

# Chapter 7: Safer Roads





# Chapter 7: Safer Roads

This chapter sets out the Greater Nottingham response to addressing the Government's Road Safety Shared Priority. It highlights the general issues concerning road safety, provides a summary of the local strategies, and looks at the key areas of intervention and actions through which the road safety targets will be reached.

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## 7.1 Background

Road safety is one of the most emotive areas addressed in the LTP. It has implications for the majority of the other transport priorities contained within the Plan, notably congestion, accessibility, maintenance, regeneration and quality of life, as well as being a key focus for investment in its own right.

Furthermore, it contributes towards the development of safe and sustainable communities underpinning wider corporate, regional and national agendas. See Chapter 3: Wider Context.

The Government has identified a number of key elements to road safety that are addressed in the LTP <sup>1</sup>, these include:

- a.** Tackling road safety in areas of disadvantage particularly within the urban area,
- b.** Meeting child casualty reduction targets,
- c.** Addressing the safety of vulnerable road users on school journeys,
- d.** Improving the safety of road users in rural areas,
- e.** Managing excessive speed,
- f.** Tackling work related accidents,
- g.** Reversing the trend in motorcycle related accidents, and
- h.** Other areas of intervention concerning network design and the evening economy.

In considering these issues an integrated approach has been taken to address the needs of occupants of motor vehicles, motorcyclists, pedestrians, cyclists and horse riders on the local highway network. The road safety issues encountered on the Highways Agency strategic road network also feed into, and are reflected in the Plan. The Highways Agency is a member of the Safety Camera Partnership and camera sites have been rolled out onto the trunk road network. Road safety education is also co-ordinated at a regional level to build upon DfT awareness campaigns resulting in a joined up approach.

## 7.2 Greater Nottingham Issues

The National Road Safety Strategy <sup>2</sup> has influenced the development of the City's and County's local strategies and the joint approach to addressing road safety issues through the LTP. The key areas of focus – improving safety for children, safer drivers, safer infrastructure, safer speeds, safer motorcycling, safety for pedestrian, cyclists and horse riders, together with better enforcement and the promotion of safer road use – are all contained within the Plan.

Records of all injury accidents reported to Nottinghamshire Police (including those on City, County and Trunk roads) are collected, analysed, verified, validated and stored by the County Council. A close working relationship with the Police ensures that the accident data recorded is both comprehensive and accurate.

Accident problem sites as well as casualty trends are identified using the above data. Analysis of the data shapes the road safety strategies and provides the evidence base for pro-active

<sup>1</sup> Full Guidance on Local Transport Plans; DfT, December 2004

<sup>2</sup> Tomorrow's Roads: safer for everyone; DETR, March 2000

road safety work by the City and County Councils, as well as work carried out by partners such as the police and fire service.

### 7.2.1 Road Safety Strategy for the City

An updated Road Safety Strategy was prepared in July 2005 and this has now been finalised and has been submitted in support of this final LTP. It documents the casualty trends in the City for all road user groups and identifies what actions are being undertaken to achieve the casualty reduction targets.

The strategy complements that developed by the County Council with a number of shared objectives. This joint working is further demonstrated in the undertaking of research highlighting the extent to which those involved in crashes in the City live in the County and further afield.

In terms of developing road safety education campaigns there is a need to think regionally. The 'Shiny Side Up' partnership for reducing East Midlands motorcycle fatalities and the regional safety camera event at the NEC Motor Show are examples of how both authorities have worked at the regional level to help meet local targets (see section 3.3.1).

At a local level the casualty reduction schemes and road safety educational activities are integrated within the strategic objectives of the City Council. For example, the annual road safety quiz has previously revolved around tram safety with the launch of NET, and in 2005 it featured the redesign of the Old Market Square and promoted safe methods of getting there.

There is also an integrated approach to scheme development. Casualty reduction schemes are integrated into wider transport initiatives that simultaneously address maintenance, accessibility, public transport improvements and regeneration. The regeneration of Aspley Lane and the local shopping centre in 2005 highlighted the co-ordinated approach at a neighbourhood level.

