent approach to bus quality partnership corridor enhancements
- City centre stop locations map showing locations in letter groups aiding people to navigate the city centre to the correct locations for bus departures allowing for better interchange between services
- Frequent routes information map showing integrated public transport routes of 15 minutes or better frequency to show bus users the most frequent services to the city suburbs and key destinations
- Journey planning information area based grid providing information on the area, services to that area and the city centre bus stop location
- Timetable information displays at each stop showing current chronological timetabled departure information for services, basic fare information and service route map
- Street lighting improvements (covered in Chapter 7)

Public transport information

Under the Transport Act 2000 the City Council is required to determine a strategy and ongoing action plan for public transport information defining:

- Type and level of public transport information that should be available to the public
- Method by which such information will be jointly delivered with key stakeholders
- Monitoring method to be used

The **Public Transport Information Strategy** details the broad standards of information to be provided covering provision relating to the following priority areas:

- Timetable, route, fare and operational information for key transport locations
- Information facilitating integrated journeys involving more than one operator through improved interchange measures including more area based integrated mapping at interchange points, Kangaroo ticketing and on street information
- Ticketing particularly off-bus prepaid smartcard ticketing
- Provision and maintenance of facilities to display information through programmed cleaning and maintenance and scheduled reactions to vandalism and graffiti problems
- Bespoke information for key sectors, particularly the elderly and disabled in alternative formats, themed/starter guides for new or infrequent users such as targeted guides for blind and partially sighted users, working with children with learning and physical disabilities and workplace travel information as part of a business support package, through providing bespoke mapping and timetabled information to key employers
- Monitoring of services through audit and continuous market research

Considerable progress has already been made in developing innovative information streams above minimum standards using a blend of printed, electronic and face to face information outputs. The public transport information strategy can be found online at:
www.mynottingham.gov.uk/busstrategies

5 Access to Key Services, Employment and Training

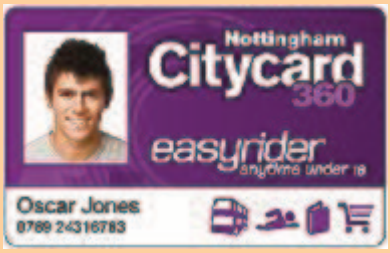
Bespoke travel information

The City Council will continue to provide more tailored and personalised travel planning solutions including:

- Large format colour coded simple integrated mapping and plates at all stops, including raised text and Braille stop coding
- At stop large format timetables for all tendered Linkbus services
- Dedicated website pages for travel by those with a disability
- Electronic stop displays at all 1,000 boarding stops and bus stations showing bus arrival times, with information also accessible by those with visual difficulties via audio announcement
- Access to electronic journey planning information at libraries, leisure centres, bus stations and via mobile phones
- Personalised journey plans and individual travel training to holders of disabled persons bus passes, including those with special education needs
- Maintenance of a staffed accessible travel centre for all queries relating to travel and ticketing, including the issuing of concessionary bus passes
- Provision of mobile travel centres to local district centres, workplace and schools
- Support and promote journey planning tools including continued participation and funding of the Traveline telephone hotline for travel information; Walkit urban walking journey planner and Transport Direct cycle journey planner
- Develop a network of community smarter travel champions to support young people and job seekers
- Develop an effective approach to community engagement in travel behaviour change activities drawing on good practice from Sustrans' work on individualised travel behaviour planning, e.g. at Tower Hamlets, and the local experience of the RideWise cycle training organisation
- Explore additional funding opportunities, such as the Local Sustainable Travel Fund, to fund revenue elements of individualised travel planning approaches

Proposal MTA 2: Integrated and smart ticketing strategy

The City Council is committed to improving integrated and smart ticketing options which can help to address affordability issues for many. The City Council's ticketing strategy has identified four resident groups where accessibility to key facilities would be improved if fares were discounted below their commercial level. These include the elderly, disabled, work seekers and those in full time education from low income families. It has also identified that fares for non-car owning families are prohibitively expensive compared with the cost of parking/driving. To this end the City Council will seek to secure funding for these disadvantaged groups, prioritising as far as possible using detailed smartcard and other socio-economic data to ensure such funds are targeted most effectively.



Box 5.D: 'Citycard' Smart Card

Since 2007, the City Council has promoted the use of the Citycard to increase public transport usage and increase participation in leisure activities and footfall at libraries, whilst also providing customer discounts at retail outlets and leisure centres. As of 2010 there are around 127,000 Citycards in circulation of which almost 50,000 are Adult Citycard and Easyrider Citycards and over 17,000 travel cards are for young people (under 18).

Non-city residents can also benefit from the integrated transport function as Nottingham City Transport has adopted the platform for their own ticketing deals. Surveys also show that around 8,000 card holders have used their Citycards to get discounts in one of over 100 stores, shops, restaurants and other facilities around the city.

The Citycard smartcard combines the functions of a travel card, library card and access to leisure facilities as well as retail discount offers. The 'Mango' electronic purse has also been introduced on Trent Barton services offering discounted travel without the need for cash transactions. The Citycard smartcard combines travel, library and leisure features with associated retail benefits. In order to progress inter-ticketing objectives and encourage interchange, a focussed movement towards systems integration and standardisation is now required. The 'ITSO' standard is now universally promoted by DfT and featured in the Government's White Paper 'Creating Growth, Cutting Carbon'. Smart and integrated ticketing has the potential to revolutionise the way passengers use public transport, with benefits for passengers, operators and the Council.

The City Council's integrated and smart ticketing strategy includes a number of actions to help reduce the cost of travel helping to tackle affordability issues. These include:

- Mobile travel centre in operation – providing information and Citycard applications and top-ups to workplaces, schools and district centres
- Functionality expanded to include: rental payment to 40,000 Nottingham City Homes residents, authorisation for free school meals for 4,500 school children, cashless catering at most secondary schools, bicycle locker and trial cycle hire scheme from the Station Hub
- ShopMobility membership scheme
- Reintroducing personalised journey travel planning for registered card users with information on their nearest bus stop, leisure centre and library
- Use by Youth Offending Team for secure stored value personalized travel
- Expansion to certain children with Special Educational Needs in cost saving initiative to reduce expensive use of taxis in favour of bus and tram
- Expansion to school children travelling to denominational schools currently using specialized school transport
- Utilise management and market information reports to analyse usage across Nottingham residents by different measures, together with GIS outputs to target interventions
- Leisure Services functionality improvements online booking using Citycards, sign up for flexible fitness package online (online direct debit signup being developed in conjunction with council tax)

The following areas have been highlighted for future consideration, subject to financial and partner business constraints integration with parking systems - car parks and on-street - to provide tiered pricing for city residents:

- Platform for integrated ticketing (bus/tram) following tram tender announcement
- Investigate moves of the multi-operator Kangeroo ticket to a smartcard platform
- Cash 'e' purse for non public transport functions (low value e.g. parking meters)
- Expand targeted discounts for city residents including retail, travel and leisure

Proposal MTA 3: Travel buddying and training initiatives

The DfT supports initiatives to ensure that those who travel have sufficient and appropriate information to use particular modes of transport as well as the confidence and basic skills to do so. Travel training and travel buddying schemes are aimed at giving practical and tailored help to people in how to understand and use the public transport network and travel by more active modes, such as walking and cycling, so that they can access employment, education and social opportunities. They are aimed at increasing independence and preparing individuals for life, and, in doing so, they can also help reduce the cost of providing care facilities.

The City Council's public transport team has already been offering its expertise to the Royal National Institute for the Blind (RNIB) and Action for Blind People to improve the accessibility of bus services for blind and partially sighted people using a range of measures including driver awareness training, confidence/independence training for the traveller, mystery shopper journeys to identify which elements

of the journey experience need improvement, providing tactile lettering at stops to aid stop identification and developing a set of bus industry standards for the provision of public transport information within the city. The aim is to develop a range of standards from the minimum that should be delivered to an excellent, (or gold), standard of good practice with the RNIB awarding the merits for this good practice. Nottingham City Council in partnership with Nottingham City Transport will be leading the way with these standards and helping the RNIB to set the various levels of achievement. The City Council will:

- Set up a public transport user group of blind and partially sighted people in Nottingham, hosted by RNIB in partnership with Nottingham City Transport and Nottingham City Council
- Work with the RNIB to shadow and monitor journey experiences to help inform the development of the transport standards

The City Council will seek to try and standardise and improve the experience for blind and partially sighted users through improving public transport information including:

- Timetable information in accessible print formats
- Getting on the bus experience including how easy it is to get the bus to stop, getting the right number bus, how close the bus pulls up to the kerb, the helpfulness of the driver as the person gets on and how easy it is to sit safely before the bus pulls out
- Layout of the bus e.g. where seats and bells are
- Getting to the destination such as ease of identifying the bus stop, including audio announcements if available or help from the driver
- At the destination and how easy it is to get off the bus, has it pulled up to the kerb and how easy is it to do the next stage of the journey from that stop
- The provision of effective training for frontline staff (drivers and customer service staff) about disabilities and particularly visual awareness
- Communication of changes and alterations of services and stops to blind and partially sighted users

5.4 Summary

Reviewing how services are delivered and the provision of transport to them can significantly increase opportunities for people to access jobs, learning and services. Through targeting those most in need it can also help to achieve a fairer and more equal society. In Nottingham many people do not have access to, cannot afford, or choose not to own a car. The Council's strategy for maintaining and where possible improving the good levels of accessibility that already exist is focused on:

- Improving public transport coverage through continued development of the Linkbus network, integration of the transport network with taxis, private hire and community and voluntary transport
- Making transport more accessible for all through a range of measures to improve public transport waiting facilities and information, expansion of the Citycard smartcard and travel buddying and training initiatives

The link between the proposals for improving accessibility and the key challenges are set out in Table 5.2.

Table 5.2: Links between access to key services proposals and meeting their challenges

Proposals	Challenges			
	Public transport coverage	Access to employment/ services	Affordability	Low travel horizons
Improve public transport coverage				
Linkbus network development	✓	✓	✓	
Integration with taxi and private hire	✓	✓	✓	
Voluntary and community transport	✓	✓	✓	
Make transport more accessible				
Improvements to public transport waiting facilities			✓	✓
Integrated and smart ticketing strategy		✓		✓
Travel buddying and training initiatives				✓

Chapter 6:
Quality of Life & Neighbourhoods

Improving Quality of Life and Transforming Nottingham's Neighbourhoods 6

Improving Quality of Life and Transforming Nottingham's Neighbourhoods 6

This Chapter explains the role transport plays in addressing the local priorities for regeneration and to improve the quality of life of Nottingham citizens. The proposals are interlinked with those discussed in Chapters 5 and 7 which aim to improve people's life chances and wellbeing. The following proposals seek to address and take forward the themes of Localism through greater citizen involvement in identifying and prioritising measures to improve local streets and places.

6.1 Context

Quality of life is a term used to define the overall wellbeing of citizens and communities. It is also a measure of the livability of a city or area. Liveability can be measured by factors such as the widespread availability of goods and services, low personal risk of crime and an effective infrastructure, including transport. Nottingham is a city of contrasts with high levels of wealth generation yet has some of the most deprived areas of the country.

People living in deprivation can be affected by low travel horizons, severance from wider society and low levels of opportunities. The provision of transport services and infrastructure is crucial to an individual's happiness helping to fulfil their personal life aspirations through improving access and connectivity to key destinations and enhancing the visual appearance of the streets and spaces where they live, learn, work and visit for recreation and enjoyment.

This LTP strategy has been developed to help improve the quality of life in local communities and centres, and the wellbeing of Nottingham citizens overall. Other LTP Chapters discuss improvements the City Council and its partners will be seeking to introduce over the life of this Plan which add to the sentiment put forward in this Chapter and these proposals collectively will help to tackle the barriers that limit people's life chances:

- Chapter 3 considered transport's role in supporting the economy which can help generate employment, training opportunities and create a vibrant dynamic city presenting many ways for people to enjoy the city's cultural, retail, leisure and sports facilities
- Chapter 5 detailed the key role transport can play in linking people to jobs, training and key services through tackling current barriers and ensuring the transport system contributes to reducing social exclusion
- Chapter 7 presents the benefits of supporting and encouraging more people to undertake more journeys by active modes, (i.e. walking and cycling) ultimately benefiting their health and wellbeing. The Chapter also sets out the need to create safer streets and environments and the City Council's role in minimising poor air quality and noise impacts from transport

A key measure the Plan supports is the delivery of regeneration projects, which have the potential to transform neighbourhoods and enhance the public realm, town, district and small centres.

Box 6.A: Key achievements

A number of quality of life improvements have been delivered through the past LTP, namely:

- A £40 million neighbourhood investment programme focused on public realm and transport improvements within local areas
- Awards for refurbishment of the Market Square including the 2008 inaugural RIBA CABE Public Space Award
- High general satisfaction with the local area with 81% of residents satisfied with their local area as a place to live with 57% feeling they could influence decisions
- Above national average satisfaction with public transport services with 77% satisfied with bus services and 71% satisfied with local public transport information
- Big Track 10 mile circular traffic free multi user waterside cycleway and path

6 Improving Quality of Life and Transforming Nottingham's Neighbourhoods

6.2 Problems and opportunities

The city's population has a large proportion of people in lower socio economic classifications; residents on lower incomes; younger households; households in rented accommodation; ethnic minority communities; young single people and students. The proportion of families with children is noticeably lower in the city than in the surrounding suburbs. Transient populations moving into Nottingham and later moving to the suburbs when their life stage and financial circumstances change contribute to this issue.

6.2.1 City of contrasts

Chapter 3 set out the economic profile of the city being a significant player in the country's economic strength. However, the circumstances in some local areas tell a different story. The Indices of Multiple Deprivation are a reflection of how the population experiences life across seven key domains: income, employment, health, education, barriers to housing and services, crime and the environment. Using this measure, the city is ranked as the 13th most deprived local authority in England and 4th out of the eight Core Cities[35]. Over 30% of the population live in areas that rank amongst the 10% most deprived in England.

The more deprived parts of Nottingham are concentrated in the estates to the north and west of the city, in the inner city, and to a lesser extent in parts of Clifton. The location of areas ranked amongst the 10% most deprived in the country correlates with high concentrations of City Council owned properties.

Local research supports strong correlations between most aspects of deprivation and the non-white British population. Other groups more likely to experience deprivation include families on low incomes, older people living in relatively low income households, working age people in workless households, people with low skills and on low pay.

Population characteristics were detailed in Chapter 5 and further breakdown on the 'mosaic' geo-data mapping profiles of inequality is available on the Nottingham insight webpage: www.nottinghaminsight.org.uk

6.2.2 Localism

The Government presented the Decentralisation and Localism Bill to parliament in December 2010. The Bill proposes to devolve greater powers to local authorities and neighbourhoods giving local communities more influence over decisions taken in their local areas. The key principles of Localism are:

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

A new national planning framework is proposed as part of the Local Development Framework with the option to prepare 'neighbourhood plans'. This will impact upon the way in which the City Council delivers key services and may have an influence on the way in which it plans and consults on new development, which in turn will have implications for transport improvements.

35 The Indices of Deprivation, 2007; Compendium of results for Nottingham City, Nottingham City Council, December 2007

Localism presents the City Council with a new opportunity to do things differently, to give local citizens and communities a stronger voice giving them a real share in local change and growth, and allows the Council to build on engagement, to collaboratively seek to deliver the transport improvements people want to see in their local areas.

6.2.3 Limited green open spaces

Despite Nottingham's tight urban boundary, 20% of the land area is made up of open and green spaces. However it is unevenly distributed across the city and varies in terms of its quality and accessibility. In many cases extensive deficiencies exist in the provision of natural greenspace including the Basford and Bestwood, Aspley, Bilborough and Leen Valley, Arboretum, Berridge, Radford and Park and Mapperley and Sherwood areas.

In December 2006 the City Council adopted a new open and green spaces strategy 'Breathing Space' which sets the framework for planning provision of and access to high quality green spaces, outdoor playing pitches and both formal and informal sport and recreation spaces.

The aim of the Breathing Spaces Strategy is to maximize the value that all city residents receive from the open spaces network by developing and creating well-managed open and green spaces, which in turn impact on the economic life of the city, boost physical and mental health and help promote safety. The LTP interacts with the aims of the strategy through provision of well-designed streets and public spaces that encourage active travel options and improve interaction within communities.

The strategy includes an action plan with a number of transport interventions:

- Maximising the accessibility of parks and open spaces through public transport improvements, promoting smarter travel choices and using the development management process
- Deliver the objectives of the 6Cs Green Infrastructure Strategy and the River Leen Access and Biodiversity Study
- Improved walking and cycling infrastructure including more and better links, cycle training and information and mapping.

Further information on the Breathing Spaces Strategy can be found at:
www.mynottingham.gov.uk/breathingspaces

6.3 Strategy and proposals

The City Council is committed to narrowing the gap between the most deprived neighbourhoods and the rest of the country to ensure that everyone has a genuine opportunity to benefit from an enhanced quality of life. Transforming Nottingham's neighbourhoods is a strategic priority in the Sustainable Community Strategy and efforts by the City Council and partners will ensure future actions and resources are focused at the local level.

