

Chapter 4: Problems and Opportunities



Nottingham

Chapter 4: Problems and Opportunities

This chapter assesses the local transport problems that impact upon the Plan area based upon the extensive data sources that are available to the authorities. It identifies the opportunities for tackling these problems and the demographic structure and social influences upon transport.

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4.1 Evidence Base

There is a growing body of evidence and data now available that the authorities have used to inform the preparation of the Plan. The origins of the key data sources and the type of information available are shown in Table 4.1. This evidence base has been supplemented by a programme of extensive consultation to attain local views on the future of transport provision in Greater Nottingham. Details of this programme are set out in section 1.6, while feedback received on each of the priorities for transport in the Plan area are illustrated throughout this chapter.

Table 4.1: Evidence Base

Type	Source	Description
LTP 1 Annual Progress Reports	City and County Councils	The data and tables contained within the reports and technical annexes of supporting data prepared with each of the APRs provides a wealth of statistical information on transport trends relating to travel movements, road safety, air quality and highway condition in Greater Nottingham from 2000/1 through to 2004/05.
Multi-Modal Studies	DfT/GOEM	The four studies contain comprehensive information on transport and travel trends and forecasts of future travel demand within the M1, A453 (M1 to Nottingham), West to East Midlands and A52 (Nottingham to Bingham) transport corridors all relating to the Plan area.
Greater Nottingham Multi-Modal Transport Model	City Council	Computer model being used to assess the impacts of major scheme proposals, NET extensions, local charging options and major development proposals. The model was used as the basis for the A52 Multi-Modal Study model.
Accessibility Planning	City and County Councils	New process being applied to evaluate accessibility to essential services and facilities. Plan area mapping capability now available through Accession computer software package.
Major Scheme Appraisals/ Business Cases	City and County Councils	Comprehensive appraisals undertaken of major scheme proposals including Turning Point, NET and local charging options, Station Masterplan and Gedling Transport Improvement Scheme. Includes NATA and environmental appraisals and consideration of alternative scheme options.
Non Residential Off-Street Parking Audit	City Council	Annual audit of commuter parking stock. Five years of data now available.

Type	Source	Description
Personal Travel Surveys	Three-City Partner Authorities	Local personal travel surveys carried out in Nottingham, Leicester, Derby and the County LTP areas to a common format to allow comparisons to be made. Household survey carried out every two years providing a representative snapshot. Third survey carried out in 2005.
Greater Nottingham Perception Surveys	City and County Councils	Local market research questionnaire to assess the public's attitudes to various transport schemes and policies. 2,000 telephone interviews conducted in 2004. To be repeated in 2006.
Big Wheel Familiarity and Favourability Surveys	Greater Nottingham Partnership	Annual survey carried out to assess the public awareness level of Big Wheel marketing campaigns and LTP schemes and policies
Air Quality Monitoring	City Council and District Councils	Monitoring of compliance with air quality standards undertaken and reported to DEFRA on an annual basis.
Demographic Information	Office of National Statistics	Analysis of local trends and comparisons with other Core Cities achieved through Census and other Government population and social trend statistics.
Economic Performance Monitoring	National and local sources	Economic performance monitored and analysed to inform production of annual City Centre Performance Report, Greater Nottingham annual Labour Market Report and for Local Development Framework annual monitoring.
Planning Data	City Council	Planning application and output monitoring system being developed to inform preparation of Local Development Framework annual monitoring.
Social Need in Nottinghamshire 2004	City and County Councils	Comprehensive review to assess the distribution of social need across the whole of Nottinghamshire including Greater Nottingham to allow policy makers and service deliverers to direct services to those most in need.

4.1.1 Learning from Other Authorities and Past Experience

The City and County Councils have sought to implement best practice wherever possible over the course of LTP1 and will continue to do so throughout the period of this Plan. To accomplish this, the authorities have built upon examples from elsewhere in the country to maximise the impact of the strategies and schemes it implements.

In addition the authorities have learnt from past experience in developing future programmes and designing schemes and this is reflected in the Plan. It has been recognised that the best way to achieve effective cross-cutting delivery is to ensure that schemes implemented address all factors which impact on the key outcomes. For example when implementing a bus

priority scheme it is also sensible to implement road safety measures, or when undertaking maintenance ensure that raised kerbs and dropped crossings are reinstalled as standard and opportunities taken to add features such as cycle lanes and advanced stop lines incorporated into the design process to improve accessibility.

Transport infrastructure projects take a long time to implement. The experience gained through partnership working through the Greater Nottingham Transport Partnership (GNTP) and the 'Big Wheel' is that ongoing dialogue helps to alleviate much of the frustration from stakeholders at the time taken and for minimising and explaining any disruption caused.

Table 4.2 below provides examples of how the authorities have modified their methods of developing strategies and schemes as a result of learning from other authorities and past experience.

Table 4.2: Examples of Learning from Best Practice and Past Experience

Initiative	Source	Actions undertaken
A: Tackling Congestion		
Traffic Control System; 2005/6	York City Council	The UTMC in York has influenced the relocation and future development plans for Nottingham's Traffic Control Centre.
Bus lane enforcement; ongoing	Transport for London	Taking on board best practice set by TfL in the development of systems for bus lane enforcement and preparations for the civil enforcement of moving offences under the Traffic Management Act to be implemented in LTP2.
Development and DPE Strategy	Lancashire County Council	The strategy has been developed using Lancashire's template for a two-tiered Decriminalised Parking Enforcement strategy.
Online Car Sharing Scheme; ongoing	Leeds City Council Bristol City Council;	Implementing Countywide care share scheme based on lessons learnt from other Core Cities experiences.
The Big Wheel Travel Awareness Campaign; ongoing	Hertfordshire County Council; National Travelwise Association	Established a major hearts and minds campaign to promote benefits of integrated transport in Greater Nottingham as a result of successful similar campaigns.
B: Delivering Accessibility		

Initiative	Source	Actions undertaken
Development of Accessibility Strategy; 2005/6	East Midlands local authorities	Organised a regional accessibility planning workshop to share best practice with colleagues in the East Midlands, which has influenced the content of the Final Accessibility Strategy.
Working with partners; ongoing	Within Reach Action Learning Programme; Gloucestershire County Council	Adapted the Within Reach 'Problem Statement' approach to guide themed partner workshop discussions and identify partners' accessibility priorities. Also the Local Accessibility Action Plan pro-forma is based on the format of the action plans developed by Gloucestershire.
Building accessibility into the planning process; ongoing	Hammersmith and Fulham LBC; Leeds City Council	Using experience from Leeds and Hammersmith and Fulham to explore approaches to build accessibility into planning decisions.
ROWIP; ongoing	York City Council	The ROWIP has been developed using York's 'whole network approach'.
Canal towpath improvements; 2002-2005	British Waterways	Worked in partnerships with British Waterways on the development and implementation of the scheme to utilise their experience from across the country.
Real Time Information provision; 2004/5	Three Cities Partnership (Nottingham, Derby & Leicester)	Adoption of the StarTrack system for the provision of Real Time information has been demonstrated to be a success elsewhere in the region and will be rolled out across core routes in Greater Nottingham.
C: Safer Roads		
Wilford Toll Bridge roundabout cycle facilities; 2002/3	CTC Cycling Policy benchmarking project	The scheme was based upon the 'magic roundabout' in York that was the first example of the provision of cycle facilities on a roundabout in the UK.
D: Better Air Quality and Environment		
Developing the Strategic Environmental Assessment report; 2005/6	West Midlands and Somerset DfT pilots studies	Pilot SEAs from these authorities were studied as illustration of the DfTs guidance for the Strategic Environmental Assessment of Transport Plans. The authority specifically assessed the interpretation of the guidance, organisation of processes and structure of the Report.

Initiative	Source	Actions undertaken
Modelling of air quality problem sites; ongoing	Leicester City Council / past experience	To assess the extent of problems concerning air quality, it has been identified through working with neighbouring authorities such as Leicester City Council and our own past experience, that careful citing and greater coverage of diffusion tubes are required to create a clear impression of air quality in an area.
E: Support Regeneration and Neighbourhood Renewal		
Station masterplan development; ongoing	Sheffield City Council	Adopted a partnership approach to ensure all the main stakeholders are represented and able to buy into the project, reflecting the methods employed in the Sheffield Station redevelopment.
Meadows Area Action Plan; ongoing	Leicester City Council	To address the problems of connectivity local involvement and 'buy-in' was assured through involving the Meadows Partnership Trust in developing ideas for re-modelling the estate - based upon practices used in Beaumont Leys in Leicester - an area with many similarities to the Meadows.
F: Enhance Quality of Life		
Maid Marian Way improvements; 2004/5	Royal Borough of Kensington & Chelsea	Removal of pedestrian guardrails, combining Pelican crossings with light columns and surfacing treatments were based upon works undertaken on Kensington High Street.
New City Centre pedestrian signing; 2002/3	London Borough of Greenwich; Bristol City Council	Positioning and information of signing influenced by signing in Bristol, while the style was influenced based upon the legibility and maintenance of signs in Greenwich.
G: Efficient Maintenance		
Transport Asset Management Plan; 2005/6	OPUS Consultants	The authorities have utilised the experience of international consultants OPUS, who have produced Asset Management Plans around the world, in the production of the Greater Nottingham TAMPs.
Highway works; ongoing	Association of Public Sector Excellence (APSE)	The City Council operates with APSE, an organisation that promotes quality public services via networking, the sharing of information and best practice, in the application of works undertaken on the ground.
Lighting PFI bid	London Borough of Enfield; Derby City Council	Previous successful bids used as a template for PFI expression of interest submission.

4.2 Demographic and Social Background

This section explains the current demographic and social trends that exist within Greater Nottingham.

4.2.1 Population and Housing

The latest population figure (mid-2003) for the Plan area is 630,100¹. The composition of this by area is:

Total Population	630,100
City of Nottingham	273,900
Surrounding County suburbs	273,800
Surrounding County settlements and rural area	82,400

According to projections produced for the Joint Structure Plan (November 2003)², the population is likely to rise to 641,000 by 2011 and 651,000 by 2021. The greatest proportion of this growth is planned to take place within the boundary of the City of Nottingham (City population projection: 280,000 by 2011 and 288,000 by 2021). This represents a population growth forecast of 1.7% between 2003 and 2011 and 3.3% by 2021 for the Plan area.

Because of demographic and social changes combined with the population growth, the Joint Structure Plan identifies that a further 37,000 homes are required by 2021. Reflecting the national sustainable communities agenda and recent house building trends, more emphasis is now being put on development on previously developed land.

The ethnic structure of Greater Nottingham is similar to the national average. In the 2001 Census 91.3% of the population were White, 3.8% Asian or Asian British (of whom 1.8% were Pakistani and 1.6% Indian) and 2.2% Black or Black British. Most of the Black and Minority Ethnic (BME) groups are heavily concentrated in the inner areas of the City. As they have comparatively young age-profiles, the proportion of the population in the BME groups is expected to continue to rise. These groups are also disproportionately likely not to have access to a car and have a low income.

Changes in the age-structure are of importance in assessing future travel demand. The number of children of school age is projected to fall by about 7% by 2011, resulting in a decrease in trips to school. Conversely, the number of people aged over retirement age is expected to rise by about 7% over the same period, leading to a greater requirement for public transport to meet their needs.