The Community Strategy, 'One Nottingham – One Plan' includes casualty reduction targets that are aligned with the targets set out in the LTP.

### 7.2.2 Road Safety Strategy for the County

Since the Accident Investigation Unit and Road Safety Team were established in 1973 Nottinghamshire has constantly reviewed its performance as well as accident trends, and adjusted its approach accordingly in order to increase its success in reducing casualties.

The Cross-Service Road Safety Improvement Plan (2003-2010) aims to help improve the efficiency and effectiveness of the service, enhance partnership working, and focus resources towards key areas of road safety work to achieve the national road safety casualty reduction targets by 2010.

In practical terms this area of work cascades into three streams of work:

- Casualty reduction,
- Accident prevention, and
- Changing peoples' travel behaviour.

These objectives and areas of work will be the basis for determining practical actions to help achieve the shared priorities within the Plan.

The plan itself contains a range of actions from education programmes to highway maintenance programmes. All of the tasks are regularly reviewed to ensure their successful progress and therefore the effectiveness of the plan.

A Road Safety Board was established in 2003 consisting of officers representing the various strands of the County Council which make up the road safety service. Establishing the Road Safety Board helped to ensure a co-ordinated corporate approach to road safety service delivery as well as the close integration of strategies such as those relating to cycling, walking, motorcycling, accessibility, regeneration and road safety.

A post has also been established to research casualty trends, identify road safety best practice, ensure policies are in place to meet the road safety service requirements, monitor the effectiveness of the different parts of the Cross-Service Plan and make recommendations for improvements to the strategy when necessary.

Policy and strategy continue to be reviewed annually based on the regular analysis of road accident and school travel data, but in addition to this a comprehensive three year review of the effectiveness of the County Council's road safety strategy was undertaken during 2005. The first part of the review considered the road safety services delivered by other 'good performing' local authorities so that Nottinghamshire can learn from those offering enhanced services. The second part of the review involved an external 'critical friend' carrying out an appraisal of the County Council's current policy and strategy.

The review ensured that the road safety strategy remains focused on delivering the key outcomes in relation to improved safety (on the roads and in the wider community including reducing perceived dangers), as well as in relation to improved accessibility, air quality, congestion, fear of crime, health, regeneration, sustainability and the general quality of life in the County. The review highlighted several recommendations such as:

- The need to enhance the ongoing programme of route management strategies particularly on the rural A-road network,
- A stronger focus on speed management with a review of speed limit hierarchy and policies, and
- The prioritisation of additional measures identified for road safety education in terms of expected contributions to casualty targets and value for money.

A Road Safety Forum was held with external stakeholders in July 2003 when the plan was presented and discussed with key organisations such as District Councils, Driving Standards Agency, Emergency Services, GOEM, Highways Agency, Local Education Authority, neighbouring local authorities, the Police, and Primary Care Trusts. This proved to be a very successful event and the Forum was held again in 2004 and 2005 and is to be held annually in



future to ensure that partners have an input into policy formulation and strategy.

Partnership working and the use of engineering, education and enforcement technology is at the forefront of Nottinghamshire's road safety strategy.

## 7.3 Key Areas of Intervention

This section sets out the areas in which steps are being taken to address the key elements of road safety set out in 7.1. It reflects the important road safety issues highlighted by the DfT, and also specific local action areas. The contributions of each area of intervention towards the road safety targets within the Plan are also summarised.

### 7.3.1 Tackling Road Safety in Areas of Disadvantage

Disadvantaged groups and deprived areas suffer disproportionately from the negative impacts of road traffic<sup>3</sup>. This issue is particularly pertinent to Nottingham, which suffers from high levels of deprivation in nearly half of all wards. See section 4.7.1.

In the mid 1970's the County Council became one of the first authorities to recognise and investigate the connection between road safety and deprived areas. The process of investigating areas of deprivation and applying accident remedial schemes has therefore been ongoing for a number of years. The continued investigation of areas of deprivation is also a key action within the authorities road safety strategies. Links have been established with Accident Prevention Groups throughout Nottinghamshire to help ensure that these cross service working groups consider road safety alongside their other work particularly within deprived areas.

