ROYAL borough of GREENWICH

Borough Road Safety Plan

October 2015

Contents

Foreword

Prior to 1998, some 6,000 people every year sustained serious or fatal injuries on London's Roads. The Royal Borough of Greenwich, therefore, supported *The London Road Safety Plan* and the 2010 casualty reduction targets that TfL set for London as a whole. By the end of 2010 total casualty figure for the Royal Borough had reached a new low. Slight casualties were down by some 35% on the 1994-98 average while all killed and seriously injured (ksi) were down by 48%. Corresponding reductions were also observed for other target groups.

Since then further progress has been made and last year saw historically low levels of road traffic casualties in Royal Greenwich. While all casualties' in 2014 were up by 11.8% on 2013, the general trend over recent years remains sharply downwards. Killed and serious injured (ksi) casualties were up 43% on 2013 but the general trend also remains downwards, while the level of ksi casualties in Royal Greenwich has already broken through the 2020 target for Greater London.

These achievements reflect the special commitment that the Council has made over many years to the protection of the most vulnerable road users, but they are no reason for complacency. Last year 770 people were hurt on the Royal Borough's roads so clearly there is still room for improvement. In co-operation with TfL, the Council will continue to deploy similar action plans as in previous years maintaining our emphasis on the safety of vulnerable road users.

As part of its approach to creating safer streets, the Council has long been committed to speed reduction in residential areas, which actions have produced substantial reductions in casualties, particularly amongst children and other pedestrians. For over a decade, 20 mph zones made up a sizeable proportion of the Council's Local Safety Schemes Programme, and between 1998 and 2011 the worse affected areas were comprehensively traffic calmed. Since 2012 we have been rolling-out a 'borough-wide 20 mph zone' to encompass all residual residential roads.

Other engineering works will continue to be targeted at accident hot spots on the Royal Borough's major road network with higher than average casualty rates. Most of these roads will remain subject to a 30 mph speed limit to avoid diverting traffic to less suitable minor roads, but the Council remains as committed as ever to the better protection of vulnerable road user groups and to improving facilities for pedestrians and cycles. Our road safety education and enforcement activities (where appropriate) will also continue to play a vital role to these ends.

This Borough Road Safety Plan sets out how the Royal Borough of Greenwich will seek to consolidate the impressive casualty reductions achieved in recent years. The Council will continue to work with all stakeholders to implement "Safe Streets for London", TfL's latest road safety action plan, and deliver the new target reduction set for 2020. In return, the Council looks to the Mayor of London to provide the funding needed to implement his 'better streets' initiative to make the Royal Borough a cleaner, greener and safer place for all road users.

Executive Summary

PART 1 - BACKGROUND

The national context to the Borough Road Safety Plan is established by:

- Road Safety Code of Good Practice (1989)
- Strategic Framework for Road Safety (2011)

The regional context is established by:

- The London Plan (2008)
- Traffic Management and Parking Guidance for London (1997)
- The Mayor's Transport Strategy (2010)
- Safe Streets for London - The Road Safety Action Plan for London 2020 (2013)

The local context is established by:

- Unitary Development Plan (2006)
- Local Implementation Plan (LIP2 - 2010)
- Earlier Borough Road Safety Plans

PART 2 - ACCIDENT ANALYSIS AND A SUMMARY OF RECENT TRENDS

Appendix 2 comprises lists containing accident data for the latest three years on Links (major roads) Nodes (junctions) and Cells (residential areas). Each accident appears in one list only. Weighting factors are applied to prioritise accidents involving vulnerable road users (pedestrians, cyclists, motorcyclists and children) consistent with the concerns identified by the London Road Safety Plan. Sites subsequently prioritised for treatment under the Local Safety Schemes Programme are first identified using this "VUNCAS" factor.

Accidents on major roads are considered separately to those on residential roads. Analysis on major roads looks for commonalities that may be ameliorated by more site-specific preventative measures, while reduction of more random accidents in residential areas is usually achieved through district-wide traffic management to support 20 mph zones. The Council continues its programme of works to introduce 'a borough-wide 20mph zone' for all residential areas previously untreated.

All casualties' in 2014 were up by 11.8% on 2013 but the general trend over recent years remains sharply downwards. Killed and serious injured (ksi) casualties were up 43% on 2013 but the general trend also remains downwards, while the level of ksi casualties in Royal Greenwich has already broken through the 2020 target for Greater London. Casualties per capita in Royal Greenwich are less than the Greater London average, while the proportion of vulnerable casualties remains significantly lower than the Greater London average for all vulnerable road user groups.

PART 3 - ACCIDENT PREVENTION - OBJECTIVES AND ACTION PLANS

Outcome monitoring data for recent Local Safety Schemes completed from 1999 to December 2014 shows all casualties reduced on average by 53% in the treated areas, while killed and serious injured are down by 67%.

The Local Safety Schemes Programme for 2015-18 identifies 38 schemes, with an estimated cost of £2.88 million and targeting 76 fewer casualties per year with an economic value of £1.88 million/annum.

Royal Greenwich will co-operate with TfL in the implementation of "Safe Streets for London", its road safety action plan, towards the target casualty reduction by 2020. Additionally the Council proposes the following actions:

In respect of engineering measures, to:

- Review accident data annually as a basis for outcome monitoring and determining future Local Safety Schemes Programmes.
- Develop accident remedial schemes in partnership with local communities, the Police, transport providers and other interested bodies.
- Carry out safety audits (as necessary) at the design stage to ensure that best practices are maintained.
- Review schemes a suitable period after implementation and take action as necessary.
- Ensure that new development is consistent with sustainable transport plans and does not lead to conditions prejudicial to the safety of road users.
- Give high priority to schemes to reduce traffic speeds, protect vulnerable road users and promote the 'better streets' agenda.
- Carry out prompt emergency repair to damaged and distressed road surfaces to mitigate risks to cycles and powered 2-wheelers.
- In addition to the Local Safety Schemes Programmes, to provide additional dedicated LIP funding streams for cycling and walking programmes to enhance safety for those two vulnerable road user groups.

In respect of education and training, to:

- Visit primary schools and pre-school groups (where resources allow) every year to provide or facilitate road safety training programmes tailored as appropriate to the various age groups.
- Encourage secondary schools to develop road safety education programmes and to focus on casualty prevention to transition years.
- Carry out cyclist training to the Bikeability National Standard to give an improved service to schools and residents and to promote the use of cycle helmets and conspicuity aids.
- Liaise with the Police and other agencies in support of national road safety campaigns to encourage more socially responsible adult behaviour in respect of speeding, seat belt wearing, drink/drug-driving, moped and scooter riding and parking away from 'school keep clear' markings.
- Promote the use of appropriate child car seats and safety restraints, ensuring that they are correctly fitted.
- Investigate funding for road safety education schemes.
- Keep the child road safety audit current.
- Carry out regular site assessment, training, monitoring and vigorous regular recruitment campaigns for School Crossing Patrol personnel.

In respect of enforcement, to:

- Liaise with the Police and other agencies as appropriate in respect of speeding, in-car safety, other road safety matters and enforcement initiatives.
- Check the roadworthiness of second hand vehicles offered for sale on forecourts.
- Monitor the weight of heavy lorries using local roads.
- Target parking enforcement resources to deliver higher levels of compliance in locations where unlawful parking is causing road safety problems particularly at pedestrian crossing sites and on "school-keep-clear" markings.
- Take action against fly-posting and unlawful signs that distract motorists
- Implement the Air Quality Action Plan within the Air Quality Management Area**.**

In respect of encouragement, to:

- Treat road safety matters as a corporate issue.
- Encourage the development of a code of practice for Council employees whether as drivers, cyclists or pedestrians.
- Maintain links with fleet users in Greenwich in order to improve driver attitudes and behaviour.

The Council has adopted the following Road Safety Policy Statement:

The Council is committed to further road safety improvements in the coming years. It will co-operate with TfL towards the implementation of “Safe Streets for London”, its road safety action plan, and meeting the 2020 casualty reduction target for killed and seriously injured. In partnership with the Police and other concerned agencies, the Council will continue to implement a comprehensive strategy to secure a year on year reduction in casualties throughout the Borough and will review its progress annually.

The Council will give a high priority to its borough-wide 20 mph zone programme to reduce excessive traffic speed in residential areas. It will also prioritise the needs of the most vulnerable road users – pedestrians and cyclists – and seek to reduce community severance along busy major roads. Powered 2-wheelers will also receive special attention. Recognising that road safety is a corporate issue, the Council will co-ordinate the activities of all relevant departments towards the implementation of the Borough Road Safety Plan.