1 Office for National Statistics (ONS) 2003 Mid-Year Estimates based upon the 2001 Census and the 2003 Mid-Year Estimates. It should be noted that these figures are not comparable with those in LTP1, as they have been re-based following the 2001 Census. Also, Nottingham City Council considers that Mid-Year Estimates for its area are too low, something which it is pursuing with ONS.

2 Projections produced by Nottinghamshire County Council, February 2004.

4.2.2 Unemployment

In November 2004 8,900 people in Greater Nottingham were registered as unemployed ³. This gives an unemployment rate of 2.2%, which is very similar to the rate for England as a whole. In line with national trends, unemployment has fallen markedly in the last few years (by 63% since November 1996).

Nevertheless, there continue to be wide discrepancies in unemployment rates between areas. The unemployment rate in the City of 3.4% compares with 0.9% in Rushcliffe. The highest ward rates are in St Ann's at 6.5%, Bestwood at 5.8% and Aspley at 5.7%, which are all within the City ⁴.

4.2.3 Car Ownership

Although car ownership levels are continuing to rise, the 2001 Census showed that 32% of households do not have access to a car (37% in 1991). However, there remains a considerable difference between districts; 83% of households in Rushcliffe have a car, compared with only 55% in Nottingham. The figures for both Broxtowe and Gedling are 77%, with Hucknall's being 73%. These percentages compare with 73% for England as a whole.

³ Office for National Statistics; via NOMIS, November 2004

⁴ Claimant count data; ONS, 2004

Figure 4.1: Household Car Ownership by Ward

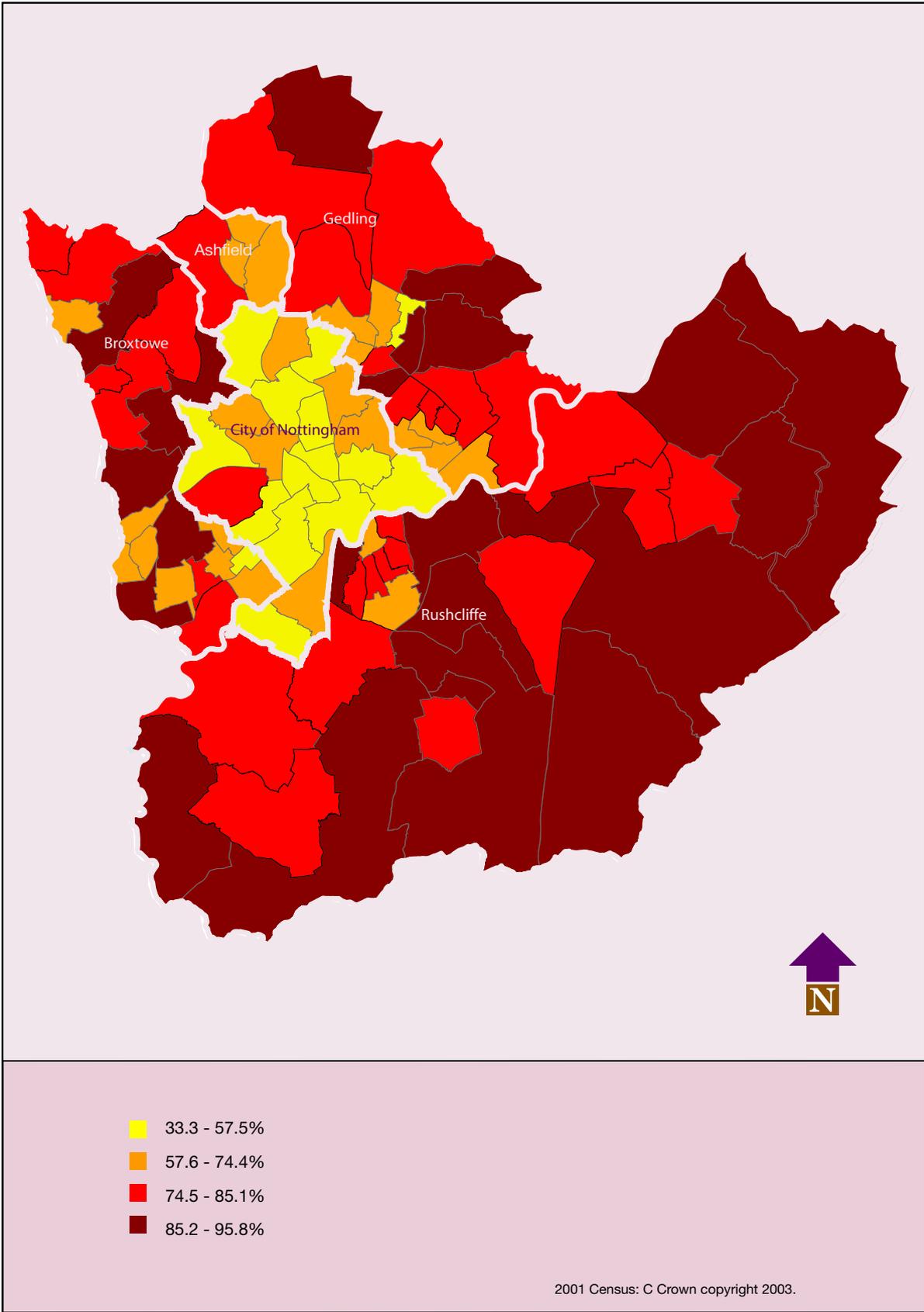


Figure 4.1 shows that there is a strong relationship between car ownership and deprivation when compared with Figure 4.11: Index of Multiple Deprivation, although it is also related to the perceived need for a car due to the distance from services and the availability of public transport. Ward car ownership rates vary from 96% in Wolds and 95% in Nevile (both in Rushcliffe) to 33% in St Ann's and 43% in Arboretum (both in the City).

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 at 27% and lone parents with dependent children at 45%. This contrasts with 91% of couples with dependent children having a car ⁵.

4.2.4 Travel to Work Mode

Table 4.3 shows mode of travel to work from the 2001 Census. As expected, public transport usage is highest amongst people working in the City Centre at 41%. Although 22% of City workers use public transport to travel to work this reduces to 16% and 15% for Greater Nottingham and the Nottingham Travel to Work Area.

Comparison with the 1991 Census shows that for Nottingham City workers, there was a slight increase in people travelling to work by car (as driver or passenger) and a decline in bus use. The number of people working from home increased and train use nearly doubled largely as a result of the introduction of the Robin Hood Line which provides a commuter link from North Nottinghamshire.

Table 4.3: Mode of Travel to Work

Figures %	Work at home	Metro/tram	Train	Bus	Motor cycle	Car as driver	Car as passenger	Taxi or minicab	Bicycle	On foot	Other
City Centre	0.3	0.1	4.2	36.8	0.4	42.2	5.7	0.9	2.1	7.1	0.2
Nottingham City	3.9	0.1	1.6	20.3	1.0	54.4	6.1	0.4	3.1	8.9	0.2
Greater Nottingham	7.6	0.0	1.2	15.1	1.0	55.3	6.1	0.4	3.2	9.9	0.2
Nottingham TTWA	7.7	0.0	1.1	13.9	1.1	55.5	6.2	0.4	3.4	10.4	0.3

Source: 2001 Census

Table 4.4 compares mode of travel to work for the Greater Nottingham Travel to Work Area against those of the other East Midlands Cities and with other Core Cities. This shows that commuter car use (as driver or passenger) is only lower in Liverpool and Tyneside. Bus use is only higher in Leeds and Sheffield. Greater Nottingham has the highest commuter cycling rate of all the comparator cities and only in Bristol is the combined walking or cycling proportion higher.

⁵ 2001 Census

Table 4.4: Mode of Travel to Work by Travel to Work Area

Figures %	Work at home	Metro/tram	Train	Bus	Motor cycle	Car as driver	Car as passenger	Taxi or minicab	Bicycle	On foot	Other
Nottingham	7.7	0.0	1.1	13.9	1.1	55.5	6.2	0.4	3.4	10.4	0.3
Derby	7.8	0.0	0.7	7.0	1.4	62.5	6.7	0.5	3.3	9.8	0.2
Leicester	9.0	0.1	0.7	9.3	0.9	59.1	6.7	0.3	3.2	10.5	0.3
Birmingham	8.0	0.3	3.3	13.1	0.8	58.4	6.4	0.5	1.5	7.5	0.2
Bristol	8.0	0.0	1.3	8.6	1.6	59.8	6.2	0.2	3.3	10.7	0.3
Leeds	6.5	0.1	3.4	15.3	0.8	55.9	7.1	0.6	1.2	9.0	0.2
Liverpool	6.2	0.5	4.7	13.4	0.8	53.9	7.4	1.4	2.0	9.4	0.3
Manchester	7.6	1.3	2.5	10.2	0.8	59.1	6.6	0.8	1.9	9.0	0.3
Tyneside	7.3	5.0	1.0	13.7	0.6	52.2	8.5	0.8	1.5	9.0	0.4
Sheffield	7.1	2.0	0.9	15.3	0.8	56.0	6.9	0.3	1.0	9.3	0.3

Source: 2001 Census

4.3 Congestion

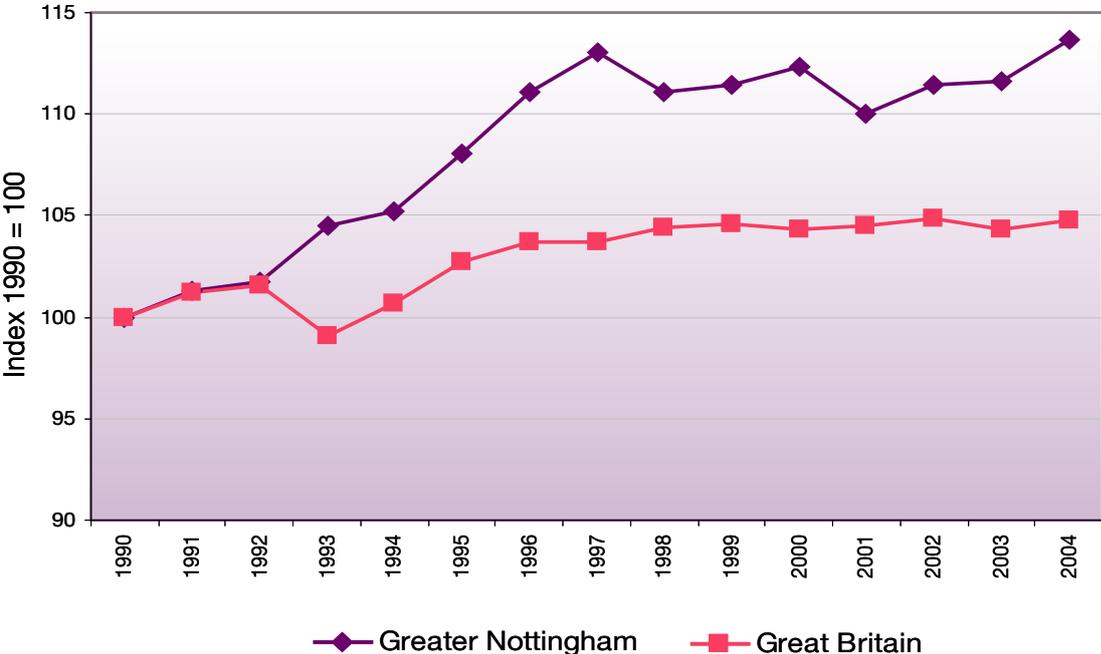
This section assesses the main issues relating to traffic congestion in Greater Nottingham.