The publication 'The Condition of Nottinghamshire' is used to identify the most deprived wards and casualty reduction methodologies are then used to identify road casualty sites and characteristics within these wards.

In 2003/4 Nottingham submitted bids for a Safe City award and Neighbourhood Road Safety Initiative (NRSI). In both cases research was undertaken to investigate casualty patterns in areas of deprivation and to design suitable road safety improvement plans. It demonstrated concentrations of drivers involved in crashes residing in certain wards of the City and this will lead to a focused distribution of educational material within these areas.

The award was also used to provide improved pedestrian facilities and to promote road safety focus groups, Neighbourhood Warden safety training and child restraint fitting advice at fire stations in deprived areas. Work to improve the responsiveness of pedestrian demands at signals will be rolled out across the majority of areas of inner city deprivation during the course of LTP2.

District Shopping Centre schemes, such as Aspley Lane, have focussed on regenerating local centres, improving transportation links, developing local access routes and reducing casualties. The Aspley scheme used the Urban Mixed Priority Route Treatment approach that has been

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<sup>3</sup> Making the Connections: final report on Transport and Social Exclusion; Social Exclusion Unit, February 2003



researched using DfT demonstration projects. Similar schemes are programmed in various locations across the City including at Broxtowe Lane.

It is recognised that a significant proportion of the conurbation has a high level of deprivation and that road safety work in these areas can be particularly effective. Consequently the Plan will allocate a priority commitment to accident remedial measures and safer routes to school schemes that have been identified in these areas.

**Table 7.1: Impact of Tackling Road Safety in Areas of Disadvantage on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	High
BVPI 99y: Children Killed or Seriously Injured	High
BVPI 99z: Slight Casualties	Medium

### 7.3.2 The Child Casualty Reduction Strategy

The number of child pedestrians killed in the UK is high in comparison to other European countries <sup>4</sup>. Significant progress was made during the course of LTP1 with a 38% reduction in the number of children killed or seriously injured on Greater Nottingham roads between 2000/1 and 2004/5, although this still corresponded to 66 KSIs in 2004/5.

A child safety audit is carried out annually to identify the road safety problems for children in Nottinghamshire and the City, and the audit is used to help identify the appropriate strategies and actions required to deal with these problems.

The audit includes a comprehensive analysis of child road casualties, looking at the various circumstances in which accidents occurred. The results of the analysis are then used to inform a wide range of education, engineering and publicity solutions. In carrying out the child safety audit the Councils also review how successful their education and engineering programmes have been, as well as identifying any possible problem areas that may not have been dealt with through existing road safety programmes. The child safety audit results in the formulation of the overall strategy to address child road casualties.

The audit also looks at measures to address other pertinent issues such as measures that aim to help pupils access schools (School Crossing Patrols and Safer Routes to School Schemes), and School Travel Plans which also contribute to reducing congestion and improving health.

The audit has identified that the rate of decrease in the numbers of pupils walking to school has slowed and that the numbers of pupils involved in road accidents on school journeys has decreased. There are therefore opportunities to implement Safer Routes to School Schemes across the Plan area to continue to promote walking and cycling to school and to help the pupils who do so to travel safely.

<sup>4</sup> Tomorrows Roads: safer for everyone; DETR, March 2000

The child casualty reduction strategy for Greater Nottingham will continue to focus heavily on targeted road safety education, backed up with a wide range of engineering treatments aimed at improving the physical environment in which children live. The educational material is age stratified to reflect the development of children and the risks they face as road users.

This process begins early 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 seat belts, 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. In many cases this is integrated into the curriculum so that limited additional strain is imposed on teachers. An example of this is the 'egg heads' design and technology project which gets secondary school children to design and build cars that protect eggs in crash tests.

In 2002 consultants were commissioned to identify locations where engineering treatments could be implemented to reduce child casualties within the City. This work resulted in a number of length treatments that have been fed into the LTP programme. However, the research also highlighted the need to work in large residential areas because child casualties are widely dispersed with very few concentrations that could be addressed with a point treatment.