Table 6.1: Quality of Life proposals and measures

Proposals	Measures
Deliver on community priorities	CP 1: Neighbourhood local transport investment programme CP 2: Town, district and small centre improvements
Deliver big city aspirations	BCA 1: Support regeneration priorities
Integrate green corridors	GC 1: Green infrastructure links

6 Improving Quality of Life and Transforming Nottingham's Neighbourhoods

6.3.1 Deliver on community priorities

Individuals are a part of and identify with their local areas and neighbourhoods. These communities are integral to the success of the city overall. In recognition of the key strengths of citizens and the unique characteristics of the local communities that make Nottingham, the Council have set about 'transforming neighbourhoods' by investing in local areas where citizens live and work to promote a sense of place, increase civic pride and encourage people to enjoy their local areas and city.

To ensure that local communities directly benefit and a neighbourhood focus is maintained, close liaison and co-operation with the One Nottingham Partnership, area committees, local community groups and the private and third sectors will assist this process.

Proposal CP 1: Neighbourhood local transport investment programme

Since 2006, the City Council has been delivering a multi-million pound area capital investment programme in wards aimed at improving the local transport and public realm environment. A key priority of the programme has been to improve the quality of pedestrian areas with at least 70% of the funding directed towards upgrading footways. Funding has been prioritised and invested across all the city's wards.

Over the past year the programme has been expanded to cover traffic management and local accessibility schemes. In the future the LTP will be used to support neighbourhood regeneration and transformation to create liveable communities through delivering on community-led local transport priorities to address local issues including footway and cycleway improvements, parking and traffic management and local accessibility schemes.

Neighbourhood renewal also encompasses areas of investment highlighted in other parts of this strategy. The Respect for Nottingham initiative, which includes Respect for Transport, will continue to play an important role in reducing anti-social behaviour on public transport, the development of the primary pedestrian route network will improve safety and design out crime, while improvements to the public realm will increase civic pride and create opportunities for investment and positive social interaction.

Box 6.B: Area Capital Investment Programme

The City Council conceived the Area Capital Fund as a capital programme to improve footways, street lighting, fencing, open spaces, parking and other small-scale public realm enhancements. Across the city an estimated £18 million has been spent in the last five years on upgrading local footways.

Local communities have prioritised and witnessed improvements to nearly 1,000 local streets in every ward totaling 833,853 square metres. This has helped to make a difference to the aesthetic feel and function of local streets, meeting equality and accessibility objectives for the benefit of all.

Proposal CP 2: Town, district and smaller centre improvements

The Nottingham Local Retail Centres Survey (2009) proposes a hierarchy for centres within Nottingham based upon four categories – town centres, district centres, local centres and centres of neighbourhood importance. Whilst there is only one defined town centre (Bulwell) and three defined district centres (Clifton, Hyson Green and Sherwood), there are a significant number of smaller local centres and centres of neighbourhood importance, which play an important role in providing accessible facilities an services in local areas. In addition, the Greater Nottingham Retail Study identified a number of shopping centres in the city.

The development of small-scale integrated centre improvement schemes will contribute towards improving the whole image and feel of the area, creating an environment for future investment. Such works can open up previously under utilised sites for development to further assist in the regeneration and increase the vitality and viability of an area. The City Council is committed to enabling a wide range of services to be provided in town and other centres, which are accessible to all.

6.3.2 Deliver big city aspirations

The creation of a high quality public realm together with attractive access points and gateways into the city and district centres are important to their overall impression and appeal. This affects vitality, the extent of social and economic exchange, and is significantly influenced by investment in transport infrastructure.

The importance of the 'quality of place' in providing the climate for private sector investment is increasingly being recognised. Inward investors are attracted to locations that offer well designed, well-maintained public places, whilst research suggests that property values increase around good quality parks and open spaces. The City 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 further unlock private sector investment.

Proposal BCA 1: Support regeneration priorities

The City Council is progressing a number of policy priorities which helps to support regeneration and have implications on transport provision. The following section presents these frameworks in turn:

- Local Enterprise Partnerships and Regional Growth Fund
- Local planning policy
- Regeneration areas
- Regeneration priorities and delivery
- Local Investment Plan
- Attracting major events

Local Enterprise Partnerships and Regional Growth Fund

The Government invited local authorities and the business community to come forward with proposals to create Local Enterprise Partnerships (LEPs) to replace Regional Development Agencies, which are to be dissolved by March 2012.

Nottingham City Council in partnership with Derby City and Nottinghamshire and Derbyshire County Councils' put forward a proposal for a LEP in September 2010, which was endorsed by Government in October 2010. The partnership aims to create the right conditions for future economic prosperity and resilience in the area.

The LEP initial priorities are to:

- Build on the reputation the area has for internationally competitive science, manufacturing, engineering and creative industries, to drive productivity growth as a low carbon economy is developed
- Develop a distinctive cultural, leisure, sport and tourism offer to world-class standards
- Ensure that the benefits of sustainable economic growth are shared across its cities, towns and rural communities
- Develop a skills programme, building on the strengths and reputation of the first rate Further Education and Higher Education sector that will meet and drive up employers' current and future skills demands
- Continue to secure investment in regeneration and infrastructure projects to stimulate private sector growth

6 Improving Quality of Life and Transforming Nottingham's Neighbourhoods

The LEP board, which will be led by representatives from the private sector and include local authority leaders, will give a commercially informed strategic direction to the LEP. A shadow LEP board has been created and met for the first time in December 2010. The remit of the board is to set out the LEP's strategic priorities and role the full board is expected to be in place by late 2011. The board will drive investment into the area by:

- Being a strong influential voice for the area and a conduit between Government and the LEP area
- Providing an integrated framework for and leading on targeted interventions to boost private sector growth across priority sectors with potential
- Ensuring that all of its interventions help to deliver investment and reduce the area's dependence on public sector employment

An over-arching priority for all of the LEP activity will be to encourage the development and adoption of low carbon technologies, and particularly their application to sustainable and renewable energy. More information on the LEP is available at: http://d2n2lep.org

Regional Growth Fund

The Government has established a Regional Growth Fund designed to encourage private sector growth and to support areas reliant on jobs in the public sector. £1.4 billion is being awarded through a bidding mechanism made available over three years from April 2011 to 2014. It is expected that there will be three rounds of bidding. Priority is being given to bids that bring significant private sector funds and encourage the transition of areas currently reliant on the public sector to a private sector-driven economy. Objectives of the fund are to stimulate enterprise by providing support for projects and programmes with significant potential for economic growth and create additional sustainable private sector employment.

Local planning policy

Planning policy is an effective tool which ensures that development management decisions which are desirable in Nottingham and are of benefit to its citizens can be made whilst ensuring balance between social, economic and environmental considerations. As planning policy controls the use of the land and directs development to the most suitable locations, its potential to influence quality of life is high. This can be achieved through the creation of a framework that seeks to redress inequalities across Nottingham. Planning policy can influence through:

- Protecting open spaces that are important to local residents
- Promoting the redevelopment of sites that are priorities within Nottingham's neighbourhoods
- Providing policies that enable positive developments in Nottingham's neighbourhoods

At present, the Adopted Local Plan (2005) forms the statutory development plan for Nottingham City. However, a new planning system is now in place which requires the production of a Local Development Framework (LDF). The LDF is a suite of documents, some of which form part of the statutory development plan and others that supplement it. The 'Core Strategy' is a key statutory component of the LDF. The City Council is currently working in partnership with neighbouring local authorities to produce consistent and comprehensive strategies for the Greater Nottingham area.

Aligned Core Strategies

Once adopted, the Aligned Core Strategies development plan document will provide the strategic planning guidance for the Nottingham Core Housing Market Area (HMA), which consists of the City Council and the adjoining districts (Broxtowe, Gedling, Rushcliffe, Erewash and Ashfield). This provides an effective method of strategic planning as the way in which people act is not constrained by administrative boundaries and the Districts immediately adjacent to Nottingham function closely with the city in terms of housing, employment and transport.

As a consequence of the abolition of the East Midland's Regional Spatial Strategy, the Councils' making up the Nottingham HMA have collectively decided to review the level of housing provision to be proposed through the Aligned Core Strategies. Work has now begun on preparing new housing provision figures, with a councillor, developer and stakeholder workshop held in February 2011. The Council intends to publish housing provision options for informal public consultation after the local elections in May 2011. This will be followed by publication of a 'pre-submission' version of the Aligned Core Strategies in early 2012.

The Aligned Core Strategies contain a number of policy areas which are also related to transport and also support, and can influence quality of life:

- **Timely and viable infrastructure:** to make the best use of existing and provide new and improved physical and social infrastructure
- **Economic prosperity for all:** to ensure economic growth is as equitable as possible, and that a more knowledge based economy is supported, in line with the aims of Science City and enhancing the Core City role of Nottingham
- **Excellent transport systems and reducing the need to travel:** to ensure access to jobs, leisure and services is improved in a sustainable way, reducing the need to travel, implementing behavioural change measures and encouraging new working practices such as use of IT and home working
- **Strong, safe and cohesive communities:** to create the conditions for communities to become strong, safe and cohesive and enhancing local distinctiveness
- **Flourishing and vibrant town centres:** to create the conditions for the protection and enhancement of a balanced hierarchy and network of city, town and other centres, through providing for retail, employment, social, cultural and other appropriate uses, accessibility improvements, environmental improvements, and town centre regeneration measures
- **Regeneration:** to ensure brownfield regeneration opportunities are maximised to enhance opportunities for local communities and residents, leading to all neighbourhoods being neighbourhoods of choice, where people want to live
- **Protecting and improving natural assets:** to improve and provide new green infrastructure, including open spaces by enhancing and developing and improving access to the network of multi functional green spaces
- **Protecting and enhancing Greater Nottingham's individual and historic character and local distinctiveness:** to preserve and enhance the distinctive natural and built heritage of Greater Nottingham, by protecting and enhancing the historic environment

The Aligned Core Strategies highlights three regeneration zones in Nottingham. These are discussed further on in this Chapter. In addition, Stanton Tip (Bulwell) and the Boots site (to the south west of the city) are named in the Aligned Core Strategies as strategic sites for development. Stanton Tip is a challenging brownfield site, having significant development constraints. An innovative approach to design and layout would therefore be required in order to achieve access to and integration with the local community.

The Boots site has the potential to expand Nottingham's employment and residential offer providing local and strategic transport issues are resolved. The site lies close to the canal towpath and River Trent with the potential for improved links to the Big Track. In the spring 2011 Budget the Government

announced plans to invest £100 million in 21 new Enterprise Zones across England, one of which is the Nottingham Boots campus in Lenton. Enterprise zones will have the potential to create new business and employment opportunities benefiting from tax breaks for business, simplified planning rules and the roll out of super-fast broadband supporting wider economic and regeneration outcomes.

Further details on the Aligned Core Strategies are available at www.gngrowthpoint.com

Land and Planning Policies Development Plan Document

The City Council has begun production of the 'Land and Planning Policies' Development Plan Document (LAPP DPD). The purpose of this document will be to provide more detailed planning guidance that supports the Core Strategy by allocating sites for development and setting out policies to help guide development management decisions.

The LAPP DPD will focus on seven themes. The **well connected neighbourhoods** theme will have the closest ties to the LTP and will look to take forward some of its aims and objectives through planning policy.

The other themes are:

- **Mixed and balanced neighbourhoods** examining issues surrounding housing and how the appropriate level and types can be delivered
- **Strong and diverse economy** examining how new economic development could be provided for whilst protecting existing valuable sites and centres of economic activity
- **Rejuvenating neighbourhoods** looking at how regeneration of all scales can be delivered across Nottingham City
- **Attractive and safe neighbourhoods** looking at how existing assets can be protected and how new development should be designed to make a positive contribution
- **Healthy neighbourhoods and a thriving natural environment** looking at the potential effects of development on existing environmental assets and how the provision of development can have an impact on health
- **Combating climate change locally** and examining the potential for development to deliver local solutions to climate change

Regeneration areas

Transport can play an important part in regenerating key areas of Nottingham. The City Council will work in partnership with local communities and its regeneration partners to ensure that transport improvements enhance the city's urban environment and contribute towards all the strategic priorities for transport set out in this document. In addition, the Council acknowledges development in regeneration areas has implications for existing and future development within adjoining districts. The Council will continue to work with neighbouring authorities on proposals and potential impacts.

The City Council originally designated three areas in the Local Plan called Regeneration Zones located on the fringes of the existing city centre, which are being progressed through the Aligned Core Strategies. These areas are characterised by an under use of land and generally poor environment with poor linkages to adjoining areas. The City Council is seeking to drive regeneration by allowing the city centre to expand, establishing new residential areas and linking communities back into the city centre through the creation of sustainable and attractive locations for new development. Creating attractive gateways into the city at transport hubs and other important points of arrival add to the sense of place and overall character of the city and will be applied in the regeneration areas.

These areas will provide a focus for physical improvements over the medium to long term, whilst ensuring that the change is managed and brings real and sustainable improvement to the economic prospects in the area. Within Nottingham, agencies such as Nottingham Regeneration Limited have been set up to facilitate regeneration by engaging with private developers and helping to remove the impediments to regeneration.

Eastside regeneration area

The Eastside regeneration area covers an area of 56 hectares (139 acres) to the east of the city centre. It is a fragmented area with a mix of uses although it has benefited from the development of the 'Bio City' project and the redevelopment of the National Ice Centre in recent years. Redevelopment in the area aims to attract new businesses, improve the gateways into the city centre and reconnect Sneinton and St Anns to the central core.

The City Council is in pre-application discussions with Victoria Shopping Centre developers over proposals to increase the floor space by up to 50% to expand the retail, office and leisure offer of the Shopping Centre. A public consultation on scheme proposals has been carried out and included no increase to car park capacity. The £250 million development will generate approximately 2,000 full and part time jobs for local people.

Other proposed projects include the redevelopment of Victoria Leisure Centre and Sneinton Square along with the substantial Eastside City redevelopment. Due to the scale of the developments the City Council will negotiate Section 106 developer contributions to help assist in the implementation of complimentary transport measures.

Connecting Eastside

The City Council is currently implementing measures that will transform the east side of the city, helping to redevelop and regenerate Sneinton Market and the area around the National Ice Centre and further south to the Eastside Island Site. The plans, called Connecting Eastside, are making Huntingdon Street and Lower Parliament Street into a logical two way route for traffic heading north and south through the city, thereby segregating local access and strategic traffic movements, the provision of significantly improved pedestrian and cycle linkages between the outlying residential areas and the city centre. A later phase will extend the city centre bus loop network onto Bellar Gate and Cranbrook Street to facilitate better public transport access to this part of the city.

The provision of the high priority neighbourhood links for pedestrians and cyclists are reducing the barrier effect of the inner Ring Road thereby encouraging pedestrian access to local jobs, services and tourist attractions in the city centre from surrounding neighbourhoods.

More information on the Eastside can be found at: www.mynottingham.gov.uk/eastside

In addition to the above, the City Council is seeking to improve links east-west through the eastside area to connect the city centre and adjacent residential neighbourhoods.

Southside regeneration area

The Southside regeneration area, embracing the Nottingham Station area, covers an area of 39 hectares to the south of the city centre. The area has the potential to become a vibrant extension to the city centre and a gateway into the city from the south. It will assist in the revitalisation of the Meadows area and incorporate the development of a state of the art public transport hub at the Station which will include provision for NET Phase Two. The redevelopment of the Broad Marsh shopping centre to the north of the area will encourage further investment in the Southside.

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Development in the Southside will focus on mixed uses comprising commercial activity with opportunities for residential, hotels and business uses. Recent developments include the creation of 300 new homes in the Hickling Pentecost building to the west of London Road, new mixed use office and residential schemes and Jury's Inn hotel on London Road.

Supporting transport infrastructure schemes in the Southside area being progressed are:

- Nottingham Station Hub Project to develop a high quality integrated public transport interchange with the tram, rail, local buses and upgrading the immediate pedestrian and cycling environs
- NET tram lines two and three which will help to attract investment throughout the Southside area through high quality mixed use (employment and housing) sites. Further detail can be found in Chapter 3

Other associated proposals include development of a new public realm exploiting the area's water features – the Tinkers Leen and the Canal. Improved links for pedestrians, cycle, bus and tram to the city centre core area, through the Southside area and to the Eastside and Waterside regeneration areas.

The redevelopment and extension of Broad Marsh Shopping Centre is a fundamental element of regeneration and economic development strategy. The key implications from a transport perspective are:

- Increase Nottingham's attractiveness as a leading retail destination
- Enable the effective integration of the Southside of the city centre with the central core by establishing attractive and legible pedestrian routes
- Provide a fitting gateway to the city from Nottingham Station and the south
- Maximise the benefits of public transport infrastructure including the NET, the Station Hub redevelopment, bus infrastructure and park and ride

The City Council is currently working with Westfield on their proposals for a new planning application to redevelop the Broadmarsh shopping centre.