The Appendices contain:

Appendix 1: R B Greenwich 2014 Casualty Data and Comparisons
Appendix 2: Link, Node and Cell Casualty Data, 2012 – 2014
Appendix 3: Personnel with Primary Responsibility for Road Safety
Appendix 4: Local Safety Schemes Outcome Monitoring to December 2014
Appendix 5: Local Safety Schemes Programmes, 2016 – 2019.

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1. PART 1 – BACKGROUND

1.1 The National Context

Road Safety Code of Good Practice (RSCGP)

1.1.1 In 1989 the Local Authorities Association published RSCGP as a benchmark for good practice in the preparation of road safety plans. This recommended that local authorities adopt, publish and regularly review a strategy for assisting road casualty reduction in their area. In co-operation with the Police, local highway authorities were required to monitor injury accident data and introduce improvements where necessary. The plans were required to describe how they proposed to achieve clear targets and objectives through engineering, education & training, enforcement and encouragement measures. Authorities were also asked to show how they intended to ensure a co-ordination between the different disciplines involved.

National Casualty Reduction Targets

1.1.2 In 2001, the Government set casualty reduction targets for 2010 against the baseline averages of 1994-98. London Boroughs were expected to deliver a net 10% reduction in slight casualties and 40% fewer killed and serious injuries (ksi), but 50% fewer child ksi. Casualty reduction targets for Greater London were updated in March 2006. By 2010 Royal Greenwich had achieved the National and Greater London targets for 'all slight' casualties. It had also met the National target for 'all ksi' and only narrowly missed the more onerous TfL target.

1.1.3 The above is included for background information. There are no longer any national casualty reduction targets.

Strategic Framework for Road Safety (SFRS)

1.1.4 In May 2011 the Government Published the SFRS, which set out the increased freedom given to local authorities to assess and act on their own priorities. While decisions should be made locally, wherever possible, this recognised a crucial role for national Government to support local delivery by providing:

- leadership on road safety
- delivering better driving standards and testing
- enforcement
- education
- managing the strategic road infrastructure
- research
- provision of public information.

1.1.5 The impacts of collisions on congestion, reliability and resilience of the road network carry major costs, so there is a strong case for reducing the economic and the personal costs of fatalities and serious injuries on our roads. SRFS sets out a package of policies to reduce these with key principles which reflect the commitment to supporting local decisions. The 'key themes' include:

- making it easier for road users to do the right thing and going with the grain of human behaviour;
- better education and training for children and inexperienced drivers;
- remedial education for those who make mistakes and for low level offences where this is more effective than financial penalties and penalty points;

- tougher enforcement for the small minority of motorists who deliberately chose to drive dangerously;
- extending this approach to cover all dangerous and careless offences, not just focusing upon speeding;
- taking action based upon cost benefit analysis, including assessing the impact on business;
- more local and community decision making from decentralisation and providing local information to citizens to enable them to challenge priorities; and
- supporting and building capability by working with the road safety community on better tools to support road safety professionals.

1.1.6 While central and local government is expected to continue to prioritise road safety and seek improvements, over-arching national targets are no longer viewed as the most effective way of achieving this. Central government should be judged against the actions that it commits to its "Road Safety Action Plan" (16 proposed measures described in Annex A). Local government and service providers also should be judged against their actions. A more sophisticated method of monitoring progress through a "Road Safety Outcomes Framework" (Annex B) should help local authorities to assess and prioritise their action and the impact of central Government measures. At the local level, the following key indicators are proposed:

- Number of killed or seriously injured (ksi) casualties
- Rate of ksi casualties per million people
- Rate of ksi casualties per billion vehicle miles

1.1.7 Alongside these is a more comprehensive list of indicators related to the key themes of the strategy. The long-term vision is to ensure that Britain remains a world leader on road safety with an aim to reduce the relatively high risk of some groups more quickly, such as cyclists and children in deprived areas. In the longer term, improvements in technology, (e.g. collision avoidance systems) will continue to transform the way we drive which, when allied with better driving, will see a very different world.

1.1.8 Performance will be monitored against the indicators in the "Road Safety Outcomes Framework". With key contributions from local authorities and others (and assuming the variation in performances moves towards the level of the top performers), Government's actions are expected to deliver:

- fatalities falling by around 37% to 1,770 by 2020
- deaths reducing by 57% to around 1,200 by 2030
- and ksi falling below 10,000 with a reduction of 70% by 2030

But these are neither targets nor hard forecasts.

1.2 The Regional Context

The London Plan

1.2.1 The strategic planning context for London was is set out in The London Plan 2008. This sets out the capital's spatial strategy incorporating stronger green energy requirements for new development. The principle objective is the vision for an exemplary sustainable world city, for the achievement of which, London's transport must be transformed. This means an integrated approach to transport provision and development, making major improvements to public transport and tacking congestion. The Plan sets out spatial policies to improve travel in London over the next 30 years. These conform to the Government's integrated policies for land-use and transport, and are consistent with traffic and accident reduction.

Traffic Management and Parking Guidance for London (TMPGL)

1.2.2 While largely superseded by later advice, TMPGL (February 1997) remains a significant publication insofar as it marked a pronounced transport policy shift away from a preoccupation with vehicles, placing more emphasis instead on the movement of people and goods. Local authorities were expected to deliver a "sustained year by year reduction in publicly provided on-street and off-street commuter parking in all areas of Greater London where there is reasonable public transport provision, and a much more determined use of parking charges and parking controls to encourage a shift from the use of the private car". Parking controls are relevant because not only have they potential to reduce the levels of road traffic, they can also make a significant and direct contribution to accident reduction. These matters are considered further in Part 3.

The Mayor's Transport Strategy May 2010 (MTS)

1.2.3 Working with the London boroughs, the DfT and other stakeholders, the MTS (4.4.3, Policy 19), seeks to improve road safety for all communities in London and implement measures that contribute to targets that may be set by the Mayor from time to time. This policy is taken forward by a number of proposals, of which the following, summarised below, are the most pertinent:

- Proposal 63: seek to achieve lower fatality and injury rates on London's transport system.
- Proposal 64: seek to achieve national and other road safety targets
- Proposal 65: develop a new Road Safety Plan to reflect new targets.
- Proposal 66: continue to monitor schemes and publish road safety casualty reports and research.
- Proposal 67: undertake public information and engagement to improve road user behaviours and reduce the risk of collisions.
- Proposal 68: improve safety for cyclists by:
  a) Encouraging the Government to amend legislation and remove the current exemption for HGVs being fitted with sideguard protection,
  b) Working to increase the number of HGVs with sideguards or fitted with electronic warning devices that detect cyclists.
  c) Raise driver awareness of advance stop line area benefits
- Proposal 69: seek enhanced vehicle and driver safety from organisations operating corporate fleets by promoting increased membership of the Freight Operator Recognition Scheme, and encouraging operators to uptake and demonstrate freight best practice.
- Proposal 70: develop initiatives and work with employers to increase work-related road safety and to reduce casualties involving work-related vehicles and activities.
- Proposal 71: implement targeted physical engineering and other design considerations to improve road safety across London's road network.
- Proposal 72: encourage the early introduction of voluntary 'intelligent speed adaptation', subject to the outcome of trials in corporate fleets, including freight, passenger transport and company cars and vans.
- Proposal 73: continue implementing effective enforcement measures, targeted at locations with poor collision records across London's road network, including new time-distance cameras which will be trialled, for example, on main roads and for enforcing speed in 20mph zones.

- Proposal 83: use the principles of 'better streets' to seek to improve town centres, in particular: removing clutter and improving the layout and design of streets; enhancing and protecting the built and historic environment; increasing the permeability of streets; and creating clear and easily understandable routes and spaces to make it easier for cyclists, pedestrians and disabled people to get about.
- Proposal 84: introduce accessible for all, 'better streets' initiatives and give consideration to trialing the removal of traffic signals where safe and appropriate.
- Proposal 129: operate the Congestion Charging Zone to deliver desired outcomes
- Proposal 130: consider managing the demand for travel through pricing incentives (such as parking charges or other charging regimes) in order to meet the overall objectives of the transport strategy.

Safe Streets for London – The Road Safety Action Plan for London 2020 (SSL)

1.2.4 By 2010, the number of people killed or seriously injured (ksi) in traffic collisions in the Capital had fallen by 57 per cent compared to the 1994-8 baseline. Slight injuries had fallen by 33 per cent, and the number of children ksi had fallen by 73 per cent. This meant there had been 3,798 fewer ksi on London's roads in 2010 compared to the baseline years, and 12,994 fewer slight injuries.