Consequently area wide schemes will be an important method for reducing child casualties within the Plan area.

**Table 7.2: Impact of The Child Casualty Reduction Strategy on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	Medium
BVPI 99y: Children Killed or Seriously Injured	High
BVPI 99z: Slight Casualties	Medium

### 7.3.3 Vulnerable Road Users on School Journeys

Around half of all journeys to a place of education are on foot, and to enable this to grow, road safety and the perceptions of safety have to be addressed. Developing safer routes to school is an important tool in improving the actual and perceived safety of children, and also in encouraging more children to walk, thus reducing dependency on the car.

A Safer Routes to School programme, and the production of School Travel Plans are being co-ordinated with the ongoing review of school provision. The safer routes programme of investment within the City will be subject to the conclusions drawn from the Building Schools for the Future programme currently being developed. The initial focus for the development of these routes in the City will be in the Bestwood and Basford areas it is envisaged with schemes rolled out in a coordinated approach with finalised school relocation decisions.

Walking routes are being developed based upon the actual routes children take. The routes are colour coded and recognised by children, health professionals and the community as a whole as a safe way of getting to school and comprise the provision of new facilities such as new street furniture, wider pavements, improved lighting, pedestrian friendly crossings and traffic calming measures.

The most recent child safety audit identified that 68% of child pedestrian and cycle casualties on school journeys in the County involved 12-15 year olds. Based on this information the programme of safer routes to school schemes in the County during the lifetime of this Plan will therefore focus primarily on journeys made to secondary schools.

The County Council is also piloting two safer routes to play schemes in deprived wards of the County. Their effectiveness will be monitored after implementation and the results of the monitoring will inform any decisions on the extension of this programme of work.

The City and County Councils provide a high quality school crossing patrol (SCP) service at sites throughout Greater Nottingham to an extent well in excess of the levels determined by national criteria.

In addition to physical works a wide variety of 'soft' measures such as annual road safety quizzes to primary school pupils and child cycle training courses will also be targeted at schools.

**Table 7.3: Impact of Addressing the Needs of Vulnerable Road Users on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	Medium
BVPI 99y: Children Killed or Seriously Injured	High
BVPI 99z: Slight Casualties	Medium

### 7.3.4 Safety of Road Users in Rural Areas

The majority of casualties involving car drivers and passengers in the County area of Greater Nottingham occur on rural roads. 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. This section should therefore be read in conjunction with section 7.3.5.

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 are, however, used when appropriate, along with education and publicity campaigns. Where casualties occur over lengths of roads, route management strategies are implemented along the whole length of the route.

Traffic calming is installed as a measure to reduce road casualties and/or as a measure to reduce through traffic to improve local environments. Most schemes have been in urban areas but a small programme for rural villages has also been implemented.

A policy and programme of works has been developed for the introduction of speed limits at villages throughout the County to help address the issue of speeding in rural areas and reduce the resultant accidents. Phase 1 of this programme is the introduction of 30mph speed limits in villages with a history of accidents. Sixteen villages have been prioritised for treatment and Phase 1 of the programme will be completed by the end of March 2006.

Phase 2 of the programme will look at the introduction of reduced speed limits at remaining villages that currently have the national speed limit and a review of villages with 50mph speed limits. The introduction of Phase 2 will be determined once sufficient time has passed to ascertain the effectiveness of the measures installed so far (in terms of casualty and speed reduction) and the Government's new guidance on setting local speed limits has been finalised.

Safety cameras also have a major part to play in reducing speeds on rural links with a history of accidents. Static cameras are installed on the key rural casualty reduction routes, and mobile cameras are used in lieu of permanent cameras being installed as well as on roads that have a casualty and speed history but do not meet criteria for permanent camera installation.

**Table 7.4: Impact of Addressing Safety of Road Users in Rural Areas on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	High
BVPI 99y: Children Killed or Seriously Injured	Low
BVPI 99z: Slight Casualties	Medium

### 7.3.5 Managing Excessive Speed

The need to manage excessive speed in Greater Nottingham was reflected in a survey in which over 70% of respondents felt that speed cameras should be used more widely where dangerous speeding is a problem <sup>5</sup>.