4.3.1 Problems

Traffic flows in Greater Nottingham have been comprehensively monitored in the Plan area since 1990. The overall volumes of traffic on main routes in Greater Nottingham are shown in Figure 4.2.

Figure 4.3 shows that between 1992 and 1997 traffic flows grew at a much faster rate in Greater Nottingham than nationally on major urban roads. Since 1997 however traffic levels have largely stabilised reflecting the impact of land use planning policy, limited road building and measures to encourage modal change.

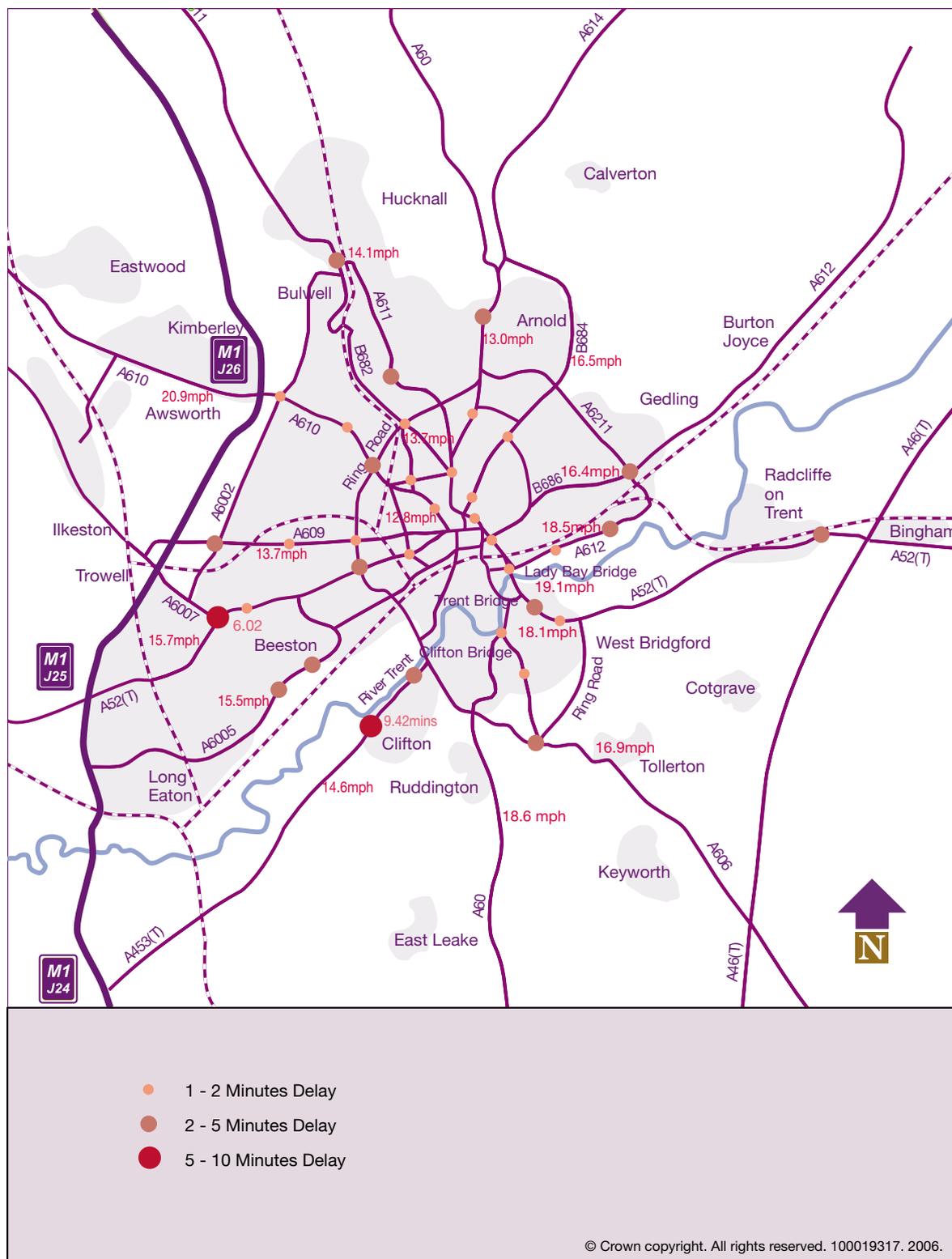
Figure 4.3: Traffic Growth (Vehicle kilometres comparison with Great Britain major urban roads)



Greater Nottingham is included in the DfT’s Traffic Speeds in English Urban Areas survey that is carried out every two years. In 2004 the average peak speed was recorded as 16.6 mph, up slightly on 16.2 mph for 2002 but down relative to the 18.3 mph recorded in 2000. Off-peak speeds went down slightly from 22.0 mph to 21.7 mph in 2002 and 23.5 mph in the base year.

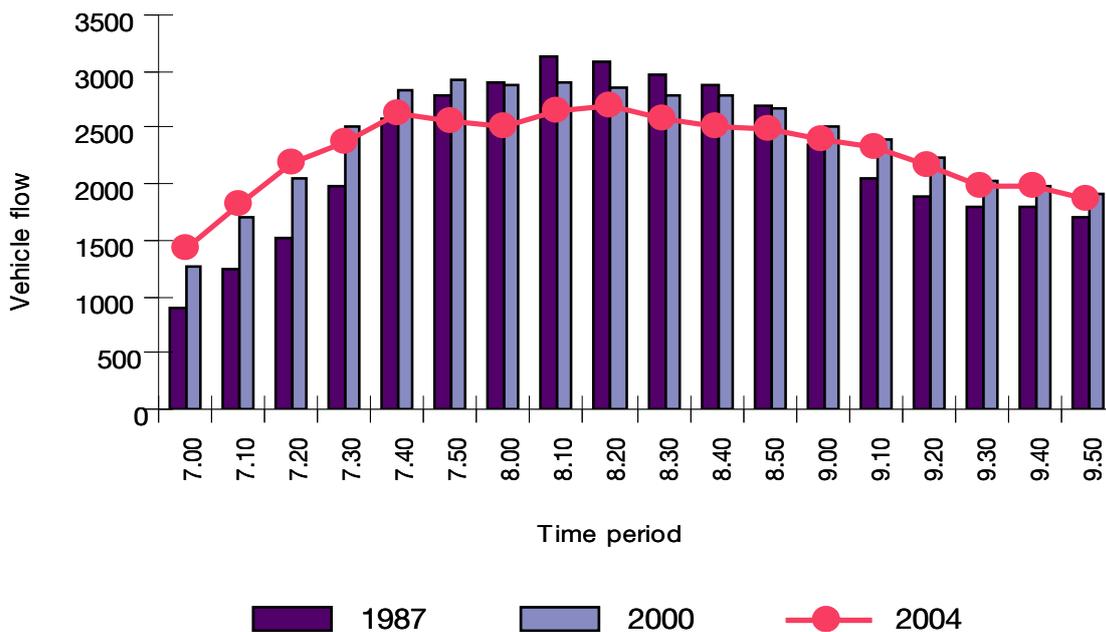
Local monitoring of journey times and junction delays for car drivers is also monitored annually, inbound to the City Centre in the morning peak period and outbound from the City Centre in the evening peak period on the main radial routes, and in both directions in each peak period on the orbital routes. The results of the morning peak period monitoring are shown in Figure 4.4. In 2005 in the morning peak period average speeds were recorded as 17.3 mph and 17.1 mph in the evening peak period.

Figure 4.4: Morning Peak Period Junction Delays and Average Journey Speeds



One response to increasing congestion has been peak period spreading. Motorists alter their journey times, either earlier or later, to attempt to avoid morning peak hour congestion. This is illustrated in Figure 4.5 which shows that traffic growth is largely taking place around the shoulders of the peak.

Figure 4.5: Inner Traffic Area Cordon AM Peak Inbound Traffic



4.3.2 Impacts

Traffic congestion in the Plan area is predominantly a peak phenomenon, particularly inbound in the morning peak, reflecting the attraction of the City Centre as a destination for employment. Typically, congestion is experienced where the Ring Road intersects with the main radial routes and on the approaches to the three main river crossings.

Congestion is the source of great frustration to the motorist. The Greater Nottingham Perception survey identified that 84% of residents feel congestion is a problem⁶. A significant side effect of increased congestion is ‘rat-running’ along inappropriate routes. This adversely impacts on both urban and rural communities and can be a serious road safety concern.

The journey time monitoring undertaken also identifies large variations in journey times on routes even on consecutive days. Similarly, during school holidays congestion within the conurbation is less disruptive. This unpredictability of journey times makes journey planning and scheduling of public transport services and deliveries extremely difficult and inefficient. Bus operators cite congestion as the primary factor causing unreliability of services in the conurbation.

⁶ Greater Nottingham Perception Survey, TTR for Nottingham City Council, July 2004

There are also significant economic impacts of congestion. High levels of congestion increase business costs and reduce access to markets. Local businesses identify increasing congestion as a significant threat to business competitiveness and growth.

It also has significant impacts both for air quality and for the emission of greenhouse gases.

4.3.3 Opportunities

Although tackling congestion is an immense challenge and should not be underestimated, Greater Nottingham is better placed than most to get to grips with the problem for the following reasons:

- Through the pursuit of rigorous land use planning policies over the last 30 years Greater Nottingham has retained its compact City form with a strong City Centre. Relative to other areas the dispersal of land use activities has thus largely been avoided. This means that Greater Nottingham has retained a development form suitable for a balance of different transport modes,
- The planned growth of the conurbation and further expansion of the City Centre in particular increases the opportunities for reducing the need for travel by locating new housing close to job opportunities and increasing the viability of public transport. Contributions from developers also present opportunities for upgrading of the existing transport network and for leveraging in other external funding,
- NET Line One is proving to be a highly popular alternative to the car and is contributing to reducing congestion within the Line One corridor. Initial surveys indicate that up to 30% of NET passengers previously used the car. Network expansion offers the opportunity to build on this success,
- Park and Ride is also popular with motorists. The existing network of five Park and Ride sites associated with the NET system, two bus based sites, and the parking provided at local rail stations already has the capacity for up to 5,000 vehicles,
- High frequency bus services are operating along most main routes. The majority are of high quality following heavy investment in the vehicle fleet over the last ten years by the operators,
- The Accessibility Planning process will highlight and address deficiencies in public transport, walking and cycling service provision, providing greater opportunity for the use of alternatives to the car,
- The heavy rail network serving the conurbation is greatly underutilised,
- The introduction of the Clear Zone has already led to a reduction of traffic movements within the Central Core area. Completion of the Turning Point scheme is expected to further reduce non-essential cross-city centre vehicle movements,
- The application of maximum parking standards and parking pricing policies that have been designed to encourage short stay shoppers over long stay commuters provide a platform for further restraint measures,
- With over 22% of all journeys being under one mile there remains enormous potential to encourage people to walk and cycle more. In terms of cycle ownership and use, while a third of all residents own a bike, cyclists account for only 3% of journeys to work ⁷,
- Over the last decade Greater Nottingham has led the way in working with employers to

⁷ Personal Travel Survey, TTR for Nottingham City Council, June 2003

produce travel plans to reduce car commuting. Applying similar techniques to schools and introduction of other complementary 'Smarter Travel Choice' measures it has been recognised there is significant potential to change travel behaviour,

- The 'Big Wheel' highly distinguishable branding and targeted campaigns provide a mechanism for supplying information in a simple and digestible format. A survey carried out in October 2004 showed that 71% of people surveyed had an awareness of the brand ⁸,
- As required by the 2004 Traffic Management Act both authorities now have nominated Traffic Managers. These posts have a duty to oversee the efficient operation of the highway network. The Act also gives the authorities the powers in the future to take over the enforcement of moving traffic offences, and
- The Transport Innovation Fund announced by the Government potentially presents a new source of funding to tackle congestion linked with the introduction of traffic restraint.