1.2.5 Casualty reduction targets for cyclists and powered two-wheeler, however, were not met. In fact the "vulnerable road users" ksi had increased significantly as a proportion of "all road users" ksi over the same period, which partly reflected the increased use of these modes. In 2011, some 77% of London ksi casualties were from the 'vulnerable' road user groups (walkers, cyclists and motor bikers) all of which were over-represented in the casualty figures relative to their modal split.

	Factor		
	Human	**Vehicles and equipment**	**Environment**
Pre-crash (crash prevention)	• Training • Education • Police enforcement (mobile phone use, drink and drugs) • Campaigns	• Road worthiness • In-vehicle recorders • Black box technology • Intelligent speed assistance • Brake assist • Anti-lock braking • Proximity sensors • Additional mirrors	• Road design • Road lighting • Safety cameras • Markings • Maintenance • Speed limits/zones • Pedestrian facilities
Crash (injury prevention during crash)	• Use of seat belts and other restraints	• Occupant restraints • Airbags • Crash-protective design • Personal protective equipment • Booster seats and baby carriers • Helmets	• Crash-protective objects • Roadside barriers • Anti-skid surfaces
Post-crash (life-sustaining)	• First aid • Access to medical care • Rehabilitation	• Ease of access • Fire risk • Cutting tools • E-call	• Quality of rescue facilities • Proximity to medical facilities and emergency services • Traffic congestion

Table 1.1: Indicative Haddon Matrix

1.2.6 In spring 2013 TfL published "Safe Streets for London" (SSL), a new road safety plan, to be delivered through a partnership of all who design, build, manage and use London's roads. The

approach embraces system thinking to understand how, when and where to act to reduce casualties. It makes reference to the "Haddon Matrix" (Table 1.1), a tool that applies the basic principles of public health to the issue of road safety. A new target has been established: to reduce the number of ksi casualties in London by 40 per cent by 2020 from a baseline of the 2005–9 average.

1.2.7 SSL identifies groups for whom road safety interventions could be justified in cost terms on the basis of risk, casualty numbers, trend over time or a combination of these factors. In addition to improving the infrastructure, improving the safety of high risk groups may involve interventions to change their behaviour through education or enforcement, and that of other road users who are putting them at risk. To these ends the SSL proposes a total of 56 actions focused on delivering, "safe roads", "safe vehicles" and "safe people" through partnership.

1.2.8 SSL draws on the Mayor's Cycle Safety Action Plan (CSAP) published in 2010. The substantial increase in the number of cycling trips has been accompanied by a comparatively small increase in casualties. As such, the relative risk of cycling per trip is actually falling and cycling is getting safer. Aiming to drive this positive trend forward, the objectives of the CSAP are to:

- Ensure the growth of cycling in London is accompanied by a reduced rate of cycling casualties
- Increase the perception that cycling is a safe and attractive transport option
- Make progress towards achieving existing and future targets for reducing cyclists killed or seriously injured
- Ensure London continues to be a world leader in developing effective cycling safety improvements, underpinned by analysis and a sound understanding of the causes of collisions.

1.3 The Local Context

The Core Strategy

1.3.1 The Core Strategy with Detailed Policies (July 2014) sets out the planning policies that the Council expects development to bring forward. Policies in respect of Infrastructure and Movement (section 4.8) are strong in their requirements around improving pedestrian accessibility and safety. Detailed Policy IM(a), Impact on the Road Network, is particularly pertinent. This states:

When planning transport provision for major developments and extensive sites where comprehensive development can take place, developers should have regard to:

i. The road hierarchy

ii. Building into highways networks speed management and design criteria for speeds no greater than 20 mph; and

iii. Incorporating appropriate traffic calming measures and encouraging residential roads to be designed as shared spaces.

Local Implementation Plan (LIP2) and Funding Bids

1.3.2 The Greenwich Council LIP was approved by the Mayor of London in September 2007. The Second LIP (LIP2) was published in December 2010. This sets out how the Council proposed to implement the Mayor's Transport Strategy (May 2010) within the borough and the Eastern Sub-regional Plan, looking forward to 2031. LIP2 - Section 4.5 deals with improving the safety and security of Londoners. It cites the road safety improvements made since the mid-1990s, and describes the role of the Borough Road Safety Plan. Funding programmes (including that for Local Safety Schemes) are undated annually through the Local Implementation Plan Reporting & Funding bids (LIPRAF) process.

Earlier Borough Road Safety Plans (BRSP)

1.3.3 Since 2001, the annual BRSP has presented a breakdown of all casualties that had occurred on the Borough's roads in the previous three years by analysing the data prepared by the London Accident Analysis Unit (LAAU) for "Links", "Nodes" and "Cells" (LNC). It has summarised the Council's plans for 'Engineering' and provided a recommended programme of local safety schemes. It has also described the Borough's action plans for 'Education & Training', 'Enforcement' and 'Encouragement'.

1.3.4 This Road Safety Plan 2015 now seeks to build on the work carried out under earlier BRSP towards achieving the new London ksi reduction target for 2020. In outlining the Council's proposed interventions, it pays regard to the factors identified in Table 1.1 above and the Council's available resources, which will be targeted towards crash and injury prevention. The Council will support TfL's lobbying efforts towards improving vehicle safety, etc. but the principal focus of the BRSP will continue to be on practical measures to reduce collisions under the traditional themes of 'Engineering', 'Education & Training', 'Enforcement' and 'Encouragement'.

1.3.5 With reference to the tabulated data in Appendix 2, Part 2 of the Plan provides a breakdown of the casualties that have occurred in the latest 3-years between January 2012 and December 2014 in a similar format to earlier BRSPs. This allows direct comparison of the various road user categories and some analysis of trends on major roads (links), major junction (nodes) and the minor roads network (cells).

1.3.6 As with previous BRSP, Part 3 discusses "Accident Prevention - Objectives and Action Plans" under the aforementioned traditional themes. But where relevant, the latest action plans are now referenced to TfL's proposed actions in "Safe Streets for London" (SSL) to indicate the areas where Royal Greenwich feels it could usefully focus resources as a key stakeholder and contributor to the London-wide road safety strategy.

2. PART 2 - ACCIDENT ANALYSIS AND A SUMMARY OF RECENT TRENDS

2.1 Accident Analysis

Casualty Data Collection

2.1.1 Information on personal injury road accidents in Greenwich is supplied by the London Accident Analysis Unit. A systematic and structured approach to the analysis of data is needed to identify trends and assist casualty reduction work. By logging appropriate details, it becomes possible to pinpoint areas or sites that have high casualty rates, or those that show improvement as a consequence of engineering, enforcement or education measures.

2.1.2 The information provided includes date, time, location, casualty details (age and gender), type of vehicle, weather conditions and a brief description of how the accident happened. Where particular factors are known to have been contributory, e.g. excessive speed, alcohol or a parked vehicle, this information is also logged. The reliability of the information is dependent on the accuracy of Police reports at the scene. Inappropriate speed is believed to be a contributory factor in the majority of collisions but may not always be recorded as such if the vehicles involved were thought to be observing the speed limit.

Casualty Data Presentation

2.1.3 For the purposes of formulating a programme of local safety schemes, it is important to compile a list of recent accidents sites in an order that reflects casualty severity as a basis for prioritising expenditure. To these ends the three lists, reproduced in Appendix 2, contain all casualties for the latest three years to December 2014 in the following format, with each casualty appearing in one list only:

a. Links List: Contains casualty details on all major roads defined between main road junctions (or 'nodes'). The 'links' include major arterial roads, trunk roads and other 'Borough' main roads. Where roads are particularly long (e.g. Plumstead High Street), there may be separate entries for the road between selected nodes.

b. Nodes List: Contains casualty details at the main junctions located on the major roads network. Each entry contains accident information at and within 50 metres of the junction.

c. Cells List: An individual 'cell' listing includes all minor roads within a 0.5 km (or 25 hectare) grid square as defined by its Ordnance Survey map reference. The cell list contains details of all casualties within that grid square other than those on the major road (node-link) network (but see 2.1.8).

Casualty Weighting Factors and Scheme Priority

2.1.4 During the last decade of the 20th century, a general decline in car-user casualties was not mirrored by a corresponding decline in those involving pedestrians, cyclists and powered 2-wheelers (P2W) - the 'vulnerable' groups. To reflect the Council's commitment to better protection of these road users, a weighting factor was introduced to the analysis of the casualty data. This serves to prioritise those links, nodes and cells where accidents involving these groups are most prevalent, and where remedial measures may have greater potential to reduce the vulnerable casualties.