The LTP will take a hierarchical approach to speed management and the reduction in accidents involving excessive speed. This involves the implementation of home zones and traffic calming schemes in residential areas whilst introducing speed cameras on the principal road network. Between these extremes there are a range of speed management techniques that will be applied according to the local characteristics of a road. These techniques include speed tables, mini-roundabouts, refuges, chicanes, interactive signs and traffic signal modifications.

Traffic calming will remain an important technique for speed reduction in residential areas and Tables 7.5 and 7.6 below, show the speed and casualty savings that have been achieved by implementing schemes in the City and County.

<sup>5</sup> Greater Nottingham Transport Perception Survey; TTR, July 2004

**Table 7.5: Traffic Calming Speed and Casualty Reductions (City)**

Type of Traffic Calming	Mean Speed		% Reduction in Casualties
	Before	After	
Round Top Road Humps (18 schemes)	24.7	13.7	51%
1.9m Square Cushions (19 schemes)	28.8	15.1	61%
8m Plateau (7 schemes)	29.7	18.8	64%

**Table 7.6: Traffic Calming Casualty Reductions – all scheme types (County)**

Number of Schemes	Average Accidents Saved per Annum	% Reduction in Casualties
13	29	64%

Considerable emphasis will continue to be placed on the detailed design of features to reduce maintenance costs, and to minimise discomfort whilst retaining safety benefits. This will continue to be achieved with the use of concrete cushions on bus routes and emergency service routes.

At locations where there are high concentrations of pedestrians, especially at formal crossing locations, plateaus will be used to equalise the height of the carriageway and the footway, a practice particularly beneficial to wheelchair users, and the elderly. These features have been particularly effectively used in the Maid Marian Way and Turning Point schemes in the City Centre.

### Inter-active Signs

Policy has been developed for the installation of permanent and temporary inter-active signs in the County. Permanent signs are installed where the criteria, based upon recorded speeds and traffic flows at a location, is met.

### Safety Camera Partnership

A safety camera partnership managed by the authorities, Nottinghamshire Police, Nottinghamshire Magistrates Courts Service and The Highways Agency has been responsible for a £3 million per annum budget spent on speed and red light cameras.

This has overseen the installation of safety camera equipment on both local authority and trunk roads within the Plan area and coordinated the processing of fixed penalty notices and an education programme aimed at increasing public awareness of the relationship between speed and casualties and the benefits achieved by this type of enforcement.

As described in Chapter 12: Implementation Programme the arrangements for funding safety camera partnerships will change from 2007/08. All agencies involved are deciding how best to take forward the work of the partnership given the new funding arrangements. This will be

determined during 2006 and an appropriate business case is to be prepared.

In accordance with the Freedom of Information Act all details surrounding the safety camera partnership, the finance, the location of the sites and the strategy documents can be viewed on the partnership web site:

 [www.streettactics.com](http://www.streettactics.com)

**Table 7.7: Impact of Managing Excessive Speed on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	High
BVPI 99y: Children Killed or Seriously Injured	High
BVPI 99z: Slight Casualties	Medium

### 7.3.6 Road Safety at Work

In October 1999, Nottinghamshire Police and the authorities jointly launched a Driver Improvement Programme as an alternative to prosecution for due care and attention offences and over 700 motorists a year currently attend this course. Because of the high incidence of work related vehicle collisions, a one-day driver development programme was subsequently introduced using the existing infrastructure and resources.

This programme has been attended by officers from both the authorities and is now offered to local businesses. It is anticipated that this course will gain importance over the lifetime of the LTP as the Health and Safety Executive place greater emphasis on employers managing occupational road risk.

In 2006 the Safety Camera Partnership will introduce speed awareness courses in accordance with the proposals contained in the Road Safety Bill. This will extend the range of training opportunities that are offered to motorists as an alternative to prosecution.

Programmes of 'road safety at work' publicity and educational resources to promote the management of occupational road risk to all employers in Nottinghamshire are also being developed to complement the training offered.