Specific proposals for tackling congestion in Greater Nottingham are included in Chapter 5.

4.3.4 Consultation Feedback

Typical consultation feedback responses regarding congestion issues were as follows:

Public Consultation:

- Large numbers of people want to see congestion reduced,
- People are frustrated over the unpredictability of journey times,
- Many respondents were in favour of the tram although some are strongly opposed,
- Walking and cycling featured heavily and people would like to see better quality infrastructure provided,
- The need for Ring Road improvements for both bus and car were identified, and
- Park and Ride is generally favoured.

Stakeholder Consultation:

- Local business regards reducing congestion as of very high importance,
- The adverse effects of traffic congestion on key access routes from the motorway and the need to upgrade the A453 link from the M1 is frequently mentioned,
- Improved cross-city routes and directional signing are encouraged, although there is a general consensus that traffic restraint measures are necessary,
- Increased investment in bus corridors would be welcomed by business,
- There is support for the introduction of smarter travel choices, with particular focus on school travel journeys,
- Many businesses however oppose the introduction of a Workplace Parking Levy, and
- Many interest groups want to see the demand for car travel reduced and alternatives made much more attractive to use.

⁸ Measuring the success of Marketing the Greater Nottingham LTP, TTR for Nottingham City Council, November 2004

4.4 Accessibility

This section examines the key accessibility issues affecting the Plan area.

4.4.1 Problems

A comprehensive assessment of accessibility problems and issues is contained within the Accessibility Strategy, which accompanies this Plan. In summary the five key accessibility problem areas identified are:

1. Geographic accessibility - Public transport needs to be reliable in order for people to reach essential services. Currently in Greater Nottingham there are high frequency bus services on all the main arterial routes with 85% of households in the City within 400 metres of a half-hourly, direct service to the City Centre. Orbital routes and link buses are filling the gaps and providing interchange opportunities but there is still more work to be done to ensure that if people live a distance from a key transport corridor they still have provision to get where they need to go. Public transport coverage in the rural parts of the Plan area is also a significant issue,
2. Physical accessibility - This can affect an individual's ability to get to the point of access and their ability to board the vehicle once they get there. If a stop lacks a shelter or seat it can also cause people problems whilst they wait for a service,
3. Financial accessibility - Limited finance may restrict people from using certain modes of transport and therefore limit their access to jobs and services. Current fare structures can be prohibitive for families and group travel. The perceptions of public transport cost in comparison to the costs of running a private car also need to be overcome,
4. Information accessibility - Within Greater Nottingham the expansion of electronic information systems is greatly increasing information availability. It is important to ensure however that more traditional paper based methods are maintained so that people without access to technology are not denied essential transport information, and
5. Safety - Safety and perceived safety can cause problems especially in the more deprived areas. People need to feel safe when travelling to and from public transport, on public transport or when walking or cycling. These problems can often be exacerbated at night time. Most people feel safe in the City during the day but over two-thirds of people don't feel safe after dark ⁹. 37% of residents feel very safe and 33% feel safe whilst walking to and waiting at a bus stop within Greater Nottingham ¹⁰.

4.4.2 Impacts

Accessibility problems can impact on an individual's ability to use a variety of essential services:

- **Education and training** - There is a high concentration of schools, colleges and further education establishments within the Plan area. These institutions offer an ever increasing variety of courses and activities that may often take place outside traditional working hours. Those who do not have access to a car rely on public transport during these hours. If

⁹ One Nottingham – One Plan, Nottingham Community Strategy, 2006

¹⁰ Greater Nottingham Perception Survey, TTR for Nottingham City Council, July 2004

factors deny them this education and training, it can have adverse effects upon their future employment opportunities. Due to the decline in traditional industries and the growth of the service sector there is also an increasing number of adults who need to access training facilities,

- **Employment** – It is not just people in work but also those seeking work that need to be considered. Within Greater Nottingham many people do not work a 9am to 5pm day. Flexi time and shift work increasingly needs to be taken into consideration and it is important to try and encompass these working patterns in our transport policies,
- **Food and essential services** - It is important to ensure that people have access to centres where shops are located. Supermarkets are very often only easily accessible to those who have access to a car. Making these sites accessible can help people access a wide range of products at affordable prices,
- **Health** – Adequate access to healthcare facilities is essential. It is important to ensure that people are not put off attending health services because they find them hard to reach. This is of particular importance where elderly and disabled people are concerned, and
- **Leisure and cultural destinations** - This is not an essential service but it does impact on the quality of life of residents. It is also of growing importance for the economic success of the local tourist industry that visitors to the area can access facilities.

4.4.3 Opportunities

Working more closely in partnership with service providers offers the greatest opportunities for improving accessibility. New approaches are being facilitated through the Accessibility Planning process and will be developed through the life of the Plan.

There are also significant opportunities to deliver improved accessibility through the co-ordination of investment programmes. Building Schools for the Future, the transfer of the City's housing stock to an Arms Length Management Organisation, future health care facilities investment programme and Leisure and Library services reviews all offer significant opportunities for improving accessibility to services particularly for those in most need.

The strong links between land use planning and transport in Greater Nottingham means that the growth in employment opportunities will predominantly occur in locations with good public transport links.

The developing Link bus network and supported bus services by the County Council provide the means for addressing the gaps in public transport provision not met by the commercial network.

Greater Nottingham is already fortunate to possess one of the most modern bus fleets in the country with an average age of buses in service by the two main operators under six years old. Over 80% of these vehicles are low floor with all vehicles expected to be low floor within three years. All 23 NET stops provide level access to the 100% low floor trams.

Taxis, private hire services, dial-a-ride and other community transport services also play a critical role in accessing essential services for those in most need and their role has further potential for development.

The County Council's programme of Mobility Management Action Area studies (MMAAs) offer an opportunity to improve access to district centres. These studies will be relaunched under the new name of Local Accessibility Transport Studies (LATS). As with the original MMAAs, LATS will be heavily focussed on identifying local travel needs in a defined geographic area through a series of thorough consultation exercises with stakeholders and the public. Initial consultation will focus on identifying issues of concern, whether specific problems such as a lack of crossing facilities at certain places, or more general concerns such as the need for better cycle provision. Following on from this, a series of proposals will be developed and a second round of public and stakeholder consultation will take place in order to gauge opinion before construction work commences.

This approach has allowed the Council to engage more meaningfully with partners and the public and has resulted in the development of co-ordinated programmes of schemes that incorporate improvements to public transport provision, cycling facilities and pedestrian access, especially for disabled pedestrians. Further details of the role and impact of LATS can be found in sections 6.4.1 (Accessibility) and 9.4.6 and 9.47 (Regeneration).

Specific proposals to improve accessibility in Greater Nottingham are included in Chapter 6: Delivering Accessibility.

4.4.4 Consultation Feedback

Typical consultation feedback responses regarding accessibility issues were as follows:

Public consultation:

- Many elderly people commented that they would like to see more local bus services to district centres, health services and local facilities,
- Higher frequency bus services in the evening and on a Sunday on the non arterial routes was regularly mentioned,
- Increasing bus services in rural areas was regarded as particularly important by many, and
- Improvement to cycle facilities was advocated as a way of increasing accessibility to services.

Stakeholder consultation:

- The business community identified road improvements as key to improving accessibility,
- The integration of development and transport infrastructure is well recognised by the business community,
- Interest groups saw access to jobs and services as very important and sustainable methods of transport should be promoted to achieve this,
- Extensions to the tram were cited as ways of improving accessibility,
- Better signing for cyclists was identified as a method through which to encourage greater use, and
- Improving access for disabled people was regarded as being very important.

4.5 Safer Roads

This section examines the key road safety issues affecting the Plan area.

4.5.1 Problems

Figure 4.6 highlights the number of people killed or seriously injured (KSI) on Greater Nottingham's roads over the last 25 years. Similarly Figure 4.7 shows the trend in child casualties for the same period. Figure 4.8 shows all casualties by mode of travel. Although there has been a significant reduction in the numbers of KSIs, particularly over the last five years the total remains high relative to many other areas. Specific issues influencing the safety of road users concern:

- 1. Network Design** – Nottingham's traditional radial street pattern and lack of a Ring Road for the eastern sector of the City, results in a large amount of vehicle movements taking place on all purpose roads within an inner City environment. This leads to high levels of interaction between motor vehicles and vulnerable road users.
- 2. Evening Economy** – The City Centre's strength as a commercial centre and popularity as a shopping destination means the daytime population swells by 41% above the resident population. The vibrant City Centre evening economy is also an issue. The large numbers of young people form a high-risk group, especially with higher speeds due to clear roads, drunken pedestrians and the risk of drink driving.
- 3. Motorcycles** – Following decreases in the late 1980s and early 1990s, the number of licensed motorcycles in Greater Nottingham has increased significantly over the course of LTP1. Motorcyclist casualties are an area of concern as despite their small modal share of traffic, they accounted for around 20% of all the KSI casualties in Greater Nottingham in 2004.

Analysis of motorcycle casualties have identified two specific groups being involved in motorcycle accidents:

- Riders of larger machines, predominantly ridden by those aged over 30, and generally a rural issue, and
 - Riders of smaller machines, predominantly ridden by younger riders, which is generally an urban problem.
- 4. Rural Speeding** – The majority of casualties (71% of KSIs and 50% slight casualties) involving car drivers and passengers in the County part of Greater Nottingham occurred on rural roads in 2004, with a particular problem with KSIs on rural links. Analysis of these casualties has shown that driving too fast for the conditions or excessive speed were contributory factors in over a third of all fatal accidents on rural roads in Nottinghamshire.

Such problems can sometimes be difficult to treat with engineering solutions because they tend to be somewhat random in geographical location and circumstance. Traffic management measures such as signing and lining schemes, inter-active signs and marker

posts, speed limits and safety cameras are, however, used when appropriate, along with education/publicity campaigns, such as bus back advertising on buses that travel within rural areas. Where casualties occur over lengths of roads, route management strategies are implemented along the whole length of the route.