2.1.5 Alongside the 'Total Casualties' in the Appendix 2 'links' and 'nodes' data lists is a value for Vulnerable Casualties, '*VUNCAS*' (per km for Links). This is the sum of the 'Total Casualties' column compounded with the child (under 16), 'ped', 'ped cycle' and 'P2W' columns, to provide a weighted index that reflects the emphasis given to vulnerable road-users. This methodology double-counts the 'ped', 'ped cycle' and 'P2W' casualties, then counts again the

'child' casualties - the latter being classed as 'very vulnerable'. A child cyclist or pedestrian, therefore, is attributed 3 points in the *VUNCAS* column.

2.1.6 The links/nodes data lists prioritise sites by the value of the *VUNCAS* (per/km for links), which index is used as the 'first order' criterion for the selection of schemes to include in the Local Safety Schemes Programme. The links and nodes sites that have been carried forward to the Programme (Appendix 5) head the lists. Others sites showing a high priority that have received funding in recent years (or have been deferred for other reasons) are listed below them (in blue font). These are followed by the sites with lesser priority, while the TLRN sites are also listed separately in the links and nodes lists.

2.1.7 Thereafter the order of the link/node schemes in the Programme is judged on the economic rate of return having regard to the severity of casualties and the estimated cost of effective remedial measures. Appendix 5 *'Preamble to Local Safety Schemes Programme'* contains further explanation of this 'second order' schemes selection criterion.

2.1.8 Since 2012 a similar 2-stage analysis of the 'cells' list no longer determines the 'environmental areas' programme. Following a Best Value Review (BVR) of 20 mph zones, the previous cells assessment has been replaced by a borough-wide 20 mph zones programme for all remaining residential areas with an existing 30 mph limit. The areas identified are now prioritised on the basis of total casualties, vulnerable casualties and schools, which listing is periodically updated - see 3.1.6.

2.2 Accident Investigation and Prevention

2.2.1 For analytical purposes, accidents in urban areas are considered in two categories, viz:

(i) Those that occur on the major road ('node-link') network
(ii) Others that occur on minor roads or 'environmental areas' ('cells').

2.2.2 Accidents on major roads tend to cluster at junctions and hazard spots, particularly those involving only motorised vehicles. Historically, however, some of the worst links in Greenwich have shown a high proportion of pedestrian and cycle casualties, which usually are more spread-out and reflect the degree to which the major road is a cause of local community severance. Detailed investigation techniques focus on analysing the causes with a view to identifying commonalities that may be ameliorated by preventative measures. In some cases it may be possible to reduce the risks through a combination of engineering works, better enforcement and public information.

2.2.3 Accidents on minor residential roads tend to be more randomly dispersed and often difficult to predict, yet collectively they constitute a significant proportion (currently around 16%) of all reported accidents occurring on the highway network. More disturbingly, accidents in residential areas impact to a greater degree on the vulnerable groups who are more likely to incur the most serious injuries. Also there is thought to be a high level of under-reporting within these groups, so the occurrence of slight injury accidents in residential areas is likely to be significantly higher than is reflected in the 'cells' data list.

2.2.4 Because of their more dispersed and random nature, accidents in residential areas require different investigation and prevention techniques than those on major roads. Where the only commonalities are congested streets and/or inappropriate speed, significant casualty reduction can usually be achieved through district-wide traffic management to improve road conditions and reduce speeds. Normally such will comprise 20 mph zoning with traffic calming measures where appropriate.

2.2.5 It is also important to identify who the high risk groups are in order better to identify the most desirable interventions and focus resources. All else being equal, halving the risk for higher risk groups will bring about greater casualty reductions than halving it for lower risk groups. The need to improve the safety of pedestrians, cyclists and motorcyclists has long been recognised, but TfL also analyses casualties in terms of gender, age, ethnicity, etc. to identify the groups for whom interventions could be justified on the basis of risk.

2.3 Accident Trends

LNC 3-year period Trends

2.3.1 TfL publishes annual traffic accident data that shows variations in the different casualty categories from year to year. The following tables, however, are based on the aforementioned 3-year data sets for links, nodes and cells (LNC data) that are supplied annually by TfL, as shown in Appendix 2. By ironing-out some of the 'blips' that may occur from one year to the next, these 3-year data sets can provide a more robust indicator of the under-lying longer term trends on the major roads, at the main junctions and in the environmental cells (which can vary significantly).

Link Trends

2.3.2 Table 2.1 below and the corresponding bar charts, Figures 2.1a & b, show comparisons of the casualties that occurred on the main links (not including junctions) for 3-year periods between the end of December 2005, and December 2014. These enable some assessment to be made of the effects of the Council's road safety activities in respect of major roads over the last decade, (although these figures also include the TLRN).

2.3.3. It can be seen that, in the last 10 years, there has been a progressive reduction in total casualties on the major links. Collisions involving pedestrians have also decreased steadily. Motorcycle casualties (all severities) are also showing a general decline, but the number of cycle casualties on the major links continues to increase and is now some 47% higher than a decade ago. Most encouraging is the sharp decline in ksi which has fallen 63% over the same period.

Node Trends

2.3.4 Table 2.2 and the corresponding bar charts, Figures 2.2a & b and show comparisons of the casualties that occurred at the main nodes for 3-year periods between the end of December 2005, and December 2014. These enable some assessment to be made of the effects of the Council's road safety activities in respect of major road junctions over the last decade, (although these figures also include junctions on the TLRN).

2.3.5 It can be seen that total casualties at main road junctions are now in decline following recent increases. Motorcyclists (all severities) follow a similar downwards trend. The pedestrian casualties' trend line is also downwards, but is now levelling off. Cycle casualties at major junctions remain the biggest concern. These continues to rise and are almost double what they were a decade ago. Most encouraging is the sharp decline in ksi which has fallen 67% over the same period.

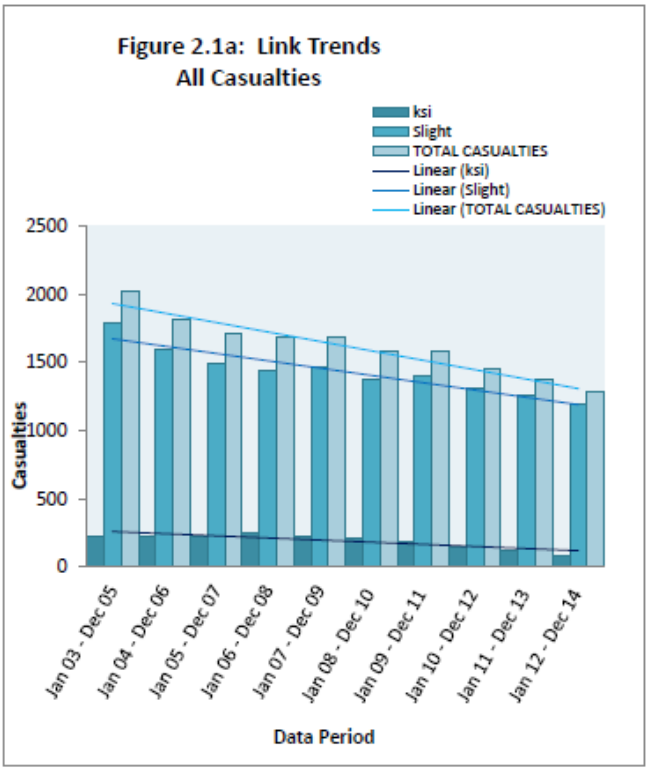
Cell Trends

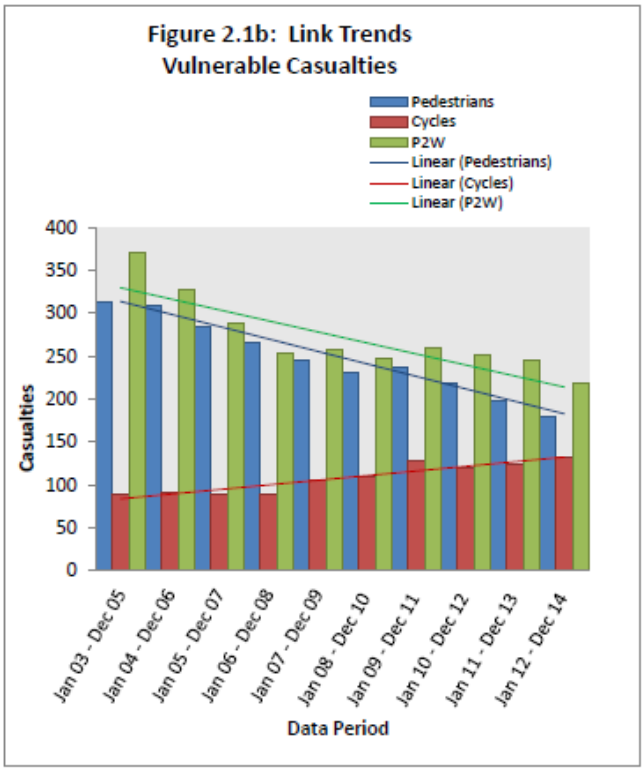
2.3.6 Table 2.3 and the corresponding bar charts, Figures 2.3a & b, show comparisons of the casualties that occurred in the cells for 3-year periods between the end of December 2005, and December 2014. These enable some assessment to be made of the effects of the Council's road safety activities in respect of minor local roads in residential areas over the last decade.