A key transport aspect of the Broadmarsh Shopping Centre redevelopment proposals is the opportunity to apply the mode priority approach established through the delivery of the Turning Point Major Scheme which focussed on the northern part of the Inner Ring Road completed in 2006. The same approach would be applied to Carrington Street and Canal Street, providing significant bus priority and public realm improvements and connecting the Hub with the Broad Marsh centre. The Turning Point South scheme will be integrated into the Broad Marsh highway proposals.

Box 6.C: The Turning Point

The Turning Point scheme aimed to reduce unnecessary city centre traffic and extend principles of a traffic restricted area introduced by the clear zone in 2001. Access was restricted to along the inner ring road to buses, taxis and essential deliveries only thereby creating an environment offering high priority for pedestrians and buses and opportunities for interchange between buses and Line One tram.

Scheme evaluation shows a 76% reduction in daily traffic within the restricted area and no discernable traffic displacement to the wider network. Pedestrian movements have increased by 7% and cyclist movement by 11%. Night time accident problems have been mitigated through improved lighting and crossings with a drop in the total number of accidents and casualties.

Waterside regeneration area

The Waterside regeneration area covers 100 hectares (250 acres) of land to the southeast of the city centre. It is predominantly an industrial area that is not realising its full development potential despite its proximity to the River Trent and Nottingham Canal. Proposals for the area involve making more of its waterside location with the development of around 2,000 new homes with associated commercial, employment, community and leisure uses in the next ten years. The comprehensive redevelopment of the area also paves the way to better connect the Meadows and Sneinton areas to the city centre.

The area possesses significant opportunities to improve transport links including:

- Walking and cycling links alongside the north bank of the river connecting the canal
- East-west public transport links through the area helping to reconnect Sneinton and the Meadows with the city centre
- The upgrading and straightening of Cattle Market Road
- The provision of an upgraded pedestrian and cycle path on Lady Bay Bridge

More information on the Waterside can be found at: www.mynottingham.gov.uk/waterside

Regeneration priorities and delivery

Focus on regeneration in Nottingham is being directed through the preparation of a delivery strategy which sets out the top ranked regeneration priorities for the city across the:

- City centre
- Three regeneration areas
- Surrounding neighbourhoods

In line with the Decentralisation and Localism Bill 2010, the regeneration strategy is being developed to recast how the City Council and its partners engage in site and area based regeneration. A comprehensive 'sites prioritisation' exercise is being embarked upon to review potential sites, including City Council assets, for their redevelopment, reuse or disposal potential. Over 5,000 sites have been included to be assessed and recorded on a comprehensive database. The assessment criteria are consistent across each site and the approach is based upon examining impact, funding, leverage, deliverability, capital receipts and asset management benefits.

The strategy is being taken forward in partnership with the private sector, working closely with the City Council and Nottingham Regeneration Limited to form an aligned work programme for regeneration activity. A draft strategy will be available in mid 2011. The focus of delivery will be through the area committee and neighbourhood structure.

Local Investment Plans

The Homes and Communities Agency require all potential future investment by local authorities to be identified within a Local Investment Plan (LIP). One comprehensive plan has been prepared for the Nottingham HMA.

LIPs focus principally on existing and new housing but may also include wider economic, transport and regeneration issues where these are important to delivering successful communities. The LIPs cover three, five and ten year investment periods with more detail required for initiatives and projects to be delivered in the first three years.

The LIP sets out that high quality transport networks are essential to support sustainable development and that a lack of transport capacity can be a significant barrier to the delivery of major employment and housing developments. Successful delivery of the LIP projects needs to go hand in hand with

the delivery of integrated transport solutions. A detailed Local Investment Agreement between the Homes and Communities Agency and Nottingham City Council will set out early year's investment priorities in more detail.

Attracting major events

The city also regularly hosts major sporting and cultural events at Trent Bridge, Nottingham International Tennis Centre, the International Ice Arena and the National Water Sports Centre, the Nottingham Contemporary art gallery and is the host of GameCity placing demands on the transport system.

6.3.3 Integrate green corridors

Planning Policy Statement 12 (Creating Strong and Prosperous Communities) defines green infrastructure as 'a network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological process and is integral to the health and quality of life of sustainable communities'. Green infrastructure networks can contribute to achieving the type of high quality natural and built environment required to deliver sustainable communities.

The proposal below covers development and improved access to green infrastructure such as the River Leen and development of multi-user paths as for flood defence schemes which will help support the use of green corridors.

Proposal GC 1: Green infrastructure links

The Three Cities of Derby, Leicester and Nottingham with their surrounding Counties (known as the 6Cs), commissioned the 6Cs Strategic Green Infrastructure Strategy. This Green Infrastructure Strategy provides an overarching strategic framework to 2026 for green infrastructure planning, investment and delivery by stakeholders working across the environmental, economic and social sectors. It has been produced to assist with and guide actions on the delivery of multi-functional green infrastructure within the sub-region as part of its long term sustainable development. The strategy takes a long term view of green infrastructure requirements and many of its recommendations would still be applicable in the absence of Growth Point status.

The long term vision for green infrastructure in the 6Cs sub region is to maintain, enhance and extend a planned multi-functional green infrastructure network. This will comprise existing and new green spaces, natural and cultural features and interconnected 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.

Both the 6C's Green Infrastructure Strategy and the Trent River Park Strategy highlight the potential of Nottingham's water courses to deliver multiple benefits. Green infrastructure corridors along the Rivers Trent and Leen and our canals not only provide valuable biodiversity resources but with sensitive planning and investment can also deliver sustainable walking and cycling routes, linking leisure and employment locations.

More information on the Green Infrastructure Strategy can be found at:
www.mynottingham.gov.uk/gistrategy

More information on the Trent River Park Strategy can be found at:
www.mynottingham.gov.uk/trentriverpark

Local Transport Plan and Growth Point funding have already contributed to the successful Big Track project. More sections and improvements are planned and included within the implementation plans for the River Leen and Left Bank River Trent.

Box 6.D: Big Track

The Big Track is a ten mile circular route created for the benefit of leisure users and commuters. It is a valued route for walkers and cyclists and an important recreational and leisure facility, linking the city and suburbs with the more tranquil setting of the canal and riverside, in addition to sports grounds, places of employment and the city centre.The route utilises the towpath and riverside path alongside the River Trent and Nottingham Beeston Canal between Trent Bridge near Nottingham City Centre and Beeston Lock to the west of the conurbation. These waterside paths were previously usable but were very narrow muddy tracks that were not perceived as attractive routes. The most significant single factor behind the success of the project has been the multi-agency partnership that has been developed for planning and delivery. By securing the long term commitment of all involved it has been possible to utilise the wide ranging expertise of all partners to secure funding, which has seen over £3 million invested.

River Leen corridor improvements

Early in 2010, the City Council published the River Leen Access and Biodiversity Study, which set out a vision and action plan to raise awareness of the Leen corridor within the Nottingham area. The study aims to coordinate the delivery of projects with complementary objectives to attract funding to develop a multi-user path and improve biodiversity along the banks and watercourse of the Leen.

The study has identified opportunities and barriers to the delivery of improvements along the Leen. It also differentiates schemes, which range from quick deliverables to longer term higher priced options.

The development of a multi-user path along the Leen is an ideal project to benefit from a range of funding streams. Work is currently underway on sections of path and biodiversity improvements funded via the Growth Point funding stream in order to support sustainable transport access to proposed new housing sites.

A lot of the land adjacent to the Leen has the potential to benefit from developer funded improvements as much of it runs through development sites and improvements to the route will enhance sustainable access to these sites.

As the Leen runs north to south right through the heart of the city, it intersects with arterial roads. Some of these have safe crossing facilities, but not all of them. Further work is needed to ensure that these roads do not impede the safe movement of walkers and cyclists along the route. Funding and design work is required to ensure that facilities are in place to allow safe passage across these roads to allow the Leen to be a safe leisure and commuter route, enhancing what has already been achieved along the Big Track.

Further information is at: www.mynottingham.gov.uk/riverleen

Left Bank River Trent flood alleviation scheme

Significant flooding events relating to the Trent occurred in 1998 and 2000 which highlighted the limitations of Nottingham's flood defences and led to a review of flood risk and the publication of the Fluvial Trent Strategy. This strategy and the River Trent Strategic Flood Risk Assessment have informed the development of the Nottingham Left Bank flood alleviation scheme.

6 Improving Quality of Life and Transforming Nottingham's Neighbourhoods

The scheme aims to reduce the risk of flooding to 16,000 homes and businesses along a 27 kilometre stretch of the River Trent, from Sawley to Colwick. Currently the probability of flooding across Nottingham is about 2% (1 in 50 chance) in any given year. Once the new works are complete this risk will be reduced to one per cent (1 in 100 chance). Work in the Meadows started in October 2010 and other works in the city are due to commence in 2011.

Combined with the works is the opportunity to upgrade sections of walking and cycling paths that run alongside the Trent and will be undertaken as part of the project.

More detail can be found on the Environment Agency website:
http://www.environment-agency.gov.uk/homeandleisure/floods/110160.aspx

6.4 Summary

Transport improvements can help to revitalise areas and make them more attractive to investment. The integration of planning and transport along with an increasing neighbourhood focus means that improving the quality of streets and public spaces within the city is recognised as being of significant local importance, particularly through local engagement and decision making by citizens, communities and councillors.

The definition of quality of life is a broad one and a variety of transport improvements can contribute to influencing people's life chances positively. The proposals described in all the other LTP Chapters help to transform people's lives. Table 6.2 maps the link between these proposals and the key challenges.

Table 6.2: Quality of life proposals and their links top meeting their key challenges

Proposals	Challenges			
	Reduce deprivation	Local engagement	Improve neighbourhoods	Improved access to open/green areas
Deliver on local community priorities				
Neighbourhood Local Transport Investment Programme		✓	✓	✓
Town, district and small centre improvements	✓	✓		✓
Deliver big city aspirations				
Support regeneration priorities	✓	✓	✓	✓
Deliver green corridors				
Green Infrastructure links			✓	✓

Chapter 7:
Active Travel & Road Safety

Safe, Independent and Active Healthy Lifestyles 7

7 Safe, Independent and Active Healthy Lifestyles

This Chapter explains the key problems facing Nottingham residents around health, road safety and personal security whilst travelling or enjoying the city, day and night. The Council's Local Transport Plan (LTP) strategy proposals to address health inequalities, minimise adverse air quality and noise impacts from transport, and for improving road safety and personal safety are described through a set of key measures which will be implemented to achieve the strategic objective of supporting citizens to live safe, independent and active healthy lifestyles.

7.1 Context

Transport provision has a key role in influencing health and wellbeing, through supporting healthier active lifestyles and in relation to improving access to health and social care services. Road safety is one of the most emotive areas of local transport planning. Designing safer streets in the city centre and neighbourhoods can also help to change people's travel behaviour by encouraging them to use sustainable modes, which are often perceived to be unsafe, particularly at night. Attractive, easy to use and safe sustainable travel options are essential if people are to change their travel choices to live healthier and happier lives.

Analysis undertaken for the Cabinet Office Strategy Unit's 2009 Study of Urban Transport[36] found that the measurable costs of urban transport road accidents, physical inactivity and poor air quality and noise collectively cost in the region of about £20 billion per year.

Better road safety has implications for the majority of the other transport priorities we are trying to achieve, notably congestion, improving access to services, quality of life and regeneration as well as encouraging active travel. The Department for Transport (DfT) calculate the economic (excluding human) costs to each casualty as an average of £52,850[37]. Using the total average cost of all casualties, the cost to Nottingham is £66.8 million per year. Whilst the economic costs of a death or injury are apparent, the social and personal costs are immeasurable. The focus of this strategy will continue to be to reduce the number and severity of road traffic accidents to ensure a safe environment for all.

It is important however that road safety concerns do not prevent people from engaging in active travel.

In Nottingham physical inactivity and the rising levels of obesity are of grave concern with large proportions of citizens not getting the recommended levels of physical activity to support their wellbeing. At the core of the problem is an imbalance between 'energy in' – what is consumed through eating and 'energy out' – what is used by the body, including energy used through physical activity. The NHS information centres Health Survey for England in 2006 states that only 40% of men and 28% of women in the UK meet minimum recommendations for physical activity. Using this assumption for Nottingham it is estimated that 52% of adults and 23% of children are not currently meeting the Chief Medical Officer's recommendations[38].

In the Chief Medical Officer's 2004 report 'At least five a week'[39] the importance of physical activity to enhancing health and wellbeing was established with the following recommendations:

- Children and young people should achieve a total of at least 60 minutes of at least moderate intensity physical activity each day
- For general health benefits, adults should achieve a total of at least 30 minutes a day of at least moderate intensity physical activity on five or more days of the week
- The recommendations for adults are also appropriate for older adults. Regular physical activity is particularly important for the maintenance of mobility and independent living

36 Comparison table of the wider costs of transport in English Urban areas is quoted in the DfT Active Travel Strategy available at: www.dft.gov.uk/pgr/sustainable/cycling/activetravelstrategy/
37 Source: Three Cities DaSTS study
38 Health Survey of England 2008
39 http://www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh4080994

Safe, Independent and Active Healthy Lifestyles 7

Influencing how local trips take place can yield significant benefits with walking or cycling often being a quicker and lower cost alternative to the car or public transport for many short trips, and they are often the easiest ways for most of us to get more physically active. More walking or cycling for short journeys has benefits for individuals in terms of their health (they are more likely to achieve a healthy weight and to have better mental wellbeing), and for many people they are very important for increasing access to jobs and services. There are benefits for communities too with safer and more pleasant streets, better air quality and lower carbon emissions, and reduced congestion.

Integrated walking and cycling also offers high value for money, which considering wider budget pressures are more achievable in these tough economic times. At the heart of this strategy is to make walking and cycling the modes of choice for local journeys.

Progress has already been made in terms of infrastructure provision and support for walking and cycling and road safety improvements coupled with initiatives to help develop safe secure and healthy communities, during the past LTPs.

Box 7.A: Key achievements

A number of road safety and health improvements have been delivered through past LTPs, namely:

- A reduction in the number of killed and seriously injured road casualties by 58% in the past 10 years
- Nottingham City Council awarded Beacon status for Road Safety dissemination
- Successful partnership working through the Nottinghamshire Camera Safety Partnership
- Awards for innovative education campaigns including 'BAREbones' and 'LIFECYCLE' initiatives
- Up to 10 20mph zone schemes around schools delivered each year
- Highest levels of children walking to school (63%) of all the Core Cities supported by one of the lowest levels of car trips (17%) nationally
- A network of primary pedestrian routes connecting inner city areas to the city centre by improved walking links
- RideWise free cycle training provided to support people to cycle safely more often
- Cycling for Health'national pilot to evaluate approaches to engaging the community in cycling as a health intervention. It targets NHS staff and adults in communities with high levels of health inequalities
- Bike recycling initiative developed to support 'Cycling for Health' referrals who wish to start cycling but cannot afford a bike of their own. The scheme has developed out of the bike recycling scheme set up by Framework Housing Trust as a rehabilitation activity for their clients
- UCycle Nottingham which is a partnership initiative with Sustrans, the two universities and Nottingham University Hospital Trust to deliver a comprehensive package to promote cycling for students, staff and visitors including improvements to cycle links from the campuses to the main cycle network; the largest student cycle hire scheme in the country and a targeted programme of marketing and engagement activities
- The 'Cycle to Work' pilot trialled for residents of the city and Hucknall through the Wheels to Work scheme run by Rural Community Action Nottinghamshire. The initiative supports residents who need assistance with transport to access training and employment opportunities
- An innovative scheme to provide cycle parking at bus stops has received funding from emda. The project, which has been funded as a trial on the Indigo, 36 and Ecolink bus routes, will see covered cycle parking with CCTV installed at five bus stop locations
- Promotional and information activities including Get Cycling information packs and other information about cycling, annual programme of events and activities to promote walking and cycling including the Wheelie Big Breakfast
- Infrastructure improvements include implementation of commuter cycle corridors, the 10-mile traffic free Big Track walking and cycling leisure route, 'Cycling for Leisure' project to improve the cycle network within the city whilst also improving access to leisure facilities by bike and allowing cycling itself to be a leisure activity
- Walkit online walking and Transport Direct cycling journey planner launched

7 Safe, Independent and Active Healthy Lifestyles

7.2 Problems and opportunities

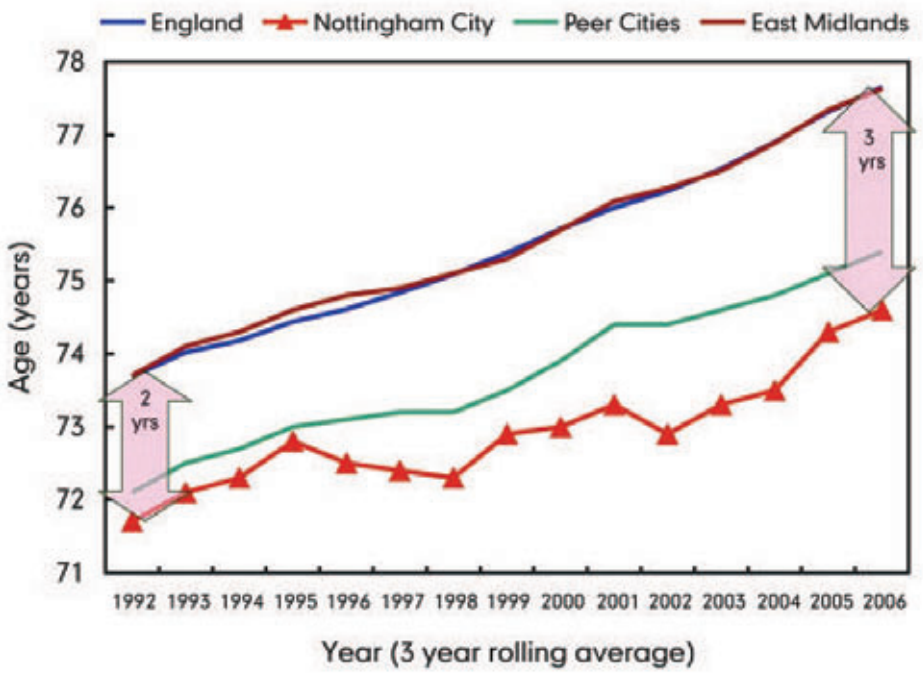
Nottingham's transport system can contribute to supporting citizens to live safe, independent and active healthy lifestyles but at the same time carries problems through associated air quality and noise impacts resulting from road transport. In addition the levels of road casualties from transport and personal safety concerns need to be addressed, particularly to support safer travel at night.