Figure 4.6: Number of People Killed or Seriously Injured

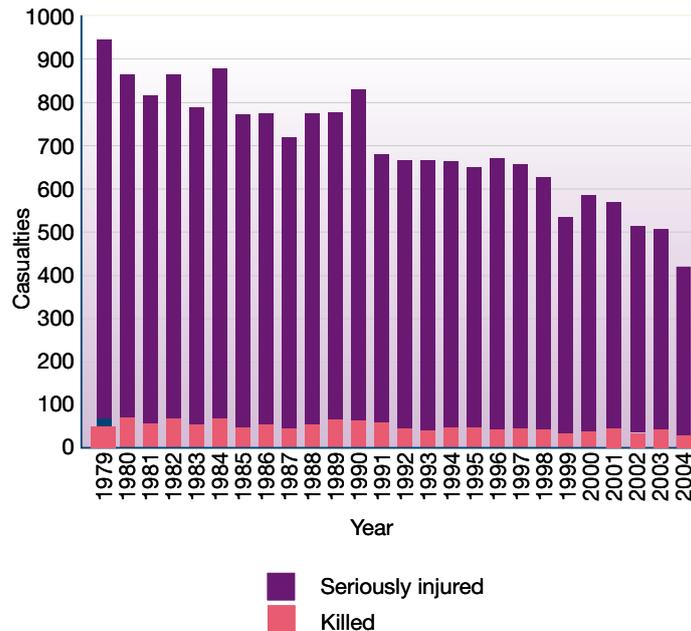


Figure 4.7: Children Killed or Seriously Injured

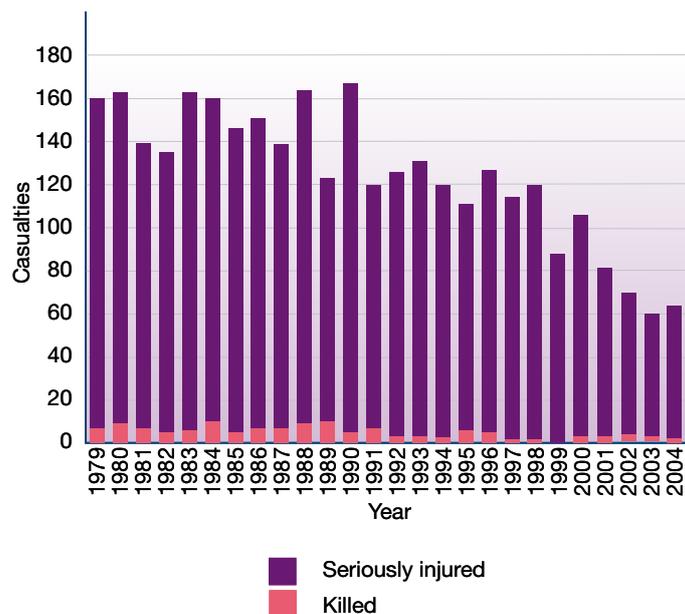
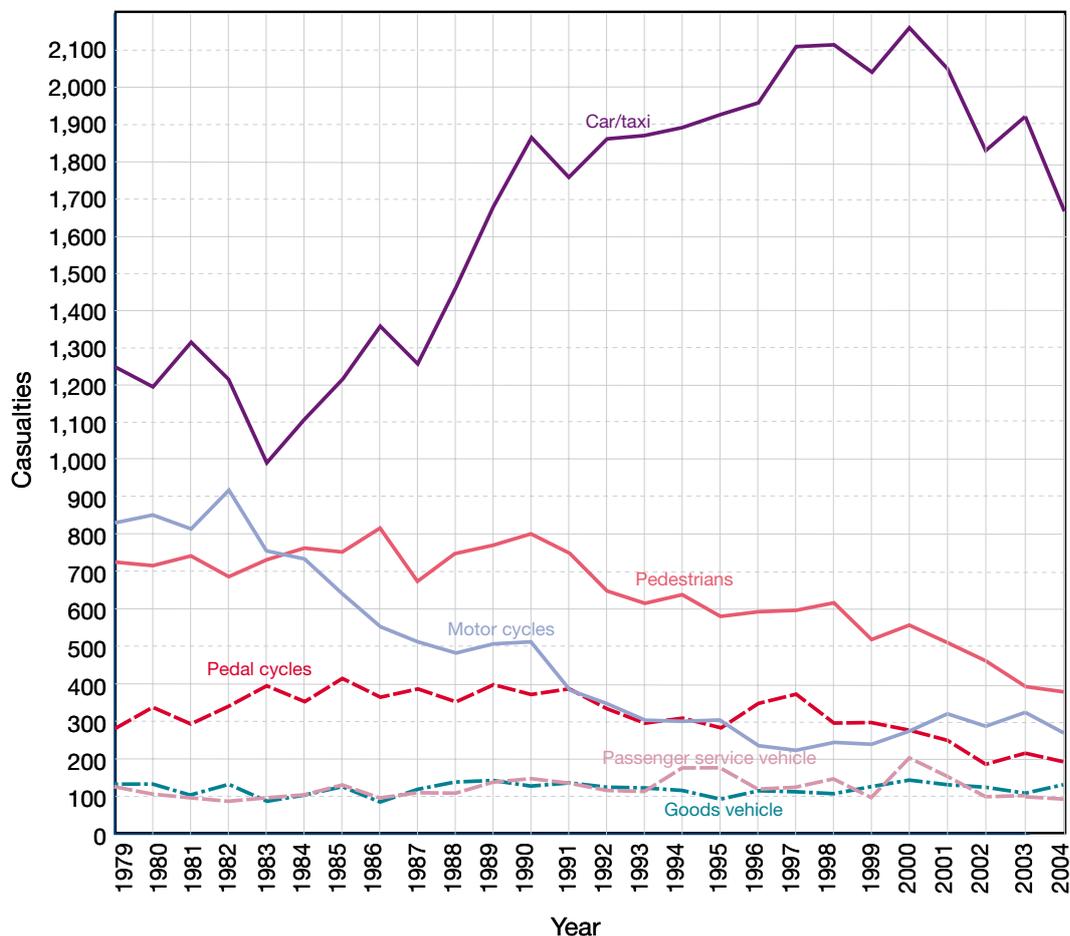


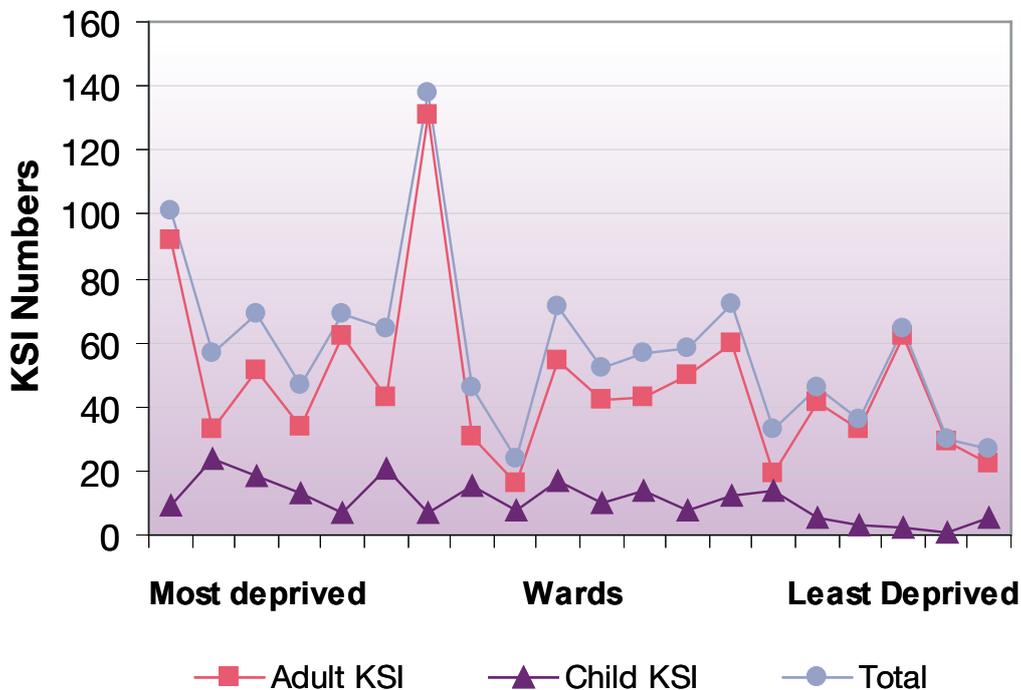
Figure 4.8: Casualties by Mode of Travel



4.5.2 Impacts

Road accidents remain the single biggest cause of death in young people aged 12 to 16. There is evidence that members of poorer communities are more likely to become road accident casualties than their better-off peers. Children in social class V are five times more likely to die in a road accident as a pedestrian than children from social class I and Nottingham has a number of areas ranked as some of the most deprived areas in the country. Figure 4.9 highlights the relationship between areas of deprivation and casualty trends.

Good progress has been made in reducing child casualties in Greater Nottingham during the period of the first LTP, and child road casualty reduction is on target to meet Government's 2010 child road casualty reduction target. Despite continuously meeting the required trajectory related to the Government's 2010 target, the numbers of child road casualties has, however, fluctuated during the last two years, possibly due to the small numbers involved.

Figure 4.9: Comparison of Accidents between City Wards based on Multiple Deprivation

The peak in the graph to the left of centre shows the high number of casualties taking place in the City Centre.

4.5.3 Opportunities

The continued application of traditional road safety education and engineering measures will continue to reduce casualties within the Plan area.

Since speed management became a high priority and safety cameras introduced in 2000 the reduction in road casualties in Greater Nottingham has accelerated. The effectiveness of the cameras is demonstrated in Table 4.5. The continued investment in this technology should therefore achieve further significant safety benefits.

Table 4.5: Performance of Safety Cameras in Greater Nottingham

Camera type	% Reduction in killed or seriously injured casualties	% Reduction in all casualties
Digital	48	38
Fixed	75	55
Mobile	34	15
Red light	49	19

New Funding Arrangements

The revised funding arrangements for road safety offer an opportunity to provide greater flexibility within road safety expenditure, as well as providing financial stability to help facilitate long-term planning.

Both authorities only install safety cameras where no other road safety measures can be used to address road safety problems, and the revised arrangements recognise and support this approach.

The authorities are currently in discussions with all interested parties, such as the Police, to develop a strategy to ensure that the new funding arrangements offer the greatest benefits in delivering casualty reduction.

It is anticipated that the existing Nottingham Safety Camera Partnership will be maintained in principle but succeeded by a Casualty Reduction Group. Whilst safety cameras will remain an aspect of the work undertaken by the group, the responsibilities of the group will be much broader expanding into other areas of casualty reduction work.

Different partnerships already exist with both internal and external organisations/agencies involved in the delivery of casualty reduction. It is intended that the Casualty Reduction Group will be an amalgamation of many of these existing partnerships, helping the continuation of the pooling of resources to maximise casualty reduction benefits.