2.3.7 It can be seen that the total casualties on minor local roads are back into decline following a recent levelling-off. Ksi also continue to fall and are now 46% down on where they were a decade ago. Cycles and motorcycle casualties also show a downwards trend, but recent reductions in these groups have now levelled-off. Across all road user categories, however, the progressive casualty reduction over the last decade remains encouraging and reflects the priority that has been given to traffic calming in residential areas supported by an effective road safety education programme.

PERIOD	ksi	Slight	TOTAL CASUALTIES	Pedestrians	Cycles	P2W
Jan 03 - Dec 05	225	1793	2018	313	90	371
Jan 04 - Dec 06	221	1596	1817	309	91	327
Jan 05 - Dec 07	223	1488	1711	285	90	289
Jan 06 - Dec 08	245	1445	1690	266	90	254
Jan 07 - Dec 09	228	1460	1688	246	105	257
Jan 08 - Dec 10	207	1380	1587	231	109	248
Jan 09 - Dec 11	186	1399	1585	238	129	260
Jan 10 - Dec 12	144	1309	1453	218	121	251
Jan 11 - Dec 13	119	1256	1375	199	125	245
Jan 12 - Dec 14	84	1196	1280	180	132	219
% change in last decade	-62.7%	-33.3%	-36.6%	-42.5%	46.7%	-41.0%

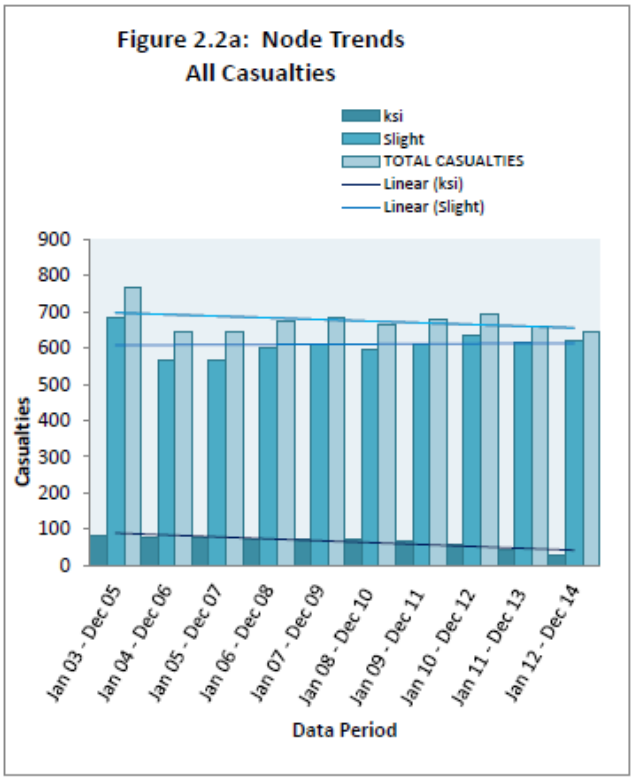
Table 2.1:- Comparison of three-year casualties on major Links

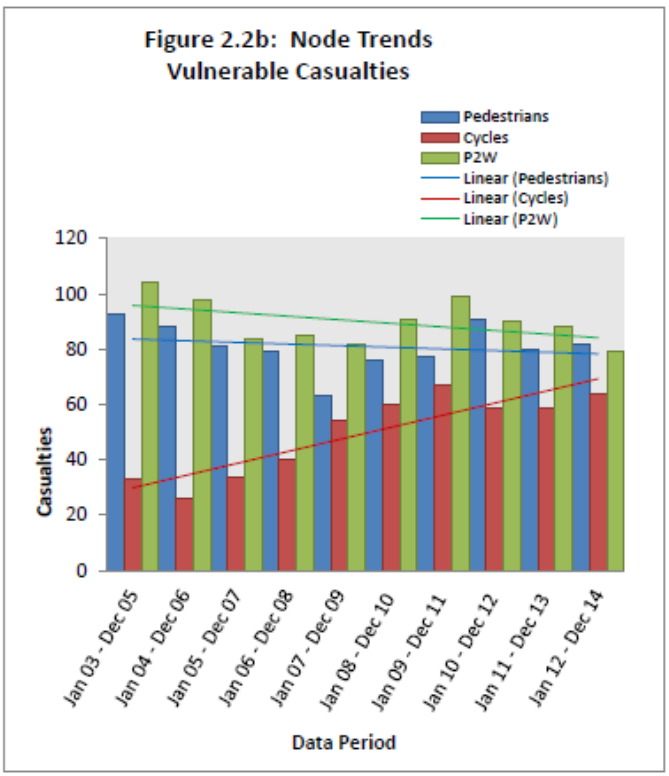




PERIOD	ksi	Slight	TOTAL CASUALTIES	Pedestrians	Cycles	P2W
Jan 03 - Dec 05	84	685	769	93	33	104
Jan 04 - Dec 06	78	568	646	88	26	98
Jan 05 - Dec 07	79	564	643	81	34	84
Jan 06 - Dec 08	73	602	675	79	40	85
Jan 07 - Dec 09	74	611	685	63	54	82
Jan 08 - Dec 10	71	595	666	76	60	91
Jan 09 - Dec 11	70	611	681	77	67	99
Jan 10 - Dec 12	58	635	693	91	59	90
Jan 11 - Dec 13	43	615	658	80	59	88
Jan 12 - Dec 14	28	619	647	82	64	79
% change in last decade	-66.7%	-9.6%	-15.9%	-11.8%	93.9%	-24.0%

Table 2.2: Comparison of three-year casualties at main Nodes





PERIOD	ksi	Slight	TOTAL CASUALTIES	Pedestrians	Cycles	P2W
Jan 03 - Dec 05	54	408	462	137	38	39
Jan 04 - Dec 06	44	402	446	131	41	30
Jan 05 - Dec 07	59	392	451	131	46	37
Jan 06 - Dec 08	60	356	416	119	41	29
Jan 07 - Dec 09	53	321	374	116	36	32
Jan 08 - Dec 10	50	325	375	121	28	32
Jan 09 - Dec 11	41	345	386	126	26	31
Jan 10 - Dec 12	49	336	385	123	25	35
Jan 11 - Dec 13	33	322	355	119	26	25
Jan 12 - Dec 14	29	274	303	96	30	25
% change in last decade	-46.3%	-32.8%	-34.4%	-29.9%	-21.1%	-35.9%