The city suffers from high levels of deprivation which have strong links to causal impacts with high proportions of people leading unhealthy lifestyles (with particularly high levels of smoking, poor diet and low levels of physical activity), which all act as interrelated determinants of poor health. The health outcomes of an individual are strongly mediated by their socio-economic environment, lifestyle and access to health and social care, which in the Joint Strategic Needs Assessment 2010 was described as the "spectrum of inequality".

7.2.1 Life expectancy

Life expectancy in Nottingham is significantly lower than the England average, with three years less for men and two years less for women (Nottingham: 75 men; 80 women; England: 78 men; 82 women). Nottingham's life expectancy for men is ranked 8th worst in England and 31st for women[40]. This trend has been worsening with the gap widening between life expectancy in Nottingham compared to the East Midlands and England averages, from 2 years in 1992 to 3 years in 2006, as highlighted in Figure 7.1. The largest contributors to Nottingham's gap in life expectancy compared to England are cardiovascular disease, cancer and respiratory disease – 50% of the gap is due to smoking.

Figure 7.1: Life expectancy: Nottingham, East Midlands and England average

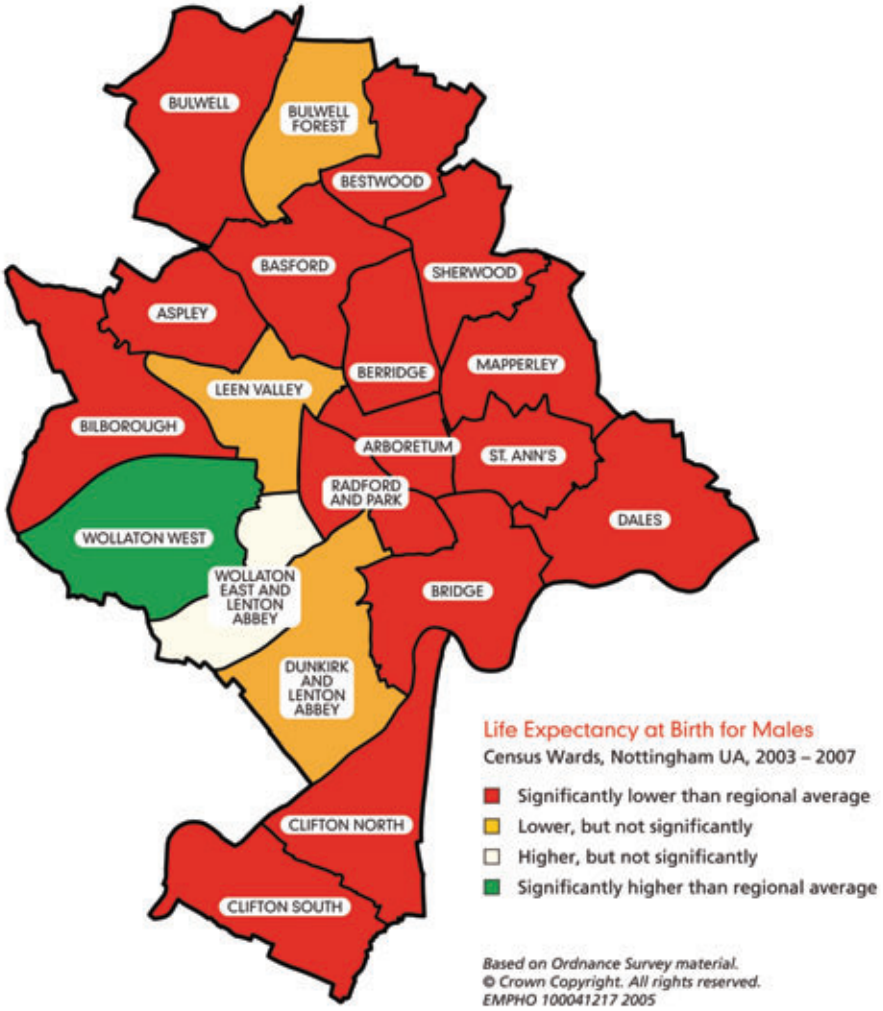


In addition, Map 7.1 shows how 15 of the city's 20 wards have significantly lower life expectancy for men than the England average. The health inequality within the city is even more marked, with men and women in some wards (St Ann's and Bulwell) living on average 10 years less than those in more affluent wards (Wollaton West).

Nottingham city has a much higher proportion of households without access to car (45%) compared to with the England average (27%)[41] with these households occupied by lower income groups making them more likely to travel on foot, bicycle and public transport contributing to daily physical activity levels. The Marmott Review[42] found that active travel programmes should work to target communities progressively across social gradients in order to encourage uptake amongst residents with the worse health outcomes.

NHS Nottingham city recommends that actions to increase active travel should be guided by the relevant NICE (National Institute for Clinical Excellence) guidance and associated recommendations. In particular the Government's proposals in the Public Health White Paper 'Healthy Lives, Healthy People' released in November 2010 places responsibility on the City Council for improving health and reducing health inequalities across the local population through the role of the Director of Public Health and public health staff. The public health function will be to lead on addressing health and wellbeing throughout life, reducing health inequalities, and working with GP consortia, health protection and emergency planning. The role of transport in affecting and influencing these factors is key and the strategy for transport's contribution to creating healthy communities is set out in section 7.3.

Map 7.1: Map of life expectancy at birth for males in city wards



41 Nottingham 2001 Census data

42 The Marmott Review, Strategic Review of Health Inequalities in England post 2010

7 Safe, Independent and Active Healthy Lifestyles

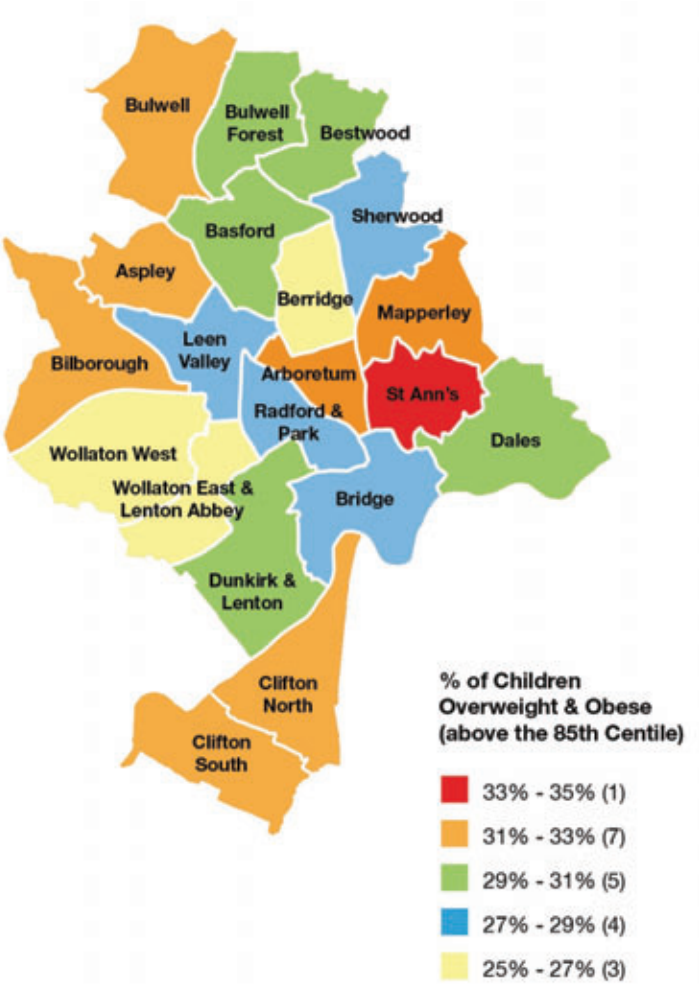
7.2.2 Obesity trends

It is estimated that obesity costs England approximately £2.5bn per year and is predicted to cost the Nottingham, Derby and Leicester City Primary Care Trusts nearly £140 million in 2010[43].

The current national trend of rising obesity levels is set to continue with obese children at high risk of becoming obese adults. Forecasts suggest 40% of Britons are predicted to be obese by 2025 and nearly 60% of the UK population could be obese by 2050[44]. The levels in the City are following this trend and may well be higher. Nottingham's children have similar levels of obesity to the England average in reception year, although levels are higher than the England rate in year 6 where 23% of those measured were obese (2008/9) and are likely to grow into obese adults at risk of heart disease, stroke and type 2 diabetes.

Mapping illustrates the extent to which obese children are concentrated in the more deprived city areas. The wards with the highest proportion of obese children are: Aspley, Bilborough, Bulwell Forest, St Anns, Arboretum, Mapperely, Lenton Abbey and Clifton. In terms of service planning it is useful to examine which wards have the highest number of obese children. This shows a similar, yet slightly different picture with the highest numbers in: Aspley, Bilborough, Bulwell, Bulwell Forest, Bestwood, Berridge, Basford, St Anns, Dales and Clifton. These are areas where estimates of adult obesity are also relatively high.

Map 7.2: Percentage of city children overweight or obese



43 Three Cities Agglomeration and Accessibility Study 2010, Atkins for emda
44 Nottingham Joint Strategic Needs Assessment 2010, www.nottinghaminsight.org.uk

7.2.3 Physical inactivity

Physical activity in childhood has a range of benefits including healthy growth and development, maintenance of energy balance, mental wellbeing and social interaction - proven to help reduce the risk of osteoporosis in later life and improve cognitive function. In addition, active children are less likely to smoke, or to use alcohol/get drunk or take illegal drugs[45].

Physical inactivity in England is estimated to cost £8.2 billion a year. This includes both the direct costs of treating major, lifestyle-related diseases and the indirect costs of sickness absence (Department for Health 2004) and these costs are predicted to rise. It is reported that only 59% of Nottingham pupils participate in 2 hours of curriculum physical exercise each week compared to a national average of 81%. In addition:

- Physical activity amongst children tends to drop off with the transition from primary to secondary school, particularly amongst girls
- Children and young people from Asian ethnic groups are less likely to participate in sports and exercise than the general population
- Amongst adults, physical activity is lower amongst women than men at all ages, lower in Pakistani and Indian adults than the general population, and is lower for people who have a long standing illness or disability

Sustainable travel to school

The DfT's 2009 PLASC Survey results for Nottingham show 63% of all journeys to school are made on foot, with the highest level of walking to school of all the Core Cities and the joint second highest level of walking to school nationally. Compared to walking, total numbers cycling to school in Nottingham are comparatively small at 1.2%, with less than half a percent of primary school pupils and 2.4% of secondary school pupils cycling to school.

Due to crime and safety concerns, parents and children impose restrictions on activity. This is particularly relevant for Nottingham where nearly half of all of the city's Super Output Areas are ranked in the worst 10% nationally on the crime domain[46] (i.e. being at risk of personal or material risk).

7.2.4 Adverse environmental impacts from transport

The LTP can crucially help to minimise transport impacts of poor air quality and noise which impact upon the health and wellbeing of our citizens.

Air quality

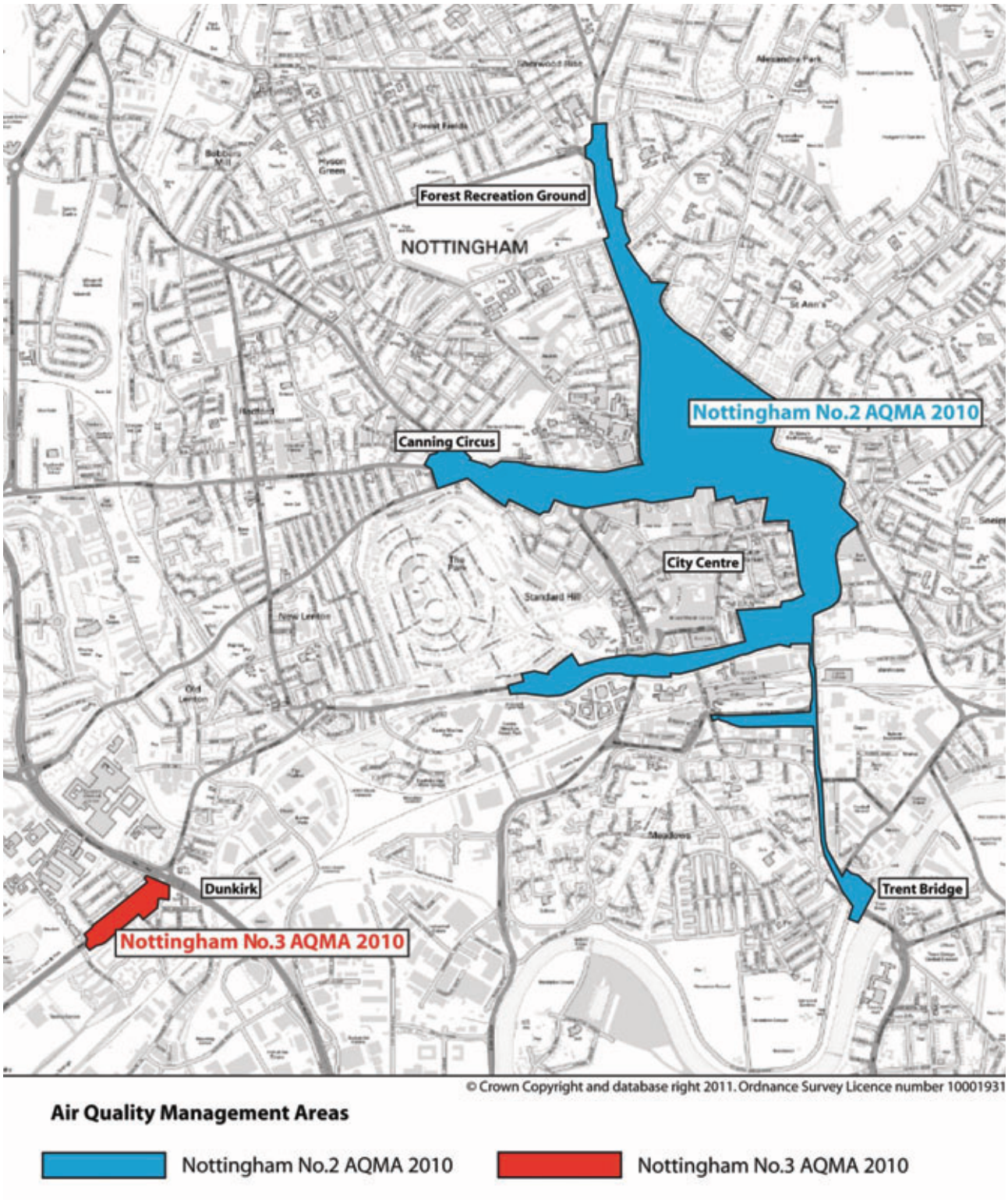
The air quality problems in the city occur through exposure to high levels of nitrogen dioxide primarily caused by high levels of traffic and stationary or slow moving vehicles which combine to create local concentrations of harmful pollutants. For most people increased levels of pollutants may not cause serious health problems but those people with respiratory illnesses, especially the young or the elderly, may be more susceptible.

Nottingham has two designated Air Quality Management Areas (AQMAs), which were originally identified in 2001 where nitrogen dioxide concentrations, primarily traffic related, exceed the air quality objectives set by the Department for Environment, Food and Rural Affairs (DEFRA). The first is located in Nottingham city centre and the second is located on the A6005 adjacent to the A52 Ring Road in the vicinity of the Queens Medical Centre.