The following highlight further key road safety opportunities:

- The 2004 Greater Nottingham Perception survey showed that 71% of residents believe that speed cameras should be used more widely to improve road safety,¹¹
- The Clear Zone and Turning Point schemes are helping to reduce the conflicts between vehicles and vulnerable road users in the City Centre,
- The national focus on tackling binge drinking and alcohol related anti-social behaviour including the application of an alcohol saturation zone for Nottingham City Centre and stricter licensing should also help to reduce road casualties,
- There are particular opportunities to further link school travel plan development and the safer routes to school programme with the Building Schools for the Future Programme to improve road safety on the school run,
- The Neighbourhood Road Safety Initiative (NRSI) has provided Nottingham with a specific opportunity to tackle road safety within inner City deprived communities,
- The integration of casualty reduction features with maintenance, accessibility, public transport improvements and regeneration elements of the LTP programme help to secure additional safety benefits,
- Work is being undertaken with regional partners to identify the origins of people involved in road accidents within the Plan area. In particular this research is identifying the need to think more regionally in planning road safety education activities, and
- Working in partnerships such as 'Shiny Side Up' established in 2001 to address the numbers of casualties involving sports bike riders and the 'Bare Bones' project established in partnership with the Police to target the increasing numbers of casualties involving

¹¹ Greater Nottingham Perception Survey, TTR for Nottingham City Council, July 2004

younger riders on scooters.

Details of specific measures to improve Road Safety are set out in Chapter 7 and in the authorities' separately produced Road Safety Strategies.

4.5.4 Consultation Feedback

Typical consultation feedback responses regarding road safety issues were as follows:

Public feedback:

- Road humps, speed cushions and safety cameras are unpopular with some,
- Many others however want traffic speeds controlled with preference expressed for more use of safety cameras instead of traffic calming methods, and
- Better cycle facilities away from traffic but also away from pedestrians.

Stakeholder feedback:

- New technology should play an increasing role in the package of road safety measures to be implemented,
- 20 mph zones in residential areas would be welcomed,
- The need to improve cycle safety on the road was identified, and
- Support expressed for more 20mph zones in residential areas and near schools.

4.6 Air Quality and Environment

This section examines the key air quality and environment issues affecting the Plan area.

4.6.1 Problems

Within the City two Air Quality Management Areas (AQMAs) have been declared that have been identified as being primarily traffic related. The first is located in Nottingham City Centre and the second is located on the A52 Ring Road on the Clifton Boulevard section in the vicinity of the Queens Medical Centre (QMC). Following assessment work completed and submitted to DEFRA in February 2005 two further AQMAs are to be declared within the Rushcliffe part of the Plan area. The first of these is on the main approaches to Trent Bridge with the second on the A52 Ring Road from the Nottingham Knight junction to the City boundary. Broxtowe Borough Council have also recently declared an AQMA in an area close to the M1 motorway.

Detailed assessment and monitoring has identified high concentrations of nitrogen dioxide as the source of these air quality problems. The diurnal variations in nitrogen dioxide concentrations and the contrast in concentrations between the two 'rush hour' peaks recorded at continuous monitoring stations in the City Centre (two sites) and vicinity of the QMC clearly shows that traffic is the major source of nitrogen dioxide at these sites.

Figure 4.10 shows the location of the AQMAs. Figure 4.11 compares the changes in air quality throughout the day and highlights a clear correlation between air pollution and the morning and evening peaks in traffic flow.

Figure 4.10: Air Quality Management Areas (Broxtowe AQMA not shown)

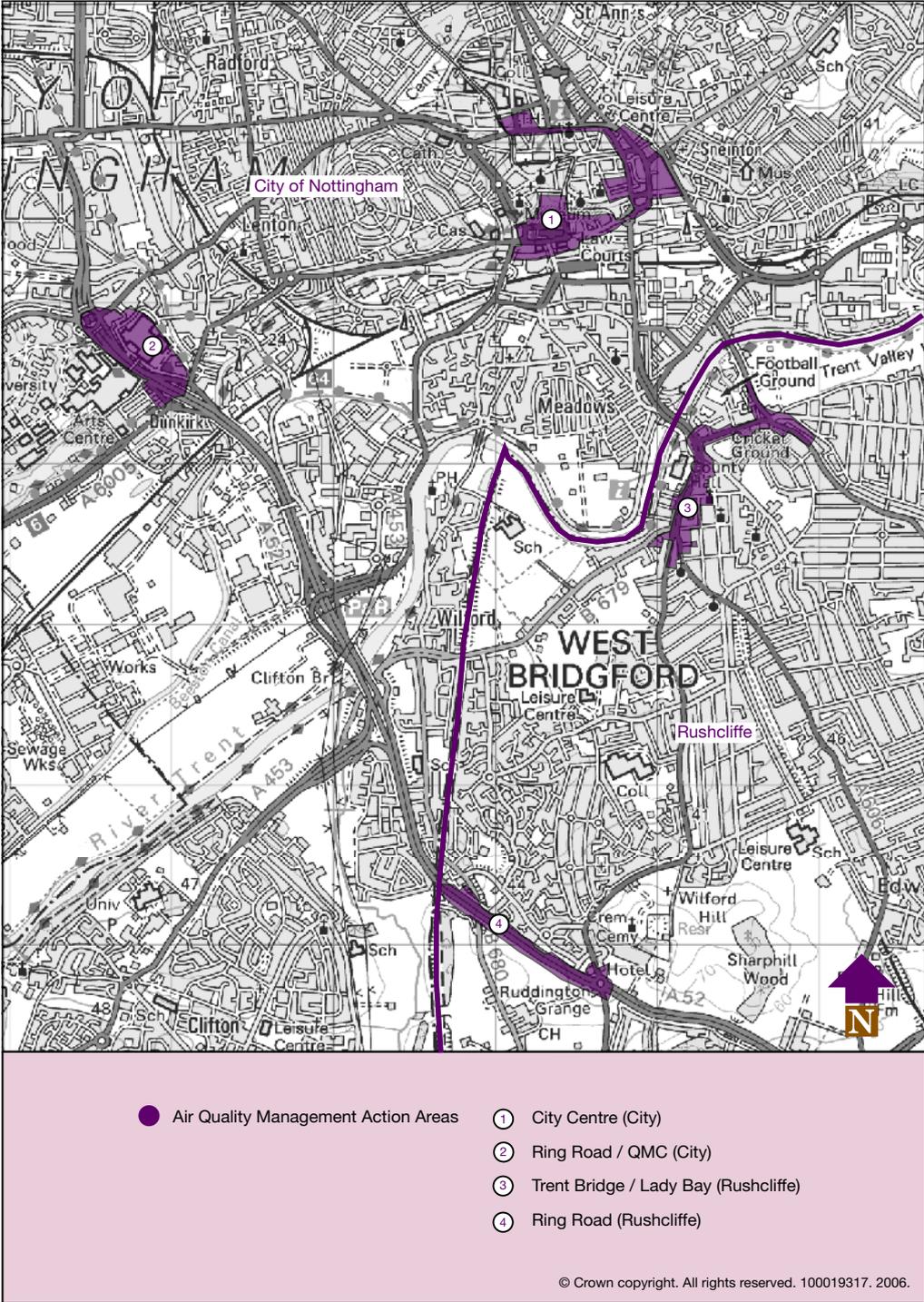
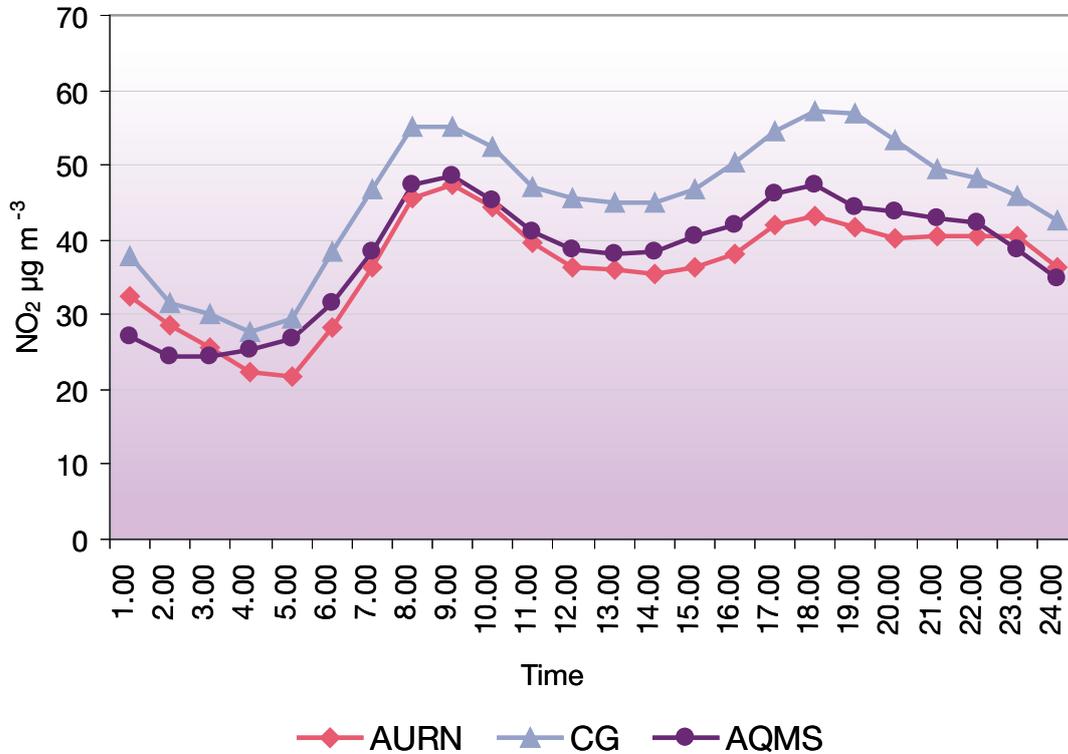


Figure 4.11: Link Between Traffic and Air Pollution

It has been calculated that traffic within the Plan area generates over 240,000 tonnes of carbon dioxide per year, a key contributor to climate change. The process of the Strategic Environmental Assessment that accompanies the preparation of this Plan identifies other key environmental issues to be taken into account.

4.6.2 Impacts

The air quality problems in the Plan area occur through exposure to high levels of nitrogen dioxide caused by stationary or slow moving traffic. 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.

Intensive research is currently being undertaken nationally into why there is an increasing incidence of respiratory diseases, particularly amongst children. It is not yet possible to establish how substantial a contribution is made by road vehicle emissions, but there is a clear scientific consensus that road vehicle emissions are a significant factor.

The local impacts of climate change will be seen in damage to the environment, property and the economy mainly from increased temperatures, lower summer rainfall and increased winter

rainfall and related effects. Disruption to transport by extreme heat or floods will likely increase in frequency ¹².

4.6.3 Opportunities

In Greater Nottingham there is clearly a very close link between tackling congestion and improving both air quality and addressing climate change. Related opportunities include:

- As a compact City with generally good public transport coverage combined with relatively high walking and cycling levels, there is a good basis for encouraging modal change,
- Expansion of the NET tram network will also improve public transport provision whilst not adding to pollution within the problem areas,
- Once completed the Turning Point scheme in the City Centre will reduce the amounts of through traffic passing through the City Centre. The Clear Zone has also reduced traffic movements within the central core area,
- One of the original aims of the Clear Zone was fostering an environment for technological change. The scheme remains a local focus for encouraging the implementation of clean vehicle technologies and innovative delivery systems,
- More intensive development could result in future air quality problems at specific locations but offset against this is a beneficial overall reduction in the need to travel. It will remain important therefore that when development is permitted, improving integrated transport provision and encouraging modal change are followed through. This will be achieved through well integrated land use planning policies, the preparation of Integrated Transport Assessments and Travel Plans linked to development proposals, and
- Although in Greater Nottingham overall traffic levels have stabilised in the last five years emissions from transport still represent a major concern. Whilst vehicles can be expected to get more efficient in the future, the impact of technological change is unlikely to be sufficient compared to potential increases in vehicle use particularly at the regional level. The only real solution therefore is to continue to contain growth in vehicle use.