**Table 7.8: Impact of Addressing Road Safety at Work on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	Medium
BVPI 99y: Children Killed or Seriously Injured	Low
BVPI 99z: Slight Casualties	Medium

### 7.3.7 Motorcyclist Safety

Motorcyclist casualties fell substantially between 1979 and 1999. However, this decline has reversed and, although there have been reductions in the number of motorcycle casualties more recently, casualties are now increasing particularly in the County part of the Plan area, a trend which compares unfavourably to the continued decline in other road user casualties. Despite their small modal share of traffic, motorcyclists accounted for 21% of all the KSI casualties in the County part of the Greater Nottingham area in 2004. Furthermore, the numbers of KSI casualties had increased by 5.5% when compared to the 1994-98 baseline. 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
- Riders of smaller machines, predominantly ridden by young riders (mirroring the increase in popularity of twist and go scooters).

The authorities and Nottinghamshire Police have formed a partnership to investigate these crashes and formulate a casualty reduction strategy. Investigations have highlighted the types of riders likely to be involved in crashes, the locations where the crashes were occurring and common causes. It revealed that many accidents involve motorcyclists travelling long distances and as such a regional approach is required.

In partnership with the Police, routes with a high number of motorcycle casualties have been identified. When possible, Police attending incidents travel along these routes to establish a Police presence in the hope that this will affect rider behaviour.

A motorcycle forum has been established with the main aims of making motorcycling in Nottinghamshire safer and more convenient. The forum is an equal partnership between the County Council and local riders. To give as many riders the chance to go to a forum, the meetings take place every three months at different locations around the County.

The 'Shiny Side Up' Partnership involving Police forces and highway authorities throughout the East Midlands, is developing a DVD that will focus on the attitudes of super bike and sports bike riders. The DVD will feature John Reynolds, the former British Superbike Champion, and target the more mature riders. This co-operative work will expand throughout the lifetime of the LTP.

A series of activities will also be developed for the younger riders, particularly those on scooters and bikes under 125cc. The programme will be co-ordinated under the title of "The Bare Bones Project", and it will focus on 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.

Working in partnerships such as these 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.



**Table 7.9: Impact of Motorcycle Safety Initiatives on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	High
BVPI 99y: Children Killed or Seriously Injured	Low
BVPI 99z: Slight Casualties	Low

### 7.3.8 Other Areas of Intervention

#### Network Design

The design quality of the road network will continue to play a significant role in meeting road safety objectives. At the strategic level, the devising of a hierarchy of roads and implementation of a new signing strategy will ensure high volumes of traffic are directed towards the most appropriate routes.

Furthermore, 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, housing developments and Building Schools for the Future programme will also ensure safety is designed into the highway network.

#### Evening Economy

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 infrastructural measures on the ground to inhibit fast moving traffic and 'rest on red' operation of traffic signals at certain locations.

**Table 7.10: Impact of Other Areas of Intervention on Targets**

Indicator	Impact of Interventions on Targets
BVPI 99x: Killed or Seriously Injured	High
BVPI 99y: Children Killed or Seriously Injured	Low
BVPI 99z: Slight Casualties	High

## 7.4 Actions

This section focuses on other elements of the LTP programme and their contribution to the road safety targets.

### 7.4.1 Pedestrian and Cycle Schemes

The development of Primary Pedestrian Route (PPR) and a Primary Cycle Route (PCR) networks will contribute towards the safety of users on key links across the Plan area.

The PPR network will involve investing in a network of connections between the City Centre and the surrounding inner city areas that are currently awkward and unattractive for pedestrians. Works will be focused upon key desire lines to provide safe, high quality links including new and direct signalled crossing points, new paving, lighting, signing, and street furniture. The approach will humanise what at present are traffic-dominated areas.

The development of the PCR network will follow the same principles, based upon improving the established cycle network. This investment will increase the prominence of cyclists on-road demanded by confident, regular cyclists whilst increasing the provision of safer off-highway routes for less confident and leisure cyclists.