45 Physical Activity Task Force, 2002
46 Child well-being index, 2009

7 Safe, Independent and Active Healthy Lifestyles

Map 7.3: Nottingham City Centre and Dunkirk Air Quality Management Areas



The detailed reviews and assessments undertaken over the last five years relating to air quality within the city have been published and are available at: www.mynottingham.gov.uk/airpollution

Noise

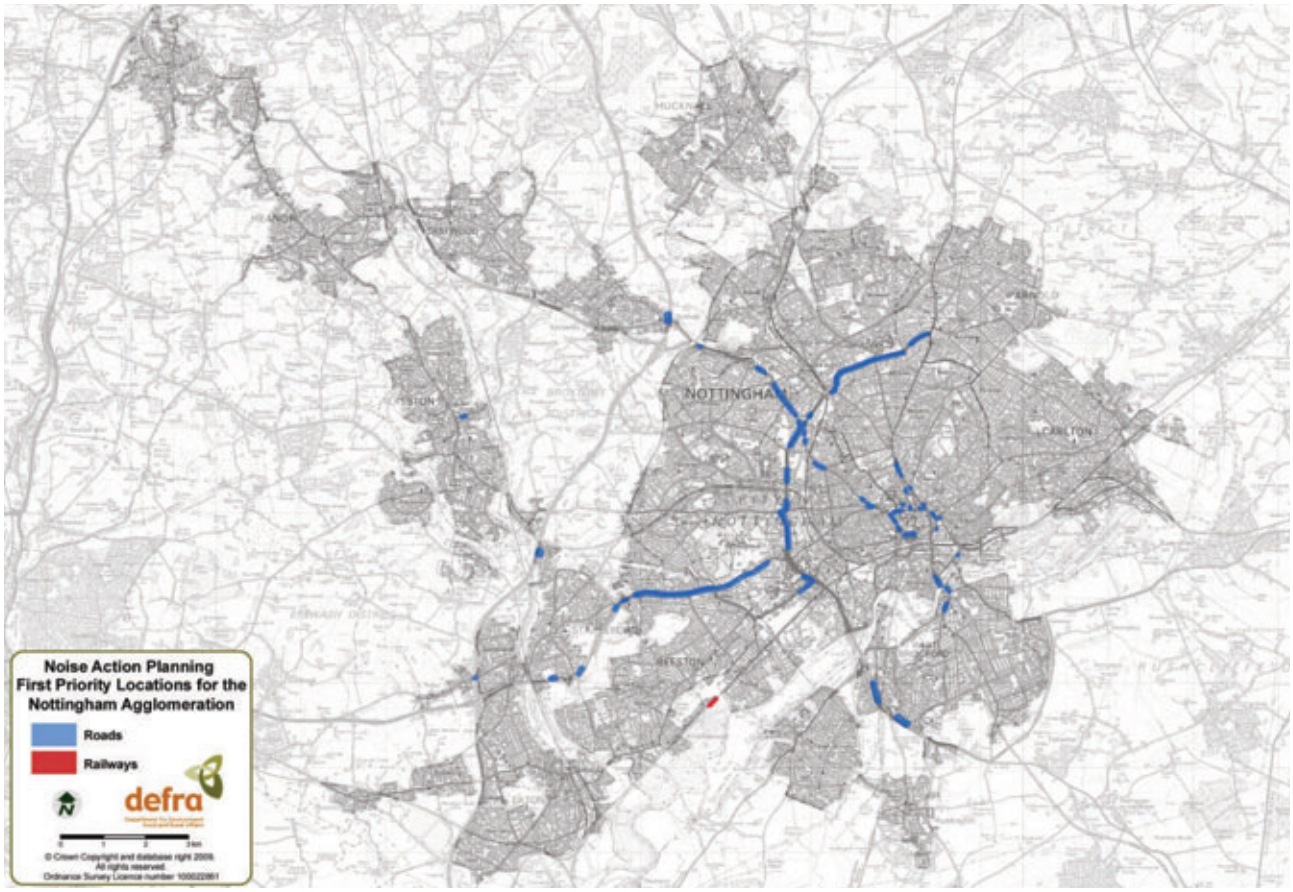
Local Authorities now have an obligation under the Environmental Noise Directive to assist in the management of environmental noise and its effects, including noise reduction along identified major roads and railways. With Nottingham being a compact and densely built up City, a significant proportion of the population is affected by high traffic volumes passing close to their homes exposing them to high levels of road traffic noise which heighten stress and anxiety, especially at night.

DEFRA formally adopted noise action plans in March 2010 for the 23 largest urban areas in England, known as 'agglomerations' including Nottingham. The determination of areas requiring noise action plans to be produced are based on the results of the strategic noise maps published in 2008, which cover noise from major roads and railways.

Local authorities now have a new obligation to assist in the management of environmental noise and its effects, including noise reduction if necessary. As part of the noise mapping, 'Important Areas' have been identified with respect to road traffic and railway noise in the

Nottingham agglomeration where the 1% of the population is affected by the highest noise levels from those roads. This approach has been taken because the populations at these locations are likely to be at the greatest risk of experiencing a significant adverse impact to health and quality of life as a result of their exposure. For road traffic this means those locations where noise levels exceed is at least 76 decibels, and for railways where it is at least 73 decibels for specified periods according to the results of the strategic noise mapping that have been identified as 'First Priority Locations'. Background information is included on DEFRA's website:
http://www.defra.gov.uk/environment/quality/noise/

Map 7.4: Noise action plan ' first priority locations ' for the Nottingham agglomeration



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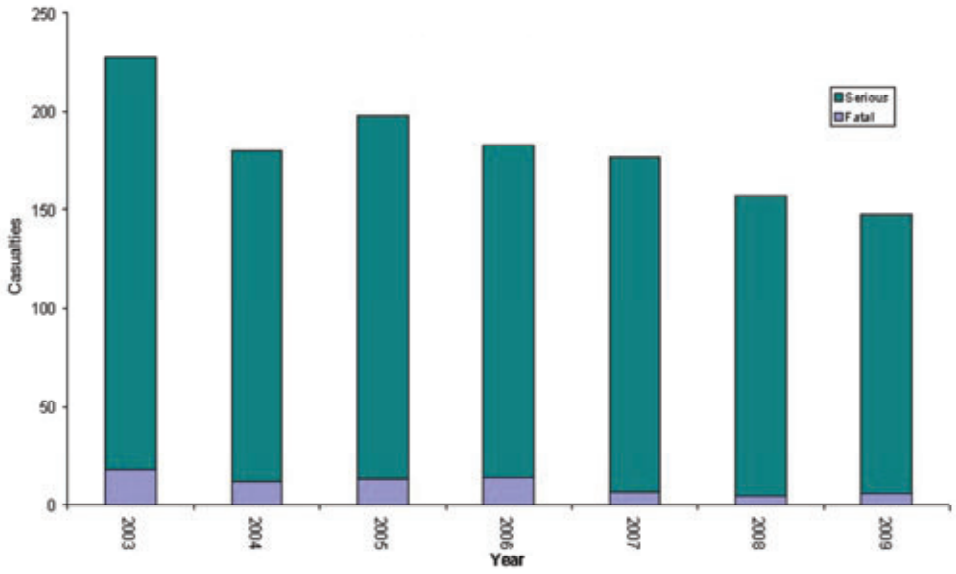
7.2.5 Road traffic casualties

Nottingham has made significant progress in the past 10 years to improve the safety of its roads. The national reduction target in road safety of a 40% reduction in total killed and seriously injured casualties compared to the 1994-1998 average baseline has been exceeded with a 58% reduction in total road casualties in the city. In real terms there has been a:

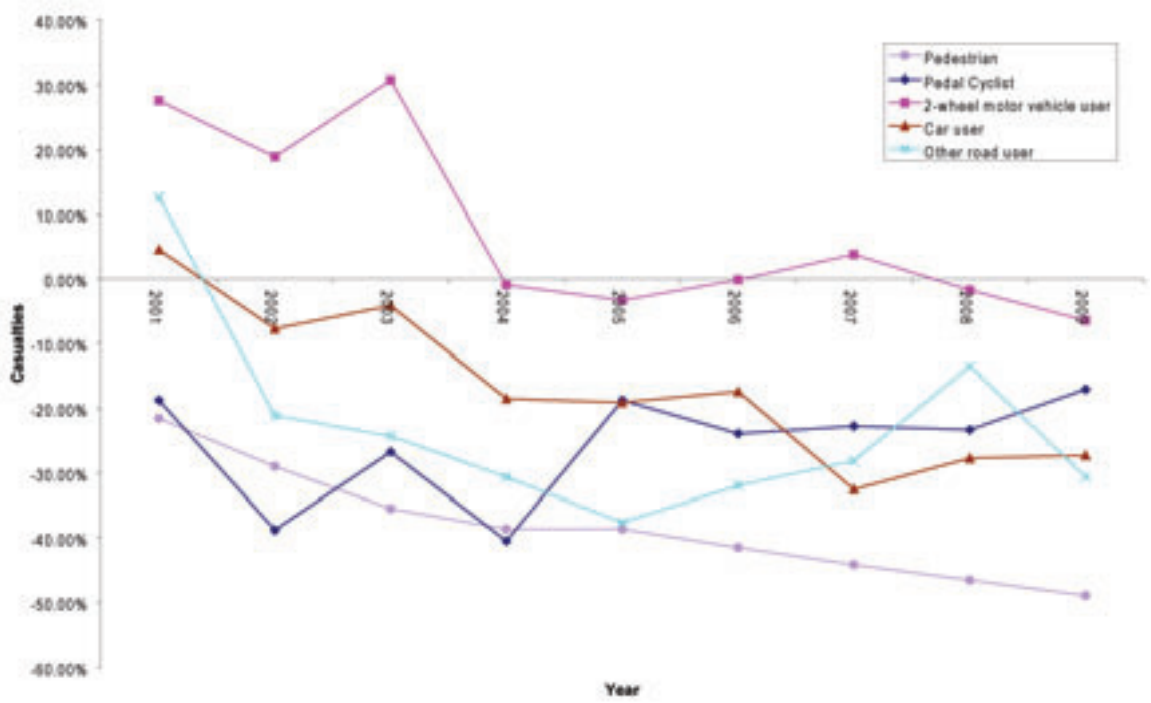
- Reduction from 322 total killed and seriously injured (KSI) (1994-98 average) to 142 in 2009
- Reduction from 66 total child KSIs to 24 in 2009
- Reduction from 1,449 total slight casualties to 1,319 in 2009

Figure 7.2: Road casualty trends in Nottingham since 2003



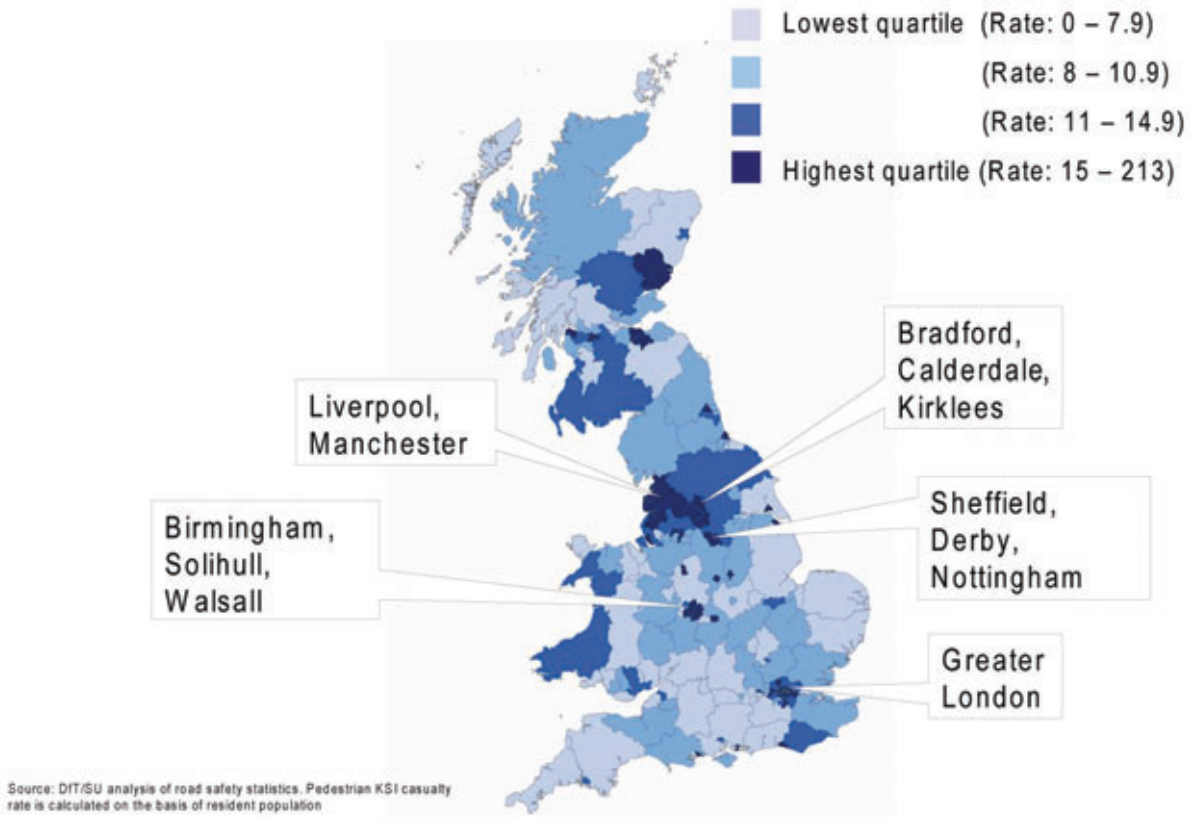
Reductions have taken places across all five road user groups which are highlighted in the graph below:

Figure 7.3: Casualty percentage change by road user group 2001 - 2009



Using DfT data, the national picture places Nottingham in the top quartile for the rate of pedestrian casualties killed and seriously injured as highlighted in the map below.

Figure 7.4: Pedestrian killed or seriously injured casualties (per 100,000 population) national picture



7 Safe, Independent and Active Healthy Lifestyles

The city has a resident working age population of 195,788, however in the daytime the working population increases by 36% to 266,365[47]. Compared to other Core Cites, Nottingham has the second highest influx of people in the daytime behind Manchester and this sharp increase in daytime population together with heavily trafficked routes within the urban area contribute to the pedestrian casualty issue.

There are particular issues in the city centre with revellers involved in road traffic accidents after dark. An analysis of casualties in the city centre has indicated a particularly prevalent road safety problem associated with young male pedestrians between the hours of 22.00 and 02.00. These pedestrians were typically drunk, and high proportions were students.

Research at the Universities indicated drinking and social patterns that tied in with casualty observations and this led to some actions for improvement. Some of this has focused on student education, but their drinking behaviour indicates that this may have limited value. With a continual turnover of students negating a long term improvement, other approaches are now being used involving the education of motorists likely to be in the city centre in the evenings, such as taxi and bus drivers, and the implementation of measures on the ground to discourage fast moving traffic and 'rest on red' operation of traffic signals at certain locations.

Much has been done to tackle darkness-related road accidents. However, there remains a problem with 863 night time accidents reported (three year period 2006-08). This equates to nearly a third of the city's accidents. It is reasonable to estimate that improved lighting (see Proposal SN 1 below on street lighting improvements) should bring night time accidents down to at least the national level of 27% for built up roads. This would be a saving of 63 accidents or 7.3% of the darkness accidents in Nottingham, equivalent to £3.76 million a year, also contributing towards the City Council's road safety targets.

Health inequalities are intrinsically linked to road safety with a disproportionate risk of being killed or seriously injured for children and children from socio-economic deprived and minority ethnic minority communities. Specific intervention however can reduce this risk. The Marmott Review found that where 20mph zones have been introduced, injuries have decreased by 40% with cyclist injuries falling by 17% and pedestrian injuries by a third resulting in a relative reduction in inequalities and road injuries and deaths.

7.2.6 Safety and Security

Community safety and fear of crime is of growing concern to citizens. Women, the young and the elderly and ethnic minorities have particular safety concerns that need to be taken account in transport provision.

It is unclear to what extent safety may present a barrier to people travelling by public transport at night. One local indicator measures perception of safety when using the bus at night (after 7pm) based on user experience of the journey (including accessing the bus stop and the wait for the bus) measured through quarterly surveys of bus users at the travel centre. In 2009/10, 85% of bus users felt safe when using the bus at night representing a 9% increase since 2005/06 when this data was first collected.

In the recent National Highways and Transport Survey 2010, 33% of Nottingham residents felt unsafe on the bus and 38% felt unsafe while waiting at bus stops. These results placed Nottingham 6th lowest and 12th lowest respectively of the 25 urban authorities who participated in the survey.

Recent surveys have confirmed street lighting improvements are a key local demand from residents. Improved lighting aids reduction in crime and fear of crime and is a strategic priority in the Sustainable Community Strategy. Improved lighting has been shown to reduce night time road traffic accidents.

47 ONS Crown Copyright Reserved [from Nomis on 29 July 2010]

Car parks are also vulnerable locations and Police crime statistics show offences are generally reducing however there are still occurrences of multiple offences in a single night in some car parks, showing that crime has not yet been designed out.