Specific proposals to improve air quality and for protecting the environment are included in Chapter 8: Better Air Quality and the Environment.

4.6.4 Consultation Feedback

Typical consultation feedback responses were as follows:

Public feedback:

- The tram was seen as an effective way of reducing pollution,
- Buses are still perceived to be a significant source of pollution by some,
- Some people stated that the number of cars on the road must be reduced to improve air quality,
- Promoting more cycling and walking were heavily mentioned, and
- Speed cushions were criticised for increasing pollution.

¹² Climate Change in Nottinghamshire, Nottingham shire Agenda 21 Forum, July 2004.

Stakeholder feedback:

- More frequent Ring Road 'shuttle bus' services are encouraged,
- Look at the potential for transporting more freight by waterways,
- Walking and cycling was identified as requiring further promotion, and
- Clear Zone was identified by many as positive but considered too restrictive for some small businesses.

4.7 Regeneration and Neighbourhood Renewal

This section examines the key issues surrounding regeneration and neighbourhood renewal.

4.7.1 Problems

Greater Nottingham is an area of contrast. Overall the economy is strong but there are also areas of severe disadvantage. The Office of the Deputy Prime Minister used 37 indicators to produce their 2004 Indices of Deprivation. Of the 414 super output areas in Greater Nottingham 81 (20%) are in the worst 10% of areas in England and 125 (30%) are in the worst 20%. Most of these are in the City, where 79 (45%) of the 176 areas are in the worst 10% nationally and 115 (65%) in the worst 20%. These are concentrated in the inner City (particularly St Ann's, Sneinton, Hyson Green, Radford and The Meadows) and the north-west (Bulwell, Aspley, Broxtowe Estate, Bestwood and Bestwood Park).

Outside of the City, two areas in Hucknall are in the worst 10% nationally and parts of Eastwood, Arnold and Netherfield are in the worst 20%. In rural areas the effects of colliery closures are still being felt, and several villages and smaller towns – such as Cotgrave and the western part of Broxtowe - suffer from deprivation. Several district centres are also in need of regeneration (in order to encourage local shopping and provide local employment) as the public realm becomes more dilapidated and units are vacated or occupied by lower order retail. Figure 4.12 highlights the levels of multiple deprivation in Greater Nottingham.

Greater Nottingham is undergoing structural change affecting both the sectors people are employed in and the occupations they hold. Sectors experiencing growth are business services, public administration, health and education which are all over-represented compared to the region, and the representation of non-marketed services even exceeds the national average. Job losses are being experienced mainly in manufacturing, particularly traditional industries. Whilst this sector is now less important than it was, it still accounts for more than 10% of total jobs.

The increased movement towards a knowledge based economy will manifest as a loss of mainly lower order jobs and the creation of higher order ones. Therefore growth is projected in some professional and managerial occupations as a result. Growth in 'assistant' posts, such as nursing auxiliaries and teaching assistants, is also anticipated to relieve pressure on doctors and teachers. Occupations projected to decline include administration, some elementary occupations and plant, process and machine operatives.

4.7.2 Impacts

Those employed in lower order occupations are most likely to lose their jobs as the economy changes. Yet growth will be in higher order jobs, which demand higher skills and qualifications. Potentially this could result in increased commuting and missed opportunities for the local population.

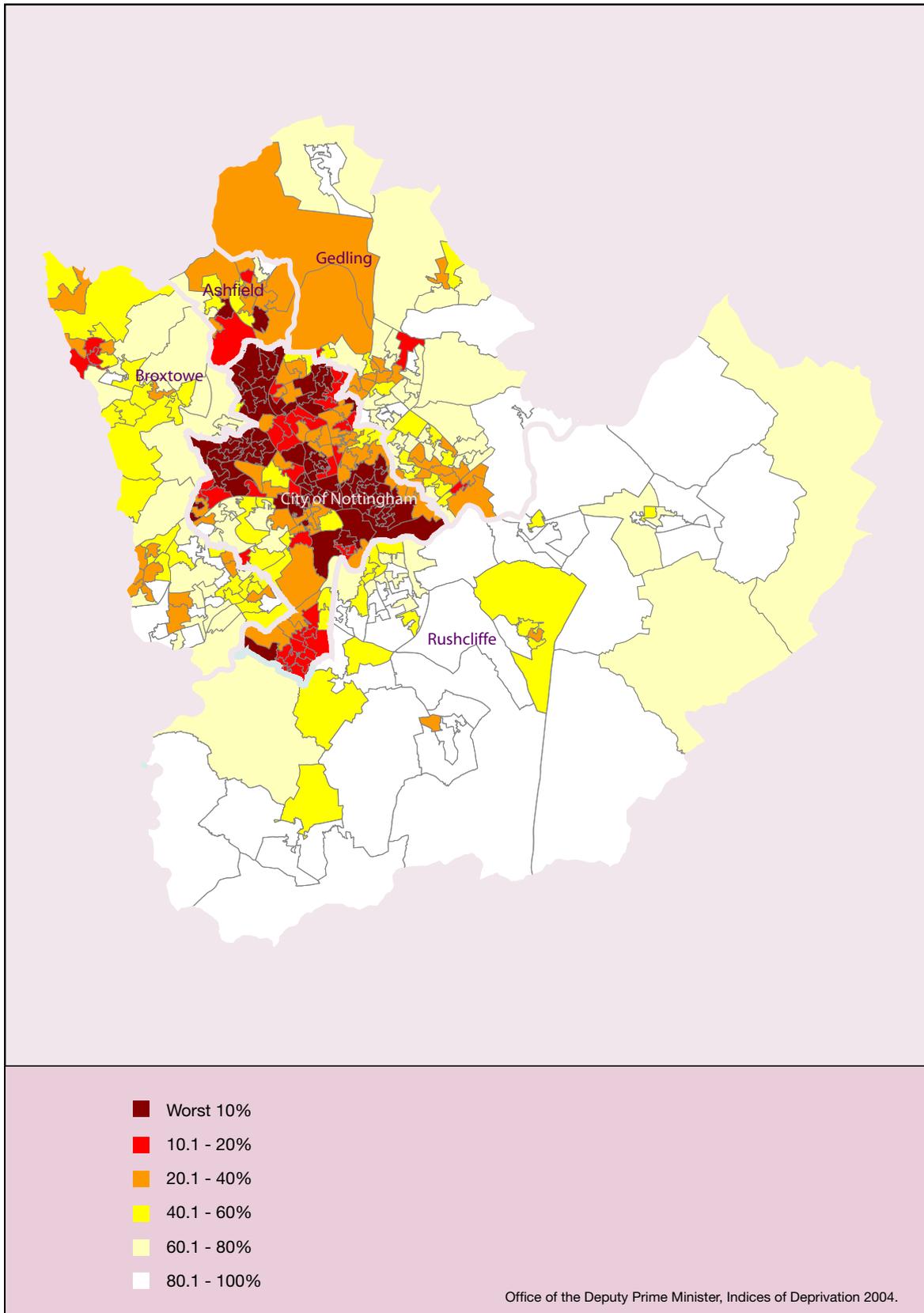
There are parts of Nottingham where the proportion without any qualifications exceeds 40%. In the ward of Aspley nearly 50% of adults have no qualifications. If these issues cannot be addressed, including access to education and training, residents will not share the benefits of this growth, and, as highlighted in the Local Futures report will prevent growth being achieved to the aspired levels.

In Greater Nottingham the proportion of jobs in knowledge intensive services is now approaching 50%. Students have been crucial to this progress and will continue to be so now Nottingham has been awarded 'Science City' status.

The loss of local employment focuses in rural areas through pit closures has also had a physical impact. In Greater Nottingham over 50 hectares of employment land has been lost to other uses over the last five-years alone. In some cases it has been possible to get previously used employment land back into use, an example being Capital One which has created nearly 2,000 jobs on about one hectare of land in the City Centre. However, the majority of employment land has been lost to residential uses. This has helped to relieve the pressure of decline in the average household size, and may assist growth by making the area more attractive to potential investors and their employees but reduces the choice of suitable employment site locations that may in turn discourage inward investment.

There are a number of social implications resulting from the decline of traditional industry within the coalfield communities in particular, including the loss of a 'neighbourhood feeling', increased crime levels and anti-social behaviour.

Figure 4.12: Index of Multiple Deprivation



4.7.3 Opportunities

The National Strategy for Neighbourhood Renewal is a major initiative from the Government's Social Exclusion Unit. It concludes that the resulting problems require coordinated, long term action which is developed and managed locally and invests in people and communities. The goal of the Neighbourhood Renewal Strategy is to narrow 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 ¹³. In Greater Nottingham a commitment to this from partners and resources will ensure that in the future action and resources can be focused on poor neighbourhoods and improve the areas for the citizens including integration of LTP measures.

The County Council has long recognised that a continuous programme of investment is needed in many areas of Nottinghamshire to create desirable, attractive places to live and has a proven track record over the last 30 years of undertaking improvement schemes aimed at complementing local transport initiatives. To continue this work it has set up a substantial five-year capital programme to provide funding for 'Building Better Communities' (BBC). The initiative concentrates on physical improvements, with a particular focus on areas of deprivation. The programme has already completed over 240 projects in its first year – many of them linked to transport improvements. Schemes are developed from the 'ground up' with community groups being encouraged to suggest projects for their local areas. Schemes are then checked to identify potential added value that can be achieved if maintenance issues, transport measures, health and education benefits and additional grant funding bids are packaged together.

Three 'regeneration zones' on the fringes of the existing City Centre have been designated. 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 economic prospects in the area ¹⁴. Within Greater Nottingham agencies such as Nottingham Regeneration Limited (NRL) have been set up to facilitate regeneration by engaging with private developers and helping to remove the impediments to regeneration.

In addition to the City's regeneration zones and the County's BBC initiative, the County Council's LATS also place a great deal of emphasis on regeneration issues in district centres. In LTP1, MMAAs helped to promote the role of district centres as shopping and service centres, promote leisure and tourism, and add to the attractiveness of each area. Work on existing study areas will continue into LTP2 along with new studies that are proposed.

In the rural areas of the Plan the LATS can promote the market towns as focuses for growth, particularly as service centres and transport hubs for their hinterlands. The Rights of Way Improvement Plan will also assist in promoting tourism in the countryside and improving access to it.

Transport improvements can help to revitalise areas and make them more attractive to investment. The expansion of the NET system in particular will help maintain Greater Nottingham as a regional centre, and bring economic benefits to the region and help lure fresh

¹³ Nottingham's Neighbourhood Renewal Strategy, One City Partnership Nottingham, May 2003

¹⁴ Nottingham Regeneration Limited, Business Plan 2005-2009, Jan 2005

investment into depressed areas. Phase 2 specifically links existing employment areas and land for a six hectare Science and Technology Park.

The role of transport in bringing forward regeneration and neighbourhood renewal is covered in more depth in Chapter 9.

4.7.4 Consultation Feedback

Typical consultation feedback responses regarding regeneration and neighbourhood renewal were as follows:

Public feedback:

- People would like to see an enhancement of links between the City and developments on the outskirts,
- Trams were seen as important in accelerating urban regeneration and have been viewed as already having a positive impact on Greater Nottingham, and
- Villages and rural areas also need considering in terms of regeneration.