Table 2.3: Comparison of three-year casualties in residential Cells

Figure 2.3a: Cell Trends
All Casualties

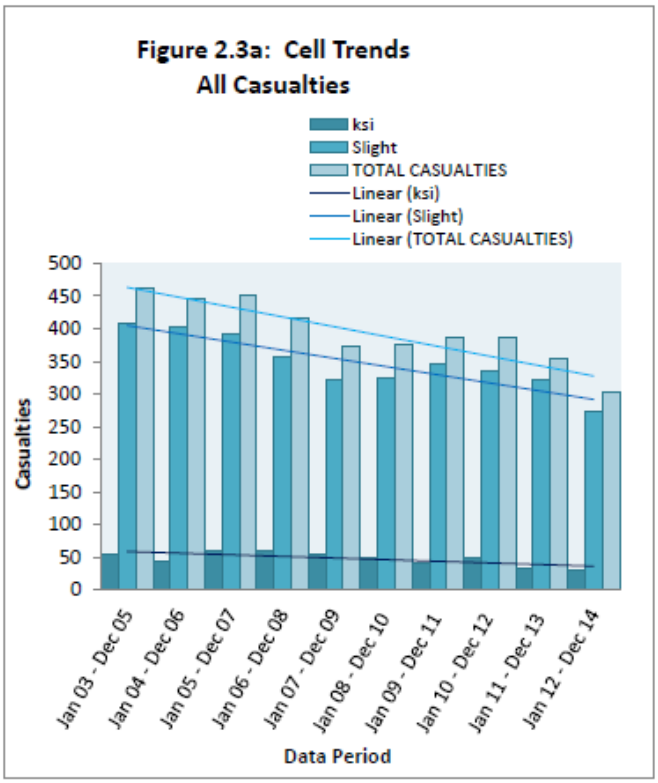
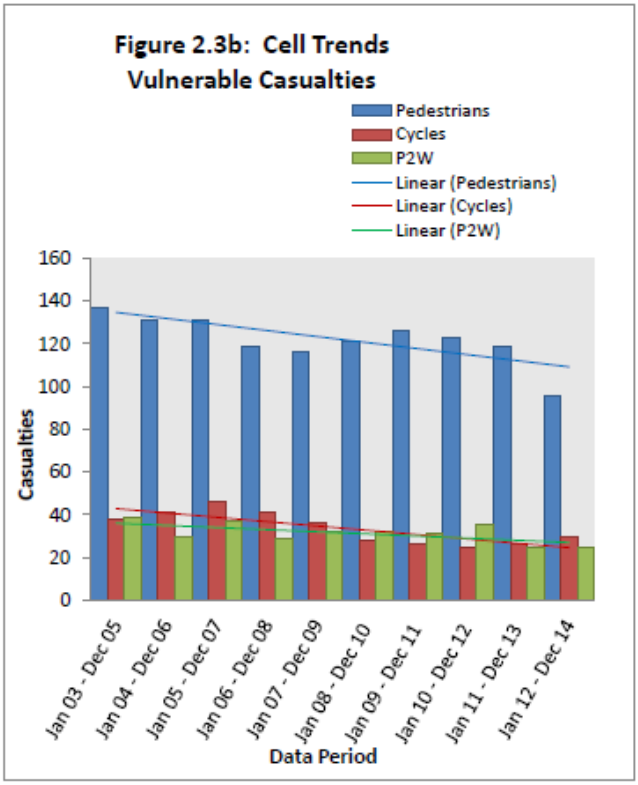


Figure 2.3b: Cell Trends
Vulnerable Casualties



Other important LNC observations

2.3.8 Looking more closely at the latest LNC data, it is also interesting to note the following important observations:

- On the major road network, some 24% of casualties are pedestrians or cyclists. A further 16% are motorcyclists, so the vulnerable groups account for 40% of all major road casualties.
- About 14% of all casualties sustain their injuries on minor residential roads (cells), of which some 42% are either cyclists or pedestrians, and about half of these are children. While the numbers generally have declined in the last 10 years, these statistics show that non-motorised groups still remain highly vulnerable off the major road network, suggesting that spatial priorities in residential areas are still weighted too heavily in favour of motorised mobility to the detriment of other 'social' functions of the street.
- Some 10% of casualties on the major road network are incurring fatal or serious injury. About 6% incur fatal or serious injury on the minor roads. As severity is largely a function of impact speed, these statistics suggest that some motorists are still failing to adjust their speed appropriately between main roads and residential areas.
- Cyclists currently account for some 10.2% of all casualties on the minor roads and 9.9% of casualties on the major road network. Given that cycle trips account for some 2-3% of all traffic movements in Outer London, these figures emphasise the continued vulnerability of cyclists over the entire highway network. In recent years, however, cycle usage has increase faster than the cycle casualty rate, which supports TfL's contention that cycling is actually becoming safer (see 1.2.8).
- On the major road network, pedestrians account for some 14% of all casualties, some 69% of which occur on the links as opposed to the nodes. While the numbers have declined steadily over the last decade, they remain indicative of the extent to which busy main roads sever communities and cause difficulties for pedestrians who need to cross them.

Year to year category trends and 2020 target

2.3.9 Appendix 1 shows the RB Greenwich casualty data for 2014 including comparisons with previous years and other London Boroughs. It will be seen from the 'radar' chart that the percentage change in "all casualties" for RB Greenwich between 2013 and 2014, whilst increasing, compares favourably with most other London boroughs.

2.3.10 Table 2.4 below and the associated Figures 2.4a, 2.4b, and 2.4c show the borough-wide 'ksi' casualties for 2014 in the 'vulnerable' categories, alongside those recorded each year for the previous decade. The latest TfL Road Safety Action Plan only specifies one target for the year 2020, which is a 40% reduction on the 2005-09 average for "*all ksi"* casualties. This 'baseline' equates to 117, so the 2020 *"all ksi"* target for RB Greenwich is 70.

2.3.11 It can be seen that, despite a rise in *"all ksi"* since last year (43%), the general trend line remains steeply downwards (Figure 2.4c). Also the 2014 *"all ksi"* figure (40) is showing a 66% reduction on the *'2005-09 average',* so has already broken through the 2020 target. *"All casualties"* in 2014 (770) are up by 11.8% on 2013 (689) but the general trend also remains downwards, while all the individual ksi categories are still on target for at least 40% reduction by 2020.

2.3.12 While there are no longer any definitive targets for the latter, it is recognised that sustained reduction in ksi casualties is unlikely to be achieved without significant corresponding reductions across all the vulnerable road user groups. The annual Borough Road Safety Plan, therefore, will continue to monitor these same categories as a guide to future action plans and work programmes.

Categories	Actual 2003	Actual 2004	Actual 2005	Actual 2006	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	TfL 2020 Target (2005-09 average less 40%)	2014 Change on 05-09 average
All Slight	1104	949	831	784	824	795	773	764	808	698	661	**730**	481	-9%
All ksi	142	113	108	122	130	126	99	104	95	73	28	**40**	70	-66%
All Casualties	1246	1062	939	906	954	921	872	827	910	771	689	**770**	551	-16%
Pedestrians ksi	39	27	31	33	38	32	23	24	35	26	12	**17**	19	-46%
Cyclists ksi	9	6	6	5	11	11	13	12	8	7	4	**5**	6	-46%
P2W ksi	35	29	34	31	26	29	13	29	21	15	6	**10**	16	-62%
Children ksi	22	15	11	18	12	16	12	14	20	10	5	**5**	8	-64%
Other ksi	59	51	37	53	55	54	50	39	31	25	6	**8**	30	-84%