7.3 Strategy and proposals

This section of the Chapter sets out the Council's strategy for improving the health and safety of its citizens and the key measures it will be taking forward in the implementation plan in order to achieve the outcomes of tackling health inequalities, to improve wellbeing and improve road safety to create a safer environment for all road users:

- **Promote active healthy travel choices** through delivering streets designed with vulnerable users in mind, developing Primary Pedestrian Routes, Public Rights of Way improvements, cycling infrastructure and training supported by information and promotion of walking and cycling
- **Improve air quality and mitigate transport noise** through action plan measures to reduce the impact of transport on air quality and noise
- **Reduce road traffic casualties** by implementing engineering improvements, support road users through education and training techniques and enforcement of traffic regulations
- **Improve personal safety** by creating a safe and secure environment and for those using public transport

The full active travel and road safety proposals are set out in Table 7.1.

Table 7.1: Active travel and road safety proposals and measures

Proposals	Measures
Walking	W 1: People friendly streets W 2: Public rights of way improvements W 3: Walking information and promotion
Cycling	C 1: Cycle partnerships C 2: Improve cycle infrastructure C 3: Promote and support cycling and cycle training
Air Quality	AQ 1: Develop and deliver air quality action plans
Noise	NAP 1: Develop and deliver noise action plans
Road safety engineering	RS 1: Introduce more 20mph zones across the city RS 2: Safer routes to school programme
Road safety education	RS 3: Road safety education and partnership working RS 4: Targeted road user training
Road safety enforcement	RS 5: Road safety enforcement and compliance
Improve safety on public transport	PTS 1: Respect for Transport initiatives
Improve safety at night	SN 1: Street lighting PFI improvements

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7.3.1 Promote active healthy travel choices

Increasing physical activity in children and adults is vital in tackling obesity as well as contributing to preventing coronary heart disease, stroke, diabetes and hypertension amongst other conditions. Encouraging people to meet recommended levels of physical activity by supporting more active travel for everyday activities and recreation purposes is at the heart of the strategy.

Promoting active healthy travel through encouraging and supporting walking and cycling trips whilst helping to improve human health also helps to compliment and are supported by the interventions which are detailed in Chapter 4: Low carbon and resilient transport systems and Chapter 6: Quality of life and transforming neighbourhoods.

Proposals and measures for improving trips by foot and cycle are set out in the table below:

Table 7.2: Walking and cycling proposals and measures

Proposals	Measures
Walking	W 1: People friendly streets W 2: Public rights of way improvements W 3: Walking information and promotion
Cycling	C 1: Cycle partnerships C 2: Improve cycle Infrastructure C 3: Promote and support cycling and cycle training

Strategy to make walking the preferred choice of travel

Making journeys by foot is not only free, easy, enjoyable and environmentally friendly, it is also the most accessible form of travel. Journeys made by car or public transport will typically include a walking component in order to reach the final destination. Nottingham's urban and district centres, with high population density, are ideal to navigate by foot often providing a predictable, shorter, journey time than other modes of transport, particularly for journeys of less than a mile. 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.

Maintaining a high-quality safe and connected pedestrian environment is crucial in reducing car journeys, promoting public transport use and helping to shape a healthy community. Improving access to the rights of way network provides access on the urban fringes, open spaces and wider countryside.

The strategy for walking is to enhance existing and create new walking links through the primary pedestrian route network and rights of way improvement programme, and to continue to actively promote walking as a viable transport mode by highlighting the health, environmental and community benefits.

Proposal W 1: People friendly streets

Well designed and maintained quality spaces have a positive impact on every person every day. The concept behind people friendly streets is about rebalancing the use and function of Nottingham's streets to create pleasant, accessible and safer streets to encourage visitors to be attracted to Nottingham and also for citizens to enjoy and experience the city, its public spaces and diverse centres and neighbourhoods.

A key strength has been the pursuit of the integration of road safety aspects into wider initiatives that simultaneously address accessibility needs, public transport improvements and support regeneration. The City Council has been considering safety enhancements into highway network design through coordinating safety needs with major planning applications and new developments at an early stage.

Schemes to improve access for disabled people will include the provision of dropped crossings, facilities at signalled crossings and physical access improvements schemes to address the safety requirements for people with disabilities and mobility impairments.

The City Council is committed to creating places for people having developed a suite of masterplans, guidance and briefs to offer clarity and consistency of advice on the design of transport infrastructure improvements in keeping with the environmental, heritage and urban form of the city, informing the quality of development welcomed in Nottingham.

Key urban design and conservation documents include:

- **City centre and Neighbourhood Streetscape Design Manuals** which brings a coordinated design approach to streets and public spaces in urban and residential areas
- **City centre Masterplan** brings an integrated approach to planning, economic development and transport by providing a spatial framework for the design and development of new buildings and spaces
- **City centre Urban Design Guide** promotes high standards of sustainable urban design and architecture in the City Centre through a series of rules to guide development and create a livelier, competitive and civilised city centre with access for all

The Council expects developments of 10 units or more to achieve a minimum silver standard under the Commission for Architecture and the Built Environment 'Building for Life' scheme standard as a means for assessing the design quality of new developments covering:

- Environment and the community
- Character
- Streets, parking and pedestrianisation
- Design and construction

The city centre urban design guide includes the public realm street network strategy which reinforces the need to reconstruct the street grid along the city centre fringes to reconnect outer lying areas to the city centre. The manual includes guidance on the design of four different types of streets, associated street furniture, trees and the finishings to be used. Streets in the city fall into four categories:

- **Vehicle dominant:** These streets accommodate high volumes of traffic and the guidance shows how to achieve this without undermining the quality of the pedestrian experience, e.g. the Maid Marian Way
- **Pedestrian/Vehicle:** Outside the city centre, most streets carry pedestrians and vehicles. The City Council will seek way of keeping them safe and lively with the provision of generous pavements, tree planting, raised kerbs and tarmac carriageway
- **Pedestrian dominant:** pedestrian movements are prioritised along streets in the city centre, however some streets do need to carry traffic and service vehicles. These streets will be designed with flush kerbs and the carriageway paved with setts
- **Historic streets:** these historic narrow streets fronted by old and architecturally distinguished buildings will be designed in keeping with their traditional character using natural materials

Primary pedestrian routes

Through the previous LTP the principle of primary pedestrian routes was established and these have been developed to better link inner city residential areas to the city centre along main walking corridors helping to reduce congestion by being made attractive routes to help improve people's access to various services and destinations, as well as parks and open spaces. The approach is to be extended to other parts of the city and district centres.

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Improvements will include:

- Widening and resurfacing footways
- Provision of convenient direct crossings of roads
- Reducing street clutter
- Improved street lighting, signing and environmental improvements

Safe, direct and attractive pedestrian links will be prioritised as part of the development of the Eastside, Southside and Waterside regeneration areas. These regeneration areas are described in more detail in Chapter 6: Quality of life and transforming neighbourhoods.

Proposal W 2: Public rights of way improvements

The Countryside and Rights of Way Act 2000 placed a duty on local authorities to publish a Rights of Way Improvement Plan (ROWIP). The City Council first published its ROWIP in October 2007. This is now being refreshed and inline with guidance on integrating LTPs and ROWIPs from Natural England, the new ROWIP will be made available once approved by the Council at: www.mynottingham.gov.uk/rightsofway

The ROWIP overarching aim will be to improve the local rights of way network taking into account the needs and aspirations of all types of users regardless of mobility. The local rights of way network includes all footpaths, cycleways, bridleways, canal tow paths, riverside walkways, greenways and any other path or track that is an off-road route and not part of a vehicular road/carriageway.

Statutory guidance outlines what the ROWIP must assess which includes:

- Extent to which local rights of way meet the present and likely future needs of the public
- Opportunities provided by local rights of way for exercise and other forms of outdoor recreation and the enjoyment of Nottingham
- Accessibility of local rights of way to blind or partially sighted persons and others with mobility problems

The ROWIP is being prepared in consultation with the Local Access Forum whose role is to advise upon strategic access and recreation issues within the city. As an advisory body for the City Council and Natural England the Forum will help to assist in the improvement of public access to land for the purpose of open-air recreation, commuting and the enjoyment of the area. More information on the Local Access Forum is available at: www.mynottingham.gov.uk/localaccessforum

Key actions will be to:

- Prepare a new guide to public rights of way, planning, development and land use changes
- Take all necessary steps to reduce any negative impacts on the public path network from proposed developments and land use changes
- Refuse approval of the loss of a public path unless specific policies set out in the development plan process are satisfied
- Continue to meet all statutory obligations for signing and waymarking
- Continue to survey and identify all unrecorded wayspand record them on the definitive map and statement where evidence shows they are public rights of way
- Continue to undertake inspection and maintenance of all adopted urban public paths
- Seek to formalise an inspection and maintenance programme for all off road public paths
- Seek to formalise an inspection and maintenance programme for all permissive paths.
- Promote both public and permissive paths through corporate publications and other media and continue to sign and way mark all public paths
- Take into account the potential affect of any proposed rights of way improvement schemes on the crime, disorder or antisocial behaviour in the area

- Only consider making an order to gate, close or divert a public right of way to reduce crime, disorder or antisocial behaviour if the evidence supports it and the statutory tests can be fully satisfied
- Prepare a new guide for the control of unauthorised mechanically propelled vehicles on public paths and other public areas
- Provide a safe and user friendly environment to encourage more people to walk, cycle and enjoy horseriding to their destination and will continue to improve existing paths and create new paths wherever possible
- Continue to consult people with limited mobility the blind and partially sighted and where possible ensure all paths are accessible by all
- Continue to consult non users through future ROWIPs and will seek to improve the path network to encourage greater use
- Support the work partners to develop health walks and other health initiatives using the path network

Proposal W 3: Walking information and promotion

Promoting walking is an important part of the smarter travel choices and road safety strategy programmes. These help to target various road users by giving children and commuters the skills, resources and support they need to walk more often.

The Council will continue to provide a consistent programme of walking promotion and support to:

- Develop the navigator maps and sign posts to encourage walking
- Develop integrated journey planning resources such as the Walkit journey planner
- Use the Big Wheel transport brand to market health, environmental costs/benefits to walking
- Support events that promote increased levels of walking

Strategy to support a cycling revolution

Cycling delivers multiple benefits as it improves health, is non-polluting to the environment and reduces congestion whilst also being an ideal form of travel for many short and medium distance journeys. The City Council is working to mainstream cycling by making it more appealing to a wider range of people through addressing barriers that are prominent around attitudes as well as the physical barriers.

To help raise the profile of cycling, a cycle action plan was developed during the last LTP and will be updated to contain measures to encourage and help support cycling inline with the objectives of this LTP. The plan will contain further actions to improve the cycling offer, developed using guidance and advice from the DfT, Sustrans, Cyclists Tourist Club, RideWise and other partners and will incorporate the proposals set out below. Other council programmes such as the road safety and smarter choices strategy will help to make people more confident with their cycling ability and help to reduce perceptions of danger and lack of awareness of the benefits of cycling.

Proposal C 1: Cycle partnerships

- The City Council will continue to develop its own travel plan and improve workplace facilities for cycling and engaging cycling champions at senior officer and councillor level. The workplace strategy consolidation of office premises has already delivered improved secure cycle parking and shower changing facilities for many City Council staff
- Consideration of cycling improvements in most transport schemes and where possible, new improved lining will be carried out as part of maintenance work
- A programme of smarter choices will provide advice to businesses on the development of a travel plan and marketing with a strong focus on cycling

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- Continuation of cycle training through the LIFECYCLE child training in schools and RideWise adult training programmes to increase the skills of cyclists and reduce the numbers of cycling casualties
- Elements to comprise close alignment of the cycling policies with road safety, planning and health policies through continuing to work with and strengthening networks already in place and developing new ones
- Ensure consultation with local and national cycle groups principally through the Cycle Development Group consisting of the City Council, Sustrans, Cyclists Touring Club, Pedals, Nottinghamshire County Council, the Greater Nottingham Transport Partnership and Ridewise
- Annual cycle forum marketing event with the associated Wheelie Big Breakfast events

Cycle evaluation and monitoring will continue through the expansion of data collection by working with the Sustrans Monitoring Unit and further use of automatic cycle counters. The Strategy performance measures will seek to make links between increasing cycling and carbon reduction.

Proposal C 2: Improve cycle infrastructure

The City Council will seek to make improvements to the existing cycle network and develop new routes for both commuters and leisure users. A strategic cycle route network has been established based on main radial, orbital, traffic free and quiet routes and a programme of improvements to these routes is being developed to include the existing as well as new cycle routes through:

- Developing commuter cycle corridors along the main radial and orbital routes which are particularly important for people commuting by bicycle
- A review of cycle facilities on these routes which is being undertaken to develop a programme of improvements
- Coordinating improvements with bus priority schemes, which include exemptions for cyclists in bus lanes

In addition the Council's approach will be to:

- Maintain a dedicated budget for small scale cycle schemes to allow small scale but effective schemes to be delivered quickly and efficiently and deal with key issues such as signing, advanced stop lines, junctions
- Improved integration/interchange between buses, trains, trams, walking and cycling through further implementation of cycle parking at bus stops, considering CCTV at suitable cycle parking locations when linked to bus stops, and mapping and publicity to promote routes and parking locations
- Early consideration of cycling improvements when designing wider transport scheme designs through the use of project management tools
- Ensure linkages between new developments and the cycle network to incorporate cycle infrastructure and parking into the design of new developments and ensure sites are accessible by bike, and seek developer contributions for sustainable travel improvements
- Good quality parking and signage consistent with DfT and best practice guidance using signs and stands which are user friendly and easy to maintain
- Maintain all routes by providing online reporting facilities for users to report problems and incorporate off-road maintenance in the rights of way improvement programme

Proposal C 3: Promote and support cycling and cycle training

The City Council will work with the health and voluntary sectors, business, education establishments, and local and national cycle organisations to promote cycle initiatives.

Box 7.B: Nottingham Ucycle Project

Nottingham Ucycle project launched in September 2009 aims to increase levels of cycling amongst staff and students at the University of Nottingham, Nottingham Trent University and Nottingham University Hospitals NHS Trust. This collaborative £3.3 million project is run by Sustrans and funded by the City Council, Cycling England, the City's two universities and the Nottingham University Hospitals NHS Trust.

The project runs a range of activities including infrastructure improvements on and between campuses, events and activities to raise awareness of the benefits of cycling and a cycle hire scheme for students. The City Council will look to build on the Ucycle concept into other education establishments and local businesses.

The City Council will also:

- Use the Big Wheel brand to promote transport marketing and deliver a comprehensive suite of cycle maps, progress innovative ideas such as the Big Track podcast focusing on local history along the route and provide cycle information packs to cycle shops
- Targeted promotion in schools including cycle training such as LIFECYCLE
- Use local media to promote the benefits of cycling associated events
- Utilise existing links with the health and voluntary sector such as Cycling for Health through work with cycle groups and supporting Ridewise cycle training as a way of helping people get back to fitness and make short to medium distance journeys by bike
- Ensure the availability of good quality paper and electronic maps through supporting and working with Transport Direct and providing bespoke mapping for employers and education establishments
- Further develop mapping and routes to support led rides through work with local cycle groups such as RideWise to support their marketing initiatives and raise the level of trained cyclists

7.3.2 Improve air quality and mitigate transport noise

The LTP strategy to contribute to cleaner air and quieter streets is an essential element in improving human health locally and globally.

Table 7.3: Air quality and noise proposals and measures

Proposals	Measures
Air Quality	AQ 1: Develop and deliver air quality action plans
Noise	NAP 1: Develop and deliver noise action plans

AQ 1: Develop and deliver air quality action plans

The City Council updates and publishes annual air quality action plans setting out measures that contribute to tackling the identified air quality problems associated with the city centre and Ring Road air quality management areas.

The action plans were last published in July 2010 and will be refreshed taking into account measures set out in the LTP Implementation Plan 2011- 2014. Measures and schemes to tackle congestion will greatly contribute to improving local air quality, as road traffic is identified to be a primary source of pollution. The strategy for tackling congestion focuses principally upon influencing travel demand, the provision of quality alternatives attractive to the motorist and better managing the flow of traffic within Nottingham. The key policies and measures to be introduced to modify transport supply and demand and form the basis of the strategy to tackle congestion are principally set out in Chapter 3 along with the measure to promote more active travel included in this Chapter.