Stakeholder feedback:

- Welcome schemes that would support the areas economic expansion and sustained regeneration such as:
 - NET Phase 2,
 - Station Masterplan,
 - A453 improvements,
 - Hucknall Town Centre Improvements, and
 - The Gedling Transport Improvement Scheme.

4.8 Quality of Life

This section examines the key quality of life issues affecting the Plan area.

4.8.1 Problems

Quality of life is influenced in many ways but lack of transport options and over dependency on motorised transport can be a contributory factor. Some key quality of life problems identified of particular relevance to the Plan area are:

- Poor streetscape quality and the quality of public spaces are not up to the public's expectations, and do not engender pride, often leading to anti-social behaviour,
- Illness and insufficient levels of physical activity are resulting in poor levels of public health, and
- Transport can be a source of severance and generates unwelcome noise which can have severe adverse impacts on communities.

4.8.2 Impacts

Streetscape/quality of public spaces – Improving streetscape quality and public spaces can encourage public activity and allows pedestrians to move freely through uncluttered streets. It assists the orderly, efficient and safe movement of people and goods. It encourages people to drive less and walk more. Improving conditions for walking is identified as a high or medium priority by 50% of Greater Nottingham residents.

Community safety – Community safety and fear of crime is of growing concern to Greater Nottingham residents. People will only use public transport, walk or cycle if they think it is safe to do so. Women, the young and the elderly and ethnic minorities have particular safety concerns that need to be taken account in transport provision.

Health - The Department of Health recommends that each person 'should do 30 minutes of moderate exercise five times each week'. Unfortunately 60% of men and 75% of women do not reach these targets. Historically much of this exercise would have come from walking and cycling in the normal course of daily life but this is no longer the case. Physical activity is vital in tackling obesity as well as contributing to preventing coronary heart disease, stroke, diabetes and hypertension. It also maintains respiratory capacity and helps prevent osteoporosis. In 2003/4 Nottingham Health Authority reported 3,000 admissions and 1,000 deaths from coronary heart disease. The 2001 Census shows that 19% of the population in Greater Nottingham has a long term limiting illness, which is above the national average.

Severance, HGVs and Noise - Greater Nottingham is densely built up and a significant proportion of the population are affected by high traffic volumes passing close to their homes. This has led to community severance and exposure to traffic noise. High levels of road traffic noise can heighten stress and anxiety, especially at night.

4.8.3 Opportunities

The integration of planning and transport along with an increasing neighbourhood focus means that improving the quality of streets and public spaces within the Plan area is recognised as being of significant local importance. Maintenance and road safety improvements can assist with improving the quality of the public realm. This can include improved lighting, footway or carriageway repairs and other local neighbourhood transport schemes.

As mentioned previously, there remains tremendous potential for increasing walking and cycling within the Plan area. Health promotion studies have shown that only by incorporating lifestyle changes into the daily routine can these changes be sustained.

Specific measures that will improve Quality of Life are included in Chapter 10: Quality of Life.

4.8.4 Consultation Feedback

Typical consultation feedback regarding quality of life issues included:

Public consultation:

- Promotion of walking and cycling to benefit health and well being was well recognised,
- There was recognition that walking and cycling will also improve air quality, and
- Personal safety issues particularly regarding use of bus stops at night were identified.

Stakeholder consultation:

- Schemes to improve personal security on public transport were proposed, and
- Personal safety concerns were expressed for pedestrians and cyclists using isolated off-road routes.

4.9 Efficient Maintenance

This section examines the key maintenance issues affecting the Plan area.

4.9.1 Problems

Both authorities are currently collecting inventory data and comprehensively reviewing the state and condition of the highway through the process of preparing Transport Asset Management Plans (TAMP), see Chapter 11: Efficient Maintenance. This encompasses all of the following:

- Carriageways (both classified and unclassified),
- Footways,
- Cycleways,
- Highway drainage,
- Trees and verges,
- Street lighting and illuminated signs,
- Non-lit signs,
- Structures,
- Road markings, and
- Winter maintenance.

During the 1980s and 1990s there was a decline in funding for highways which led to a bias towards reactive maintenance, preventing a more cost-effective, proactive maintenance regime from being developed. This has led to a major backlog of essential work which undermines the structural integrity of the highway network.

There are many factors which contribute to poor highway condition. The main impacts are from:

- Nature of the network i.e. urban/rural,
- Traffic usage and composition,

- Extent of utility activity,
- Weather conditions,
- Scope of past maintenance work, and
- Rate of economic development.

The City's highway network is in a much worse condition than national standards. The network, being almost entirely urban, has particular characteristics that need to be taken into account:

- Well above average traffic concentrations,
- Wider than average road widths,
- Street lighting across the whole network,
- More footways/pedestrian facilities,
- More complex and extensive traffic signal installations,
- Significantly more traffic calming schemes,
- Extensive road markings/street furniture, and
- High quality materials in the City Centre and environmentally sensitive areas.

As a result maintenance needs are significantly higher than the national average highway network requirements.

4.9.2 Impacts

Like any asset, highways need to be maintained efficiently to ensure that they operate effectively and at optimum cost.

There are close linkages between maintenance and safety. Surface texture impacts on stopping distances and vulnerable road users such as pedal and motorcyclists are particularly at risk of poor highway condition.

The elderly and the young are particularly put at risk by poor condition of the footway. There can also be a high financial cost to an authority through claims.

Under investment in bridges and structures can lead to the need to introduce vehicle weight restrictions. This may require long detours to be made to access premises potentially adding to business costs. This not only adds to unnecessary vehicle kilometres, but also increases intrusion on the alternative routes. This can be particularly acute in quieter, rural areas.

Unplanned or emergency road works can cause extensive disruption across the network that can lead to considerable delays to public transport and again add to business costs.

4.9.3 Opportunities

Key opportunities for optimising maintenance efficiency are:

- The process of preparing a TAMP requires the identification of priority areas for maintenance work and better management of resources for maximum effect, should additional funding be forthcoming,
- The integration of maintenance work into other LTP schemes, particularly bus corridor and

road safety schemes, is achieving economies of scale in construction, procurement and design and thus achieving better value for money and reducing disruption impacts,

- The Private Finance Initiative for street lighting renewal is currently being considered by the authorities as an alternative procurement option, and
- The de-trunking of Highways Agency operated roads increases the size of the local authority managed network, and increases the potential for economies of scale in maintenance contracts.

4.9.4 Consultation Feedback

Typical consultation feedback regarding maintenance issues included:

Public feedback:

- Minor roads and pavements are in urgent need of more maintenance work,
- Litter and clutter needs to be dealt with more effectively,
- People have concerns that road works are worsening congestion, and
- Cycle tracks should be kept free of glass and surfaces kept in better condition.

Stakeholder feedback:

- Road works need to be better managed to minimise disruption,
- More attention needs to be given to the maintenance of footways and cycle ways, and
- Cycle ways need to be given a higher priority in winter maintenance.

4.10 The Big Wheel Familiarity and Favourability Study

A number of LTP marketing related surveys have been undertaken by the authorities, including the Annual Familiarity and Favourability study that looks at the impact The Big Wheel campaign has had on 300 respondents ¹⁵.

The primary objective of the study has been to assess the changing patterns in both business and personal opinions over time, by conducting surveys in 2001, 2003 and 2004. The results have been used to review the impact of the Big Wheel campaign and will advise and shape its future direction.

Awareness of the LTP increased from 39% to 71% in the 2004 survey. As with previous surveys, around half of the respondents aware of the LTP lived in the City with an even split between age groups.

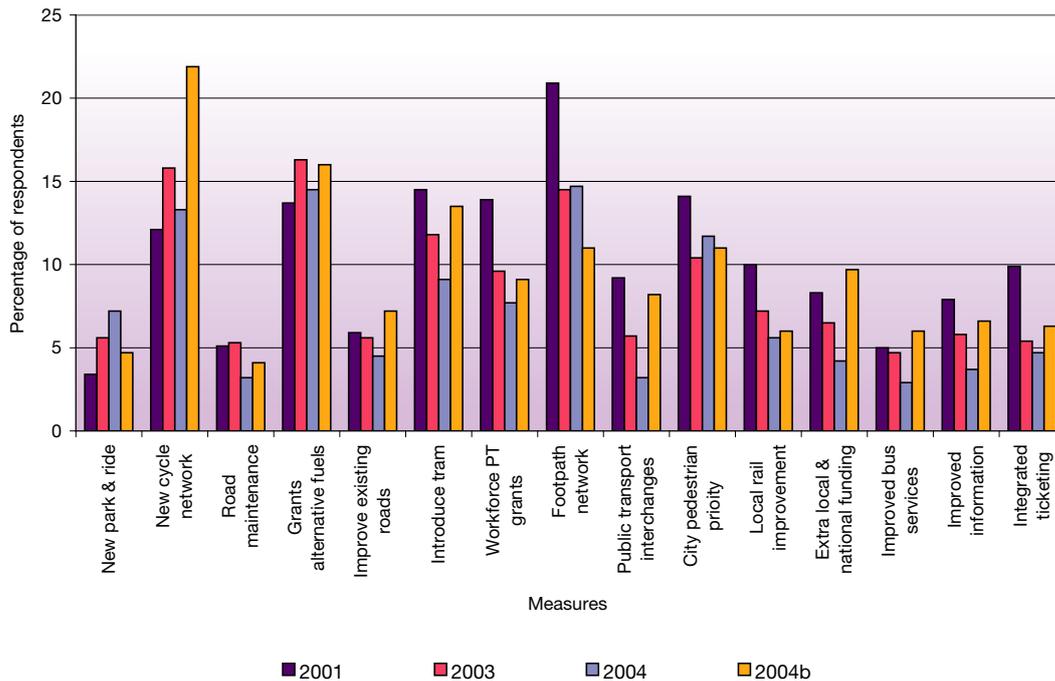
A public survey conducted in February 2004 indicated a dip in awareness of the Big Wheel campaign. Awareness in the 18 - 30 age group decreased from 34% in 2003 to 29% in the latest survey. A common trend of awareness based upon employment status has been highlighted by the surveys with the employed, self-employed and students being most aware of

¹⁵ Measuring the Success of Marketing the Greater Nottingham Local Transport Plan; TTR, November 2004

the campaign.

The latest survey revealed that a greater number of respondents considered most transport measures to be ‘very effective’ than in the three previous surveys (see Figure 4.13). This is very positive feedback for the introduction of measures in Greater Nottingham.

Figure 4.13: Respondents Perceived Effectiveness of Transport Measures



Fewer respondents in the latest survey considered transport measures to be ‘not at all effective’. The notable exception to this was for the new cycle network, where there was a large increase in respondents considering it to be not at all effective.

The study suggests there is a strong, increasing trend towards acceptance of the transport measures being implemented in Nottingham, with a steady upwards trend in terms of the measures being considered as very effective. However, it is interesting to note that the percentage of people who consider the measures to be not at all effective remains relatively unchanged, which suggests that although the majority of the population shows some empathy with the LTP and its actions, there is a minority which remains unaffected by the LTP measures and the Big Wheel campaign.