Table 2.4: Categories - Casualties per Annum and Borough ksi Target

Figure 2.4a: Vulnerable Road Users

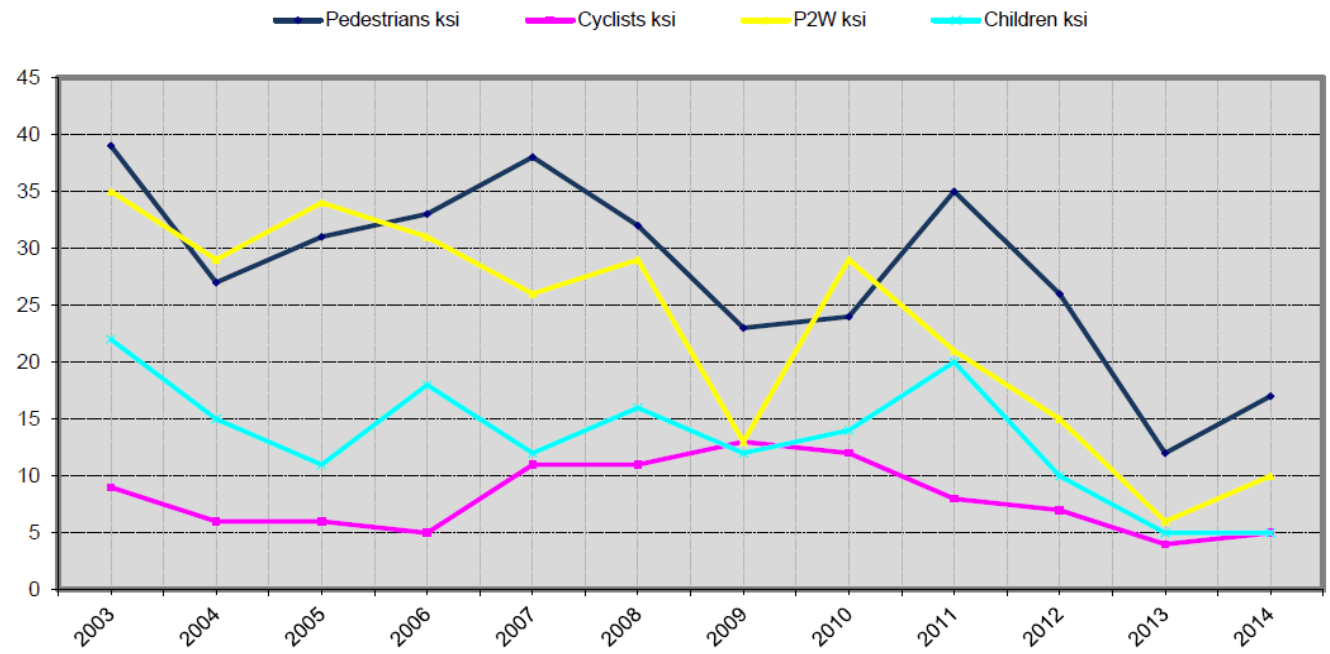


Figure 2.4b: All Slight Casualties

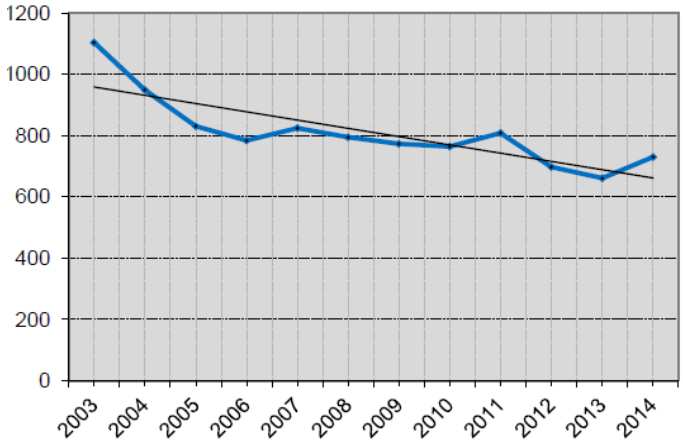
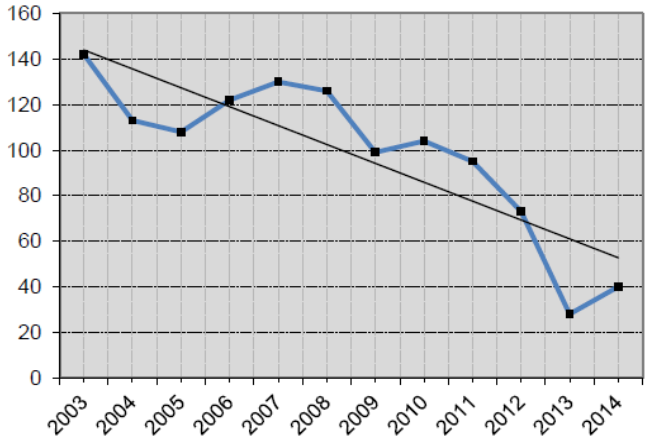


Figure 2.4c: ksi casualties

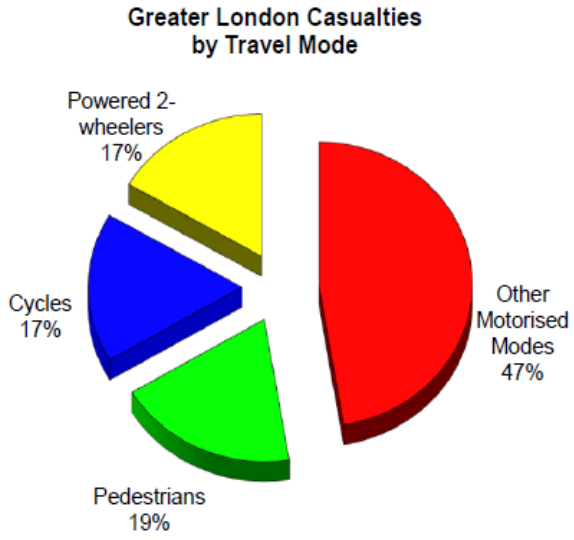


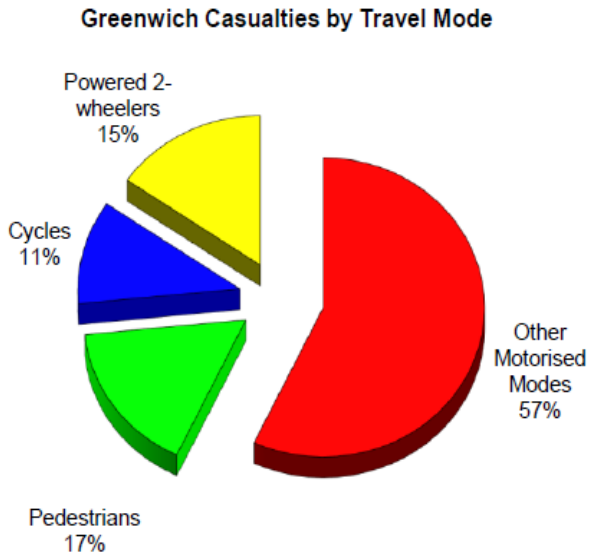
Casualties per Capita and Vulnerable Casualties - comparisons with Greater London

2.3.12 The following Table 2.5 and the associated pie charts show the 2013 casualties in Greenwich split between the various travel modes, and how these compare with Greater London as a whole. In 2013 the estimated population of Greenwich (264,008) was 3.14% of Greater London (8,416,535), while traffic accidents in Greenwich accounted for 3.05% of all casualties in the Capital, i.e. about 2.9% fewer casualties per capita than the Greater London average. More significantly those involving vulnerable road users were proportionally less in Greenwich than the Greater London average for all the vulnerable road user groups. This partially reflects the relative mode share but also the particular emphasis given by the Council in recent years to protecting vulnerable road users.

TABLE 2.5 - ALL CASUALTIES IN GREENWICH AND GREATER LONDON BY MODE OF TRAVEL, 2013

	Other Motorised Modes	Pedestrians	Cycles	Powered 2-wheelers	Total Casualties
Greater London 2013	12893	5181	4623	4502	**27199**
Greenwich 2013	393	113	77	106	**689**
Greenwich Casualties as % of Greater London	3.05%	2.18%	1.67%	2.35%	**2.53%**





3. PART 3 - ACCIDENT PREVENTION – OBJECTIVES AND ACTION PLANS

3.1 Engineering

3.1.1 Highway engineering projects are coordinated from within the Council's Directorate of Regeneration Enterprise and Skills, in line with the policies and programmes set out in the *Local Implementation Plan*. Engineering measures for achieving casualty reduction are categorised as follows:

(i) Specific remedial measures at problem locations where measures are targeted to reduce particular types of commonly occurring accidents.
(ii) A borough-wide 20mph zones programme, incorporating district-wide traffic calming, to effect a more pedestrian/cycle friendly environment, aimed towards a general reduction of randomly dispersed accidents over a wide area.
(iii) Controlled Parking Zones to reduce commuter traffic intrusion ('space searching') and effect a safer more orderly arrangement of on-street parking over a wide area.
(iv) Other measures targeted at the needs of vulnerable user groups, particularly cyclists and pedestrians, intended safeguard and to promote these more benign modes of travel.

Specific Remedial Measures

3.1.2 Typically carried out on the major road network, specific remedial measures are brought forward following detailed analysis to identify various commonalities in the causes of accidents over a number of years. When designing schemes, careful attention is paid to the needs of all road users, particularly the vulnerable groups. High priority is given to speed considerations and the application of highway standards consistent with the desirable speed of traffic in the relevant urban context. It is recognised that designing to inappropriately high standards in terms of road alignment and visibility can sometimes serve to increase traffic speed with counter-productive road safety effects.

District-wide Traffic Calming

3.1.3 District-wide traffic calming is appropriate in 'environmental cells' through which the speed and/or volume of traffic can cause community severance on the busier roads, or conflict with the 'social spaces' function of local streets. Such conditions usually give rise to randomly dispersed accidents characterised by a higher than average proportion of vulnerable casualties. Traffic calming schemes are most effective when changes to the vertical alignment of the carriageway are included, i.e. road humps, speed cushions, and speed tables. Horizontal changes of alignment (build-outs, chicanes, etc.) can complement these measures but may be of limited value if used alone. When properly designed, mini-roundabouts can also be beneficial traffic calming features but care must be taken when changing priorities at junctions.