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Proposal NAP 1: Develop and deliver noise action plans

DEFRA are expected to release an online web tool to assist local authorities with noise impact assessments in the spring 2011. The web tool aims to assist local highway authorities in taking forward the noise action plan process. Once the tool is live, the City Council will utilise it in compliance with the Environmental Noise Regulations 2006. An action plan will be published thereafter which will consider options available to reduce noise levels from transport and where finances allow, actions to be taken in priority areas where noise levels exceed the recommended thresholds. Details will be published at: www.mynottingham.gov.uk/ltp3

Ambient noise reductions will be sought through:

- Continue to promote sustainable travel options to reduce traffic volumes
- Supporting the purchase of quieter buses through modern bus purchases
- Encouraging private drivers and motorcyclists to adopt quieter driving techniques through publicity and campaigns
- Ensuring all new transport projects consider noise mitigations
- Introducing road maintenance programmes to replace road surfaces with low noise surfacing where possible
- Improving traffic management and signal control techniques through the network management plan
- Utilising speed enforcement measures that do not encourage noise, rapid acceleration and deceleration
- Considering the use of natural noise barriers if financially viable and appropriate to do so

7.3.3 Reduce road traffic casualties

To continue to reduce the number and severity of road traffic casualties, the City Council will seek to implement road safety strategy measures covering engineering, education, and enforcement aspects. Accident remediation work for carriageways and footways and to a high standard, safeguarding peoples' wellbeing when using the highway network and measures to manage excessive speed, are critical to protecting vulnerable road users. Integrated transport and planning policies to design in safety to and from key destinations and the asset management plan process to prolong the life of assets can also contribute.

The City Council will work with road safety partners, the Police, transport operators and the Highways Agency to achieve continued casualty reduction performance. The DfT will be publishing a new strategic framework for road safety in the spring 2011. The Council will consider recommendations set out in the new framework as part of improving road safety.

The Council's proposal for reducing road traffic accidents has three key elements and is set out in Table 7.4:

Table 7.4: Road traffic casualty proposals and measures

Proposals	Measures
Road safety engineering	RS 1: Introduce more 20mph zones across the city RS 2: Safer routes to school programme
Road safety education	RS 3: Road safety education and partnership working RS 4: Targeted road user training
Road safety enforcement	RS 5: Road safety enforcement and compliance

Road safety engineering

Road safety engineering schemes are a key component of the City Council's casualty reduction strategy. The engineering package can include junction and environmental improvements, traffic calming, interactive signs, anti-skid surfacing, road lighting schemes, signing and lining improvements, and speed management counter-measures.

The design quality of the road network will continue to play a significant role in meeting road safety objectives. The network design process requires an audit of schemes to be implemented from a road safety perspective to assess the opportunity to amend the scheme to improve its safety or allow additional road safety elements to be incorporated. The co-ordination of safety schemes with major planning applications and housing developments will also ensure safety is designed into the highway network.

Using casualty data provided by the Police, the City Council will identify locations where injury collisions are occurring with a view to introducing measures to reduce these hot spots. A thorough appraisal of the available evidence underpins the proposals in this strategy. This intelligence includes a detailed analysis of:

- Where collisions happen
- Who is involved (age, gender, socio-economic group)
- What they are doing and why (the attitudes and beliefs which underlie their behaviours)
- Which types of vehicle are involved
- When collisions happen
- What the consequences are in terms of injury or death

The City Council will provide road safety advice and undertake safety audits for all proposed changes to the road network, including new developments to ensure the constructed design is safe for all road users.

Proposal RS 1:Introduce more 20mph zones across the city

The City Council will seek to introduce more 20mph zones as part of the strategy to build a safer city, create a culture of respect and encourage community cohesion and involvement. Research shows that vehicle speeds decrease in 20mph areas with speeds typically reducing by 1mph yielding casualty savings of 5%. Road casualties can be reduced through road engineering, where appropriate, increasing public awareness of the relationship between slower speeds and casualty reduction and encouraging citizen responsibility and protection.

As a priority, the City Council will seek to complete the programme of 20mph zones around schools. 20mph limits will then the introduced around further education establishments, shopping areas, residential areas and community facilities.

Prioritisation will be determined through key criteria including:

- Analysis of accident casualty data
- Community requests through neighbourhood engagement
- The amount of pedestrian and cycling activity (or potential)
- The presence of vulnerable groups such as children, elderly and disabled people

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Proposal RS 2: Safer routes to school programmes

The safer routes to school programme along with the production of school travel plans are being coordinated with the ongoing review of school provision. The safer routes programme of investment within the city will be integrated with the final wave of Building Schools for the Future developments. As part of the smarter travel choices package, the City Council will work with new schools to develop school travel plans and provide continued support to existing schools with travel plans.

Road safety education

Road safety education is made up of a complex mix of publicity, events, education, training and advertising that is targeted to specific road user groups and coordinated within a yearly and age stratified timetable. In terms of age, road safety education produces material that is appropriate for the audience in terms of content, reading level, school year development, attention span, and how the audiences can be best targeted. This is very similar to the approach that would be adopted by an advertising company.

Proposal RS 3: Education and partnership working

Working in partnerships will continue to play a major role in road safety strategy and give the opportunity not only to learn from other authorities, but to pool resources and also to adopt more consistent road safety programmes across the region in order to maximise their impact.

Key road safety partnerships include:

- **'BAREbones':** Focused on delivering a series of activities aimed at younger riders, particularly those on scooters and bikes under 125cc and promotes the benefits of wearing protective clothing. The Accident and Emergency Department at Queens Medical Centre are providing the injury data that will be used in publicity distributed through motorcycle retail outlets. It is also intended to use roadside advertising in a similar way to that used already at motorcycle crash sites
- **Shiny Side Up:** Involving Police forces and highway authorities throughout the East Midlands who developed a DVD that focuses on the attitudes of super bike and sports bike riders. The DVD features John Reynolds, the British Superbike Champion, and targets the more mature riders

The City Council has prioritised early awareness through child road safety education practices with three different educational packs supplied at ante-natal groups, pre-school playgroups and at reception classes. The early focus is on developing parental responsibility and protection. This includes wearing seatbelts, close supervision and acting as a good role model. When children attend school they are sequentially introduced to pedestrian safety, cycle training and pre-driver training knowledge through road safety awareness lesson plans. In many cases this is integrated into the curriculum so that limited additional strain is imposed on teachers.

Work is planned around the academic year, with specific activities timetabled to coincide with calendar events. For example, conspicuity campaigns occur in the autumn when the clocks change, starter packs are distributed in September, drink drive campaigns occur in the winter and summer, a road safety quiz starts in January and leads to a final in the summer term. However, opportunities are also taken to stage road safety events that are related to current media topics or national campaigns, e.g. emphasising the dangers of drink driving during major sporting events.

Key education and training provision includes: Keepsafe Keepsake, Tiny Trekkers, Five Alive including 'My First Highway Code', Fact File, and Impact city newspaper. Tackling problems with young new and inexperienced drivers has been occurring through early intervention work with school children on the 'Court In Time', and the Brake Reaction Test.

Box 7.C: RideWise social enterprise partnership

The RideWise local social enterprise partnership aims to encourage more people cycling more often by giving them more confidence and better cycle riding skills. Free cycle training is offered to residents and training packages are available for major employers wishing to promote and support their staff to cycle. The partnership has trained nearly 2,300 adults and children since 2006/7, employing two staff and supported by over 20 freelance instructors.

Proposal RS 4: Targeted road user training

Our approach will be to continue and expand targeted training programmes such as the Lifecycle and Ridewise cycle training and driver improvement retraining programmes.

Box 7.D: LIFECYCLE cycle training

A pilot for a curriculum-based approach to road safety and cycle training in schools for children aged six to eleven years old by providing an integrated and structured set of interventions throughout a child's time at primary school. The aim is that all children leave primary school trained to national standard level 2 and with a positive attitude towards regular cycling.

The programme is being delivered in 50% of city primary schools, prioritising those schools in the most deprived wards of the city. Cycle training has increased from 102 in 2008/9 to 257 in 2010/11.

In 2009/10 Nottingham adopted the National Standard Training Course Bikeability and set about planning a new project, which dovetails into it called LIFECYCLE that will encourage an increase in cycling activity while also targeting exposure to risk on the roads by embedding cycling as a real transport choice.

Driver improvement retraining programme

A national driver improvement scheme has been adopted by all Police in the UK and is administered through approved agencies by the Association of National Driver Improvement Service Providers. The scheme offers drivers who have 'due care and attention' offences under the Road Traffic Act 1988 and where referred by the Police, a retraining opportunity as an alternative to prosecution.

The retraining programme will be expanded to offer training for a wide range of offences such as no seat belt wearing and mobile phone use. This will be managed by the Police in partnership with the City Council and other partners.

Road safety enforcement measures

Enforcement activity linked to casualty reduction has been taking place through the Nottinghamshire Road Safety Partnership's long standing work with the Roads Policing Unit within Nottinghamshire Police. The work has been a data-led approach to deliver the Safety Camera Partnership amongst other enforcement activities. In 2008 this work expanded to include enforcement and awareness raising aimed at seatbelt and mobile phone use, motorcycle safety and drink/drug driving.

Proposal RS 5: Enforcement and compliance

Nottinghamshire Safety Camera Partnership

The Nottinghamshire Safety Camera Partnership, comprising of the Nottingham City and Nottinghamshire County Councils, Nottinghamshire Police, Nottinghamshire Magistrates Courts Service and the Highways Agency was established in 2000 to tackle the joint priority of casualty

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reduction. This has involved joint working on a wide range of issues including speed management, red signal violations, drink-drive initiatives, motorcycle safety, pedestrian safety and improving driver behaviour.

Since the loss of specific Road Safety Grant from the government, the City Council will explore ways to continue the operation of camera safety equipmentand processing system for speed and red light cameras.

At the time of writing, the future of the partnership is currently under review.

Project Aurora compliance

The City Council is seeking to create a culture of respect by breeding respect for the law, citizens, neighbourhoods and the environment through the Project Aurora enforcement and compliance team. The team will work in partnership with Nottinghamshire Police and aims to eliminate traffic law offences including bus lane enforcement, parking, traffic and taxi licensing.

Project Aurora is an organisational transformation initiative to develop a single, integrated, uniform approach to public realm enforcement. The City Council approved the single enforcement function in February 2010.

Community protection will develop the project and significant progress will be made by merging several functions (public health, public protection, and public realm) with the existing community protection service.

There are a number of interfaces between a single enforcement function and existing highways operations, these have elements of compliance within them but also discharge a strategic and statutory function in managing the highway network. On street enforcement of waiting restrictions will form part of the single enforcement delivery. There will need to be a joint approach to the management of these highway functions from a commissioning, operational and network management viewpoint.

Project Aurora functions will efficiently deliver single enforcement functions covering:

- **Bus lane enforcement:** To ensure effective management of compliance network wide development is continuing to implement automatic and monitored enforcement. Development of new systems, approvals sought through the DfT and new enforcement areas (such as moving traffic offences) will remain with the Traffic Manager and be pursued through the Network Management Plan. In addition a mobile enforcement vehicle is operational to enforce bus lanes and other enforcement activity. This will deliver a long term strategic ability to manage bus lanes and support reliable bus timings and frequency to maximise the attractiveness of public transport
- **CCTV management:** The Traffic Manager will utilise highway camera images as additional supporting information to assess highway network efficiency and impacts of traffic congestion. This supports technical decisions to be made in traffic signal control strategies and for the impacts of changes to be monitored
- **Permits and licensing:** Functions covering a range of activities including ‘A’ boards, skip licences, issuing of restricted access permits and ensuring overhanging trees and vegetation are cut back to improve safety. The purpose of the service is to ensure safety in placing activities on the highway and ensure that the movements of highway users (all classes) are not unduly restricted by its impact at the location affected or on the wider network
- **School crossing patrols:** Among 43 sites of which 15 are staffed. In the longer term sites are likely to reduce as permanent road safety measures are introduced giving 24 hour protection

7.3.4 Improve personal safety

The LTP strategy aims to create a safe and secure environment for all travellers. The proposals for ensuring this happens are set out in Table 7.5 below.

Table 7.5: Personal safety proposals and measures

Proposals	Measures
Improve safety on public transport	PTS 1: Respect for Transport initiatives
Improve safety at night	SN 1: Street Lighting PFI improvements

Improve safety on public transport

Proposal PTS 1: Respect for Transport initiatives

Improvements to safety whilst on and connecting to public transport are progressed through the Respect for Transport initiative which is coordinated and managed through the Bus Quality Partnership. The Respect for Transport (RfT) aims are to:

- Improve public perceptions about safety and security on public transport, leading to a greater willingness to utilise it as an everyday means of movement
- Develop and promote socially acceptable behaviour on public transport
- Reduce opportunities for/ deter crime and anti-social behaviour on and around public transport
- Ensure anti-social behaviour is challenged and perpetrators are brought to justice

The main operational focus is to combat:

- Socially unacceptable, unpleasant behaviour on vehicles (e.g. addressing bad behaviour of school children on buses)
- Acts of violence and vandalism against the transport infrastructure, which threaten the safety of staff and travellers (e.g. throwing stones at trams)
- Investment in bus infrastructure through the provision of illuminated bus stops, with CCTV and of on-board CCTV on all tendered services.
- Using the Statutory Quality Partnership to establish on-board CCTV as a quality standard for all commercial operators
- Supporting late night bus services, particularly to employment and educational sites
- Staffing key interchange facilities such as bus stations and park and ride sites

Improve safety at night

Proposal SN 1: Street lighting improvements

The City Council is responsible for maintaining all lighting installations on the highway, comprising street lighting units and illuminated traffic signs, beacons, centre island columns and traffic bollards.

The City Council has carefully considered all its options and found that the best way to deliver significant change quickly is to use a private sector partner through a Private Finance Initiative (PFI) contract with credit received from the DfT. The private sector partner will be able to provide both the resources and upfront capital cost that the Council does not have available. The Council will manage the programme and work with the appointed contractor over 25 years to replace and upgrade the stock.

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Over the past few years the street lighting energy bill has increased from £0.7m/yr (4p/unit) to the current £2m/yr (10.4p/unit). Action is being taken to reduce the energy consumption of the street lighting system through energy saving proposals. Modern, energy-efficient designs and equipment will be used together with new remote monitoring technology which will allow light levels to be better controlled.

The lighting project is a key priority to transform the street scene through the production of a good quality lit environment which will enhance people's quality of life, improve road safety and help reduce crime and fear of crime. The upgrading of street lighting will also encourage people to consider travelling by sustainable modes as well as providing significant road safety and community safety benefits with reduced incidences of antisocial behaviour, and by addressing crime hotspot areas creating safe and sustainable communities. Through evaluation of design light pollution and energy consumption issues have also been carefully considered.

Box 7.E: Street Lighting Private Finance Initiative

The stock has been replaced and enhanced by an average of around 850 columns a year over the last 5 years, funded through various sources. However, around 40% of the stock is over 20 years old and outdated or effectively life expired. There are over 24,000 ageing outdated light columns, 3,000 lit road signs and 8,000 lanterns that need replacing on our streets. The City Council also maintains some 4,000 lighting columns in off-street locations in housing estates and parks.

In the first five years of the PFI contract, most of the ageing outdated street lighting columns in Nottingham will be replaced. There will still be one third of the columns in the city that will not need replacing as they are of an acceptable standard. Some technical changes will also be made to improve the quality of light in residential areas, for example, outdated yellow lights will be replaced by better quality white lights. The provision for heritage column replacement in Conservation Areas will also be made. The programme for replacement will be developed with highway network management and traffic management to ensure efficiency of works, minimise disruption and achieve value for money.

Further information can be found at: www.nottinghamcity.gov.uk/streetlighting

7.4 Summary

This Chapter has covered the City Council's strategy for promoting healthy active travel and improving road safety. Key proposals can be summarised as:

- Promoting active healthy travel choices through provision of walking and cycling infrastructure and support through information and marketing
- Improving air quality and reduce noise from transport through developing and delivering action plans
- Reducing road traffic casualties through a series of engineering, education and enforcement measures
- Improving personal safety through respect for transport and delivering street lighting improvements

The strategy supports creating a safer environment for all. Building safer communities, which improve quality of life and encourage more people to walk and cycle can help to achieve other LTP priorities such as reducing congestion and deliver benefits for tackling climate change.

The key links between these proposals and the related challenges are detailed in the table below:

Table 7.6: Links between the active travel and road safety proposals and meeting their challenges

Proposals	Challenges			
	Casualty reduction	Address health inequalities	Reduce transport related air quality/noise	Lower crime/fear of crime
Promoting active healthy travel choices				
Walking				
People Friendly Streets	✓	✓	✓	✓
Public Rights of Way Improvements	✓	✓	✓	
Walking Information and Promotion		✓		
Cycling				
Cycle partnerships	✓	✓		
Improve cycling infrastructure		✓		
Promote and support cycle/cycle training		✓		
Improve air quality and mitigate transport noise				
Develop and deliver Air Quality Action Plans		✓	✓	
Develop and deliver Noise Action Plans		✓	✓	
Reduce road traffic casualties				
Engineering measures				
Introduce more 20mph limits	✓	✓	✓	
Safer Routes to School Programmes	✓	✓		
Education measures				
Education and partnership working	✓	✓		
Targeted road user training	✓	✓		
Enforcement measures				
Road safety enforcement and compliance	✓			✓
Improve personal safety				
Respect for Transport initiatives				✓
Street Lighting Improvements	✓	✓		✓

Chapter 8: Outcomes & Progress

Outcomes and progress 8

This Chapter explains how the proposals and measures set out in Chapter 3 to 7 of this strategy will be realised through the LTP Implementation Plan process and provides a summary of how these interventions will achieve the desired outcomes for delivering economic, environmental and community benefits.