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 the 17% of the population of Greater Nottingham who class themselves as having a disability which effects the way they travel<sup>6</sup>.

### 7.4.2 Traffic Management

#### Highway Directional Signing / Variable Message Signing

The introduction of a Highway direction signing programme across the conurbation is anticipated to reduce the number of casualties through ensuring traffic is directed onto the principal route network and away from residential areas, schools and busy shopping streets. The introduction of variable message signing in the City Centre will also lead to a reduction in the volume of circulating traffic looking for a parking space, and therefore potentially reducing the number of accidents caused by distracted drivers.

#### Decriminalised Moving Traffic Offences

The decriminalisation of parking was introduced within the City Council part of the Plan area in October 2002. Following on from this, the authority are seeking to decriminalise moving traffic offences during the Plan period, once the regulations have been put in place to do so. Along with achieving congestion benefits this will contribute towards meeting casualty reduction targets. It is also consistent with the Council's 'Respect' agenda being pursued at the corporate level.

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<sup>6</sup> Greater Nottingham Transport Perception Survey; TTR, July 2004

Enforcement priorities will include:

- Bus lanes: through more stringent enforcement of bus lanes, motorists will be less inclined to encroach into them, thereby reducing the potential number of accidents with other motorists, buses and cyclists.
- Clear Zone: whilst the numbers of vehicles entering the Clear Zone has reduced since its introduced, there still some degree of conflict between prohibited vehicles entering the zone and pedestrians. The number of accidents within the area has remained at similar levels <sup>7</sup>, possibly due to the fact that pedestrians also are less conscious of traffic within the area. Through increasing enforcement it is intended to reduce the number of accidents occurring.
- Yellow box junctions: camera enforcement will help improve driver discipline and reduce casualties at busy junctions.

### 7.4.3 Road Crossings

The authorities will look to integrate the implementation of new crossing facilities with other transport schemes or developments within the Plan area. Where new crossings are provided, disabled facilities will be incorporated to ensure safe accessibility for the mobility impaired.

### 7.4.4 Local Road Schemes

As part of the regeneration of the Eastside Regeneration area (see section 9.2.1) a new two-way traffic route will be implemented to replace separate northbound and southbound roads, which currently carry a large volume of vehicles through the eastern edge of the City Centre. Applying the same principles as used elsewhere in the City Centre on schemes such as Maid Marian Way and the Turning Point it is also intended to increase the priority for pedestrians and use physical measures to slow down traffic to reduce conflicts at key junctions.

### 7.4.5 Other Schemes

#### Town Centre Improvements

Town centre improvement schemes are planned for the centres of Arnold, Beeston and West Bridgford. These will increase the priority given to pedestrians and reduce the opportunity for conflict with traffic through the use of access restrictions, pedestrianisation and new crossing facilities.

#### Education and Awareness

Opportunities will continue to be taken to promote road safety messages as part of a coordinated approach to communications and marketing of transport initiatives particularly as part of the Big Wheel initiative.

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<sup>7</sup> Clear Zone Evaluation Report; Transport and Travel Research, March 2005

**Table 7.11: Areas of Investment and Links with Road Safety Priorities**

	Tackling Road Safety in Areas of Deprivation	Meeting child casualty reduction targets	Improving the safety of road users in rural areas	Managing excessive speed	Tackling work related accidents	Reversing the trend in motorcycle related accidents	Vulnerable road users on school journeys
<b>Pedestrian and Cycling Schemes:</b>							
Pedestrian routes	√	√					√
Shared pedestrian / cycle network	√	√					√
Cycle network	√	√					√
<b>Local safety schemes:</b>							
Casualty reduction schemes	√	√	√	√	√	√	√
Safer routes network		√					√
<b>Traffic management:</b>							
Highway direction signing	√	√					√
<b>Road crossings:</b>							
New crossing facilities	√	√	√	√			√
Access for disabled people	√						√
<b>Local roads:</b>							
Regeneration schemes				√			
<b>Other:</b>							
Decriminalised enforcement	√			√			
Integrated town centre improvements				√			
Rural schemes			√				