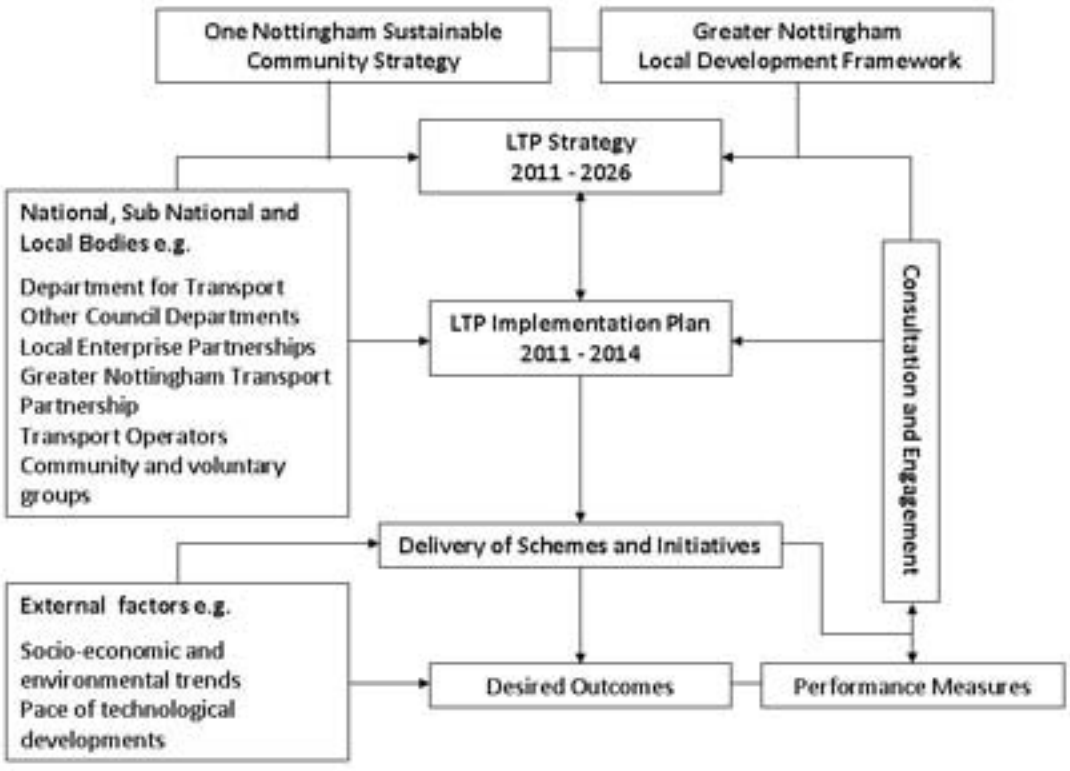
8.1 Delivering the Strategy

To accompany this LTP strategy, the City Council has published a separate LTP Implementation Plan. The Implementation Plan sets out the key measures and initiatives, which will be progressed over three years during 2011 to 2014. The Implementation Plan comprises of the following sections:

- **Funding local transport improvements** details the sources of funding to be used for the delivery of transport measures identified in the strategy, which includes planned capital and revenue resources, major schemes, local and other funding sources
- **Overseeing the LTP programme** including an action plan of measures containing the approach to identifying and prioritising measures linked to achieving the LTP objectives. The action plan details schemes, timescales, priority and funding sources, value for money, programme governance and risk management
- **Delivery of the four major schemes** which are: Station Hub redevelopment, NET Phase Two, Ring Road major and Broad Marsh/Turning Point South. Section includes project status and key delivery milestones to be achieved
- **LTP programme of planned allocations** for 2011 - 2014 and a programme of improvements to be funded through externally funded elements

The LTP delivery process from policy to implementation can be illustrated as follows:

Figure 8.1: Policy to implementation



8 Outcomes and progress

8.2 Timetable

The tables below summarise the key milestones for local transport related funding announcements and planned stages in major transport scheme delivery. Further detail relating to particular schemes is provided in Chapter 3 and the LTP Implementation Plan 2011 - 2014 available at: www.mynottingham.gov.uk/ltp3

Table 8.1: Key milestones in funding processes

Funding Processes:	Start	End
LTP Integrated Transport and Maintenance allocations	April 2011	March 2015
1. Local Government Settlement Funding announcement	December 2010	
2. 2011-2014 LTP Programme consultation	January 2011	February 2011
3. Implementation Plan (setting out programme) approved	March 2011	
4. Delivery of Implementation Plan measures	April 2011	March 2014
Regional Growth Fund	**2011**	**2014**
1. Round 1 (of 3) bid preparation	October 2010	December 2010
2. Bid submission to Department for Business Innovation and Skills	January 2011	
3. Commence 1st round schemes (if successful)	From April 2011	
Future Round bid submissions	From April 2011	
Local Sustainable Transport Fund	**2011**	**2014**
1. Key component bid preparation	December 2010	April 2011
2. Delivery (if successful)	July 2011	March 2015
3. Large bid preparation	April 2011	June 2011
4. Short-listed bids business case preparation	July 2011	December 2011
5. Large bid delivery (if successful)	June 2012	March 2015
Workplace Parking Levy	**October 2011**	
1. Introduce WPL (commencement of licensing)	October 2011	March 2012
2. Introduce WPL charging	April 2012	

Table 8.2: Key milestones for the delivery of major schemes

Major Scheme delivery:	Start	End
Station Hub	**Ongoing**	**2014**
1. Commence highway works	October 2010	April 2011
2. Commence work on multi-story car park	From January 2011	
3. Network Rail appoint main station contractor	June 2011	
4. Station construction work	Autumn 2011	Winter 2014
Nottingham Express Transit (NET) Tram Phase Two	**Ongoing**	**2014**
1. Tender bids evaluation	Ongoing	January 2011
2. Select preferred tender bidder	January 2011	March 2011

Major Scheme delivery:	Start	End
3. Seek Full Approval from Government	Summer 2011	
4. Construction	Autumn 2011	2014
5. NET tram Lines Two and Three open	Late 2014	
Ring Road major	**Ongoing**	**2014**
1. Submit Expression of Interest to DfT	January 2011	
2. Submit best and final bid to DfT	Autumn 2011	
3. Programme Entry re-activation (if successful)	December 2011	
4. Earliest construction	2013 +	2015 +
Broad Marsh/Turning Point South	**Ongoing**	**2015/16**
1. Westfield to develop proposals to planning application stage	Ongoing	tbc
2. Construct development and Turning Point South	Tbc	tbc
Strategic roads		
1. A453 (M1 to Nottingham)	2015 +	
Strategic rail	**Ongoing**	
1. Midland Mainline line speed improvements	2011	2014
2. Station area re-signalling	Summer 2013	Winter 2014
3. High Speed Rail (national consultation)	February 2011	June 2011

8.3 Desired transport outcomes

There are a range of benefits and outcomes the LTP aspires to deliver. The following tables map out the desired outcomes the Council is seeking to achieve in response to addressing key challenges for each strategic objective.

Deliver a world-class sustainable transport system which supports a thriving economy and enables growth

The proposals to support the economy and deliver a world-class sustainable transport system are set out in Chapter 3, and covers:

- **Travel demand management** comprising two key areas: parking policy controls over pricing, enforcement and land use planning of parking provision and smarter travel choice measures aimed at changing travel behaviour e.g. through supporting travel planning, travel marketing, awareness and promotions
- **Encourage sustainable alternatives** through investment in creating a high quality attractive integrated public transport system and providing support and promotion to encourage more walking and cycling trips
- **Improve the efficiency of the network** using the asset management plan process to maintain the current strategic road network and develop the city's highway network by exploiting new technology systems, better coordinating road works, traffic management techniques and including improved direction signage
- **Build appropriate additional capacity** for the highway network through targeted improvements at congestion hot spots

8 Outcomes and progress

Table 8.3: Economy links between LTP objective, key challenges and desired outcomes

Key Challenges	Desired Outcomes
• Backlog of local transport assets in need of maintenance • Congestion on main routes into and out of the city and around the ring road leading to unreliability of journeys • Inadequate rail and road connections to national and international networks • Insufficient capacity of the local transport network to accommodate planned population and housing growth	• Increased levels of walking, cycling and public transport use • Less congestion and improved journey reliability • Improved connectivity to national and international networks • High levels of satisfaction with the local transport system • Improved accessibility to employment sites • Increased transport network capacity

Create a low carbon transport system and a resilient transport network

The City Council's proposals to create a low carbon transport system were described in Chapter 4 and can be summarised as:

- **Influence and reduce travel demand** through determining the location of new developments in sustainable locations, designing them in a way that reduces total distance travelled by carbon intensive vehicles and maximises the use of sustainable alternatives e.g. walking, cycling and public transport and greater use of technology to remove or reduce the need to travel
- **Improve operational efficiency** through trialling alternative fuels for fleets and public transport, making use of location technology to maximise the efficient use of vehicles, and providing greener infrastructure e.g. more use of recycled materials and low voltage technology
- **Sustainable car use** consisting of car clubs and car sharing, eco driving and low carbon vehicle choice
- **Adapt the network to a changing climate** through introducing better drainage and permeable road surfacing to improve water runoff and introducing measures to future proof the current transport network

Table 8.4: Carbon links between LTP objective, key challenges and desired outcomes

Key Challenges	Desired Outcomes
• Contribute to challenging national targets for carbon reduction • Design, develop and maintain a resilient transport system • Address over reliance on oil • Ensure future transport infrastructure development and maintenance does not exacerbate flood risk	• Reduced carbon emissions from transport • Less disruption to the local transport system from poor weather • Reduced volumes of drive-alone trips and short journeys by car • The adoption of green transport technologies

Improve access to key services, employment and training including creation of local employment and training opportunities

The access to key services strategy was detailed in Chapter 5 and specified measures to improve:

- **Public transport coverage** through maintaining and enhancing the current high level of accessibility of the mainstream public transport network and improving integration with taxis, private hire vehicles and voluntary and community transport services
- **Make transport more accessible** through the provision of a wide range of printed and electronic information to enable travellers to access integrated information in a range of tailored ways to suit all needs, integrated ticketing to help tackle affordability and the provision of more tailored and personalised travel planning solutions

Table 8.5: Access links between LTP objective, key challenges and desired outcomes

Key Challenges	Desired Outcomes
• High levels of social exclusion in parts of the city • Improve the coverage, physical accessibility and affordability of transport • Low travel horizons • Create more opportunities for training and local employment within the transport sector	• Reduced levels of social exclusion amongst disadvantaged groups • Improved access to: Employment and training, learning, healthcare and social services, and healthy living • Children and young people supported to achieve • Greater employment and training opportunities in the transport sector for local people • Transport services developed that support more independent living

Improve the quality of citizens' lives and transform neighbourhoods

Chapter 6 set out the City Council's approach with regards to improving people's life chances through transforming Nottingham's neighbourhoods and improving quality of life by:

- **Delivering on community priorities** by engagement with residents and delivering a neighbourhood focused local transport investment programme consisting of local footway, parking, traffic management and accessibility schemes
- **Supporting regeneration** through land use planning policy, regeneration priorities and helping to attract major sporting and cultural events to the city
- **Developing green corridor links** to upgrade green infrastructure to support the use of green corridors such as the River Leen and develop multi-user paths as part of flood defence schemes

Table 8.6: Quality of life links between LTP objective, key challenges and desired outcomes

Key Challenges	Desired Outcomes
• Rejuvenate the physical environment of many of Nottingham's more deprived neighbourhoods • Support regeneration initiatives through improved transport infrastructure and public realm • Create and improve access to green and open spaces, residential areas and local centres	• Improved local perception of neighbourhoods, the public realm and local streets • Empowered communities to influence decisions on transport • Increased satisfaction with transport and local neighbourhoods (residents) • Reduced severance • Accessible green infrastructure

Support citizens to live safe, independent and active healthy lifestyles

The strategy to support active travel and road safety was set out in Chapter 7 encompassing four areas to:

- **Promote active healthy travel choices** through delivering streets designed with vulnerable users in mind, developing Primary Pedestrian Routes, Public Rights of Way improvements, cycling infrastructure and training supported by information and promotion of walking and cycling
- **Improve air quality and mitigate transport noise** through action plan measures to reduce transport air quality and noise impacts
- **Reduce road traffic casualties** through engineering, education and training techniques to support road users and enforcement of traffic regulations
- **Improve personal safety** by creating a safe and secure environment and for those using public transport

8 Outcomes and progress

Table 8.7: Active travel and road safety links between LTP objective, key challenges and desired outcomes

Key Challenges	Desired Outcomes
• Address large-scale health inequalities that exist between people living in different parts of the city • Reduce adverse impacts of transport on our citizens particularly in terms of poor air quality and noise • Ongoing need to reduce the number of road casualties particularly vulnerable road users • Lower crime and the fear of crime	• More children and adults utilising active travel modes (walking and cycling) • Improved air quality • Less transport generated noise • Reduced levels of road traffic casualties • Reduced incidences of anti-social behaviour and build a culture of respect for transport • Increased users perceived and real levels of safety when travelling

8.4 Performance measures

The City Council proposes to assess progress against the Plan objectives through monitoring a number of key transport performance measures. Indicators the City Council intend to collect are listed in Table 8.8.

Table 8.8: Indicators for monitoring during the LTP

Ref	Indicator	Frequency	Comment
PI 1	Local public transport (bus and tram) patronage	Quarterly	City only. Target within Nottingham Plan
PI 2	Carbon emissions for city traffic area	Annually	Indicator to be determined
PI 3	Percentage of employees covered by a commuter travel plan	Annually	WPL business support. Definition of 'live' plan to be determined
PI 4	Cycling trips	Annually	
PI 5	Air quality (nitrogen dioxide in AQMAs) for a) city centre and b) ring road	Annually	
PI 6	Access to services and facilities	Annually	
PI 7	Working age people with access to employment by public transport	Annually	DfT Core Accessibility Indicators
PI 8	Mode of journeys to school	Annually	National school census data
PI 9	Children killed and seriously injured	Six-monthly	Revised to report data on a 4 month delay (following processing and verification). Currently on 15 month delay
PI 10	Total killed and seriously injured	Six-monthly	Revised to report data on a 4 month delay (following processing and verification). Currently on 15 month delay
PI 11	Journey time (vehicle journey time per mile)	Annually	

The Nottingham Plan includes an indicator to monitor public transport use as a measure of economic performance. In addition, there are certain cross-cutting indicators included in the Nottingham Plan which transport has a direct bearing on, such as overall employment rates, provision of housing stock, improving community involvement in local decision making, carbon emissions, reducing obesity amongst children and cardiovascular disease amongst adults.

In February 2011, the Department for Communities and Local Government published a single data list that Government would be requesting from local authorities. The list of transport data can be found on the Communities website at:
http://www.communities.gov.uk/localgovernment/decentralisation/tacklingburdens/databurdens/

8.5 Monitoring of the Plan

The Council intends to communicate progress with citizens, key stakeholders and partners through existing forums and networks in place which were set out in Chapter 1 and through online and social media. Ongoing progress and delivery for this LTP will be reported at least on an annual basis and published on the City Council transport webpages: www.mynottingham.gov.uk/ltp3

Glossary

Glossary

6Cs	Three Cities and Counties (Nottingham, Derby, Leicester and Nottinghamshire, Derbyshire and Leicestershire)
ANPR	Automatic Number Plate Recognition
AQMAs	Air Quality Management Areas
BQP	Bus Quality Partnership
CO2	Carbon emissions
DEFRA	Department for the Environment, Food and Rural Affairs
DfT	Department for Transport
Emda	East Midlands Development Agency
FIG	Food Initiatives Group
GNLP	Greater Nottingham Learning Partnership
GNTP	Greater Nottingham Transport Partnership
HAMP	Highway Asset Management Plan
HMA	Housing Market Area (Geography covering Nottingham City, Rushcliffe, Gedling, Broxtowe in Nottinghamshire and Erewash in Derbyshire)
IIA	Integrated Impact Assessment
NHT	National Highways and Transport survey
LAPP DPD	Land and Planning Policies Development Plan Document
LDF	Local Development Framework
LEP	Local Enterprise Partnerships
LIP	Local Investment Plan
LSTF	Local Sustainable Transport Fund
LTP or the Plan	Local Transport Plan
NET	Nottingham Express Transit
NMP	Network Management Plan
PFI	Private Finance Initiative
PPG 13	Planning Policy Guidance 13: Transport
PPG 17	Planning Policy Guidance 17: Planning for open space, sport and recreation
PPS 4	Planning Policy Statement 4: Sustainable economic growth
PPS 12	Planning Policy Statement 12: Creating strong and prosperous communities
RfT	Respect for Transport

Glossary

RNIB	Royal National Institute for the Blind
ROWIP	Rights of Way Improvement Plans
SCS	Sustainable Community Strategy
SFRA	Strategic Flood Risk Assessment
SHLAA	Strategic Housing Land Availability Assessment
SQPS	Statutory Bus Quality Partnership Scheme
WPL	Workplace Parking Levy

the big wheel
turning transport around

Nottingham
City Council