20mph Zones

3.1.4 The objective of district-wide traffic calming is to achieve a highway environment within which a 20 mph speed restriction is effectively 'self-enforcing'. The accident remedial benefits following well-designed schemes almost invariably are positive. Where resources and other conditions permit, consideration may also be given to appropriate engineering works to effect the construction of a shared surface, combined with other environmental improvements to produce a 'home zone' (in accordance with the IHIE Design Guidelines.) Within such areas speeds are tightly constrained so that uses of the street, other than traffic movement, can be

safely accommodated (as provided by the Transport Act 2000). Latterly such treatment has been confined to new residential developments.

3.1.5 In October 2011 the Government announced new regulations for implementing 20 mph zones which reduced the requirement for road humps, etc. in preference for additional signing and other measures to 'design out' inappropriate high speed. This coincided with the Council's own Best Value Review of its 20mph zones, further to which Members approved:

- subject to consultation, the phased implementation of a "borough-wide 20 mph scheme" for all currently untreated residential roads that do not form part of the principal road network,
- the continued use of self-enforcing traffic calming measures in those locations where road traffic hazards are demonstrable, either by virtue of high recorded 85th percentile traffic speeds (>30 mph) and/or significant collisions involving pedestrians and cyclists,
- subject to consultation, the establishment of 20 mph zones (or limits) elsewhere using signs and road markings in accordance with the revised regulations published by the DfT in October 2011, supplemented as appropriate by speed activated warning signs.

3.1.6 In 2012, therefore, the Council adopted a policy of introducing a 20 mph speed limit borough-wide on all residential and non-principal roads. Figure 3.1 shows the existing zones that have been implemented to date and those that are proposed. The latter have been prioritised based primarily on recorded casualties but applying the following weighting factors:

- Fatal casualty: x 4
- Serious casualty: x 2
- Slight casualty: x 1

. To prioritise vulnerable road users, extra weighting (x 1 in each case) is given to pedestrian, cycle and P2W casualties, and the presence of schools. Table 3.1 shows the prioritised list of schemes with casualty data and the schools in each zone, which ranking is now reflected in the local safety schemes programme for 20mph zones. The listing will be updated periodically to reflect the latest casualty data. This initiative supersedes the earlier analysis of "environment cells" based on OS grid references. The 'cells' data in Appendix 2, therefore, is included only for the purpose of assessing wider casualty trends on minor borough roads.

3.1.7 It has often been the Council's practice, when implementing 20mph zones, to involve nearby schools in the design of the scheme. This takes the form of a poster competition with cash prizes for the art work deemed most suitable for inclusion on the 20 mph zone entry signs. Engaging local children in this way has afforded invaluable opportunity for targeted road safety education that has assisted the Council towards meeting its child casualty reduction target.

Measures near Schools

3.1.8 More localised traffic calming measures around schools have also featured highly on the Council's road safety agenda over many years. Speed tables and kerb build-outs have been used extensively to reduce traffic speed, eliminate dangerous parking and provide safe crossing places for school crossing patrols (and pedestrians generally). In some instances, temporary signs designed by school children, have also been erected to remind parents not to park on 'school-keep-clear' markings. The Council periodically reviews all school-keep-clear markings to ensure that a robust enforcement framework is being sustained.

Parking Controls and CPZs

3.1.9 Controlled Parking Zones (CPZs) are brought forward to resolve local parking conflicts by prioritising the available on-street space for residents and local business. Although not primarily intended as accident remedial measures, these schemes can serve to reduce the volume of commuter traffic entering an area with corresponding accident reduction potential. Carefully designed parking controls can also have more direct road safety benefits when they reduce the incidence of hazardous obstructive parking. This means retaining appropriate visibility at junctions, crossings and tight bends, etc. Further benefits may ensue if permitted on-street parking arrangements can be used to influence the effective carriageway alignment so as to complement other traffic calming features and reduce speeds.

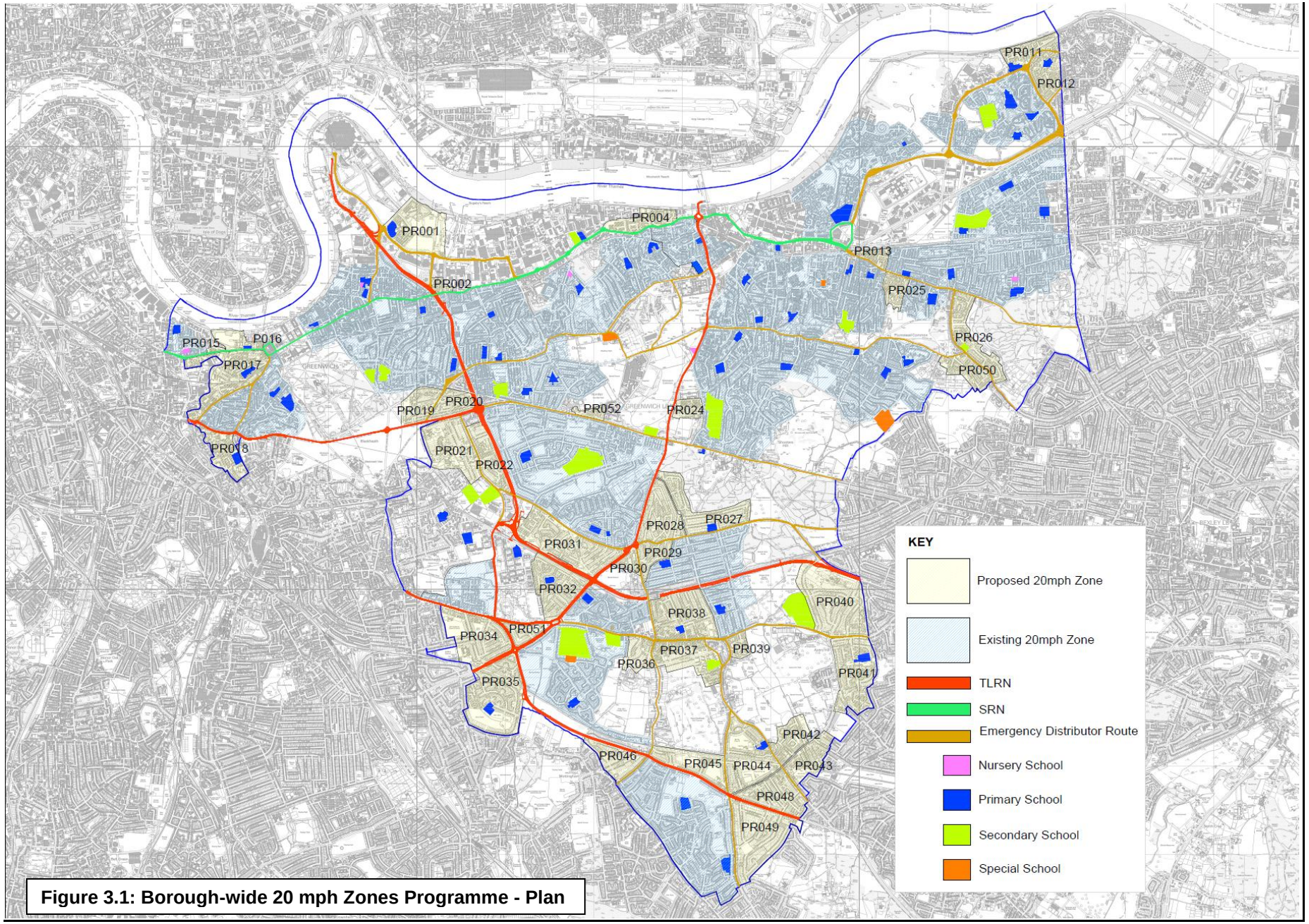


Figure 3.1: Borough-wide 20 mph Zones Programme - Plan

						ACCIDENTS			CASUALTIES					SCHOOLS			
		Ranking 'score'	Ranking position 14/15	**Ranking position 15/16**	proposed year of implementation	Slight	Serious	Fatal	**Peds**	**Cyclists**	**P2W's**	**U16's**	**journey to school**	Nursery	Primary	Secondary	Special
PR041	Anstridge Road Area	**10**	7	**1**	proposed 16/17	4	0	0	2	1	0	2	0	0	1	0	0
PR017	Norman Road Area	**9**	6	**2**	proposed 16/17	4	0	0	1	1	1	1	0	0	1	0	0
PR022	Westbrook Road Area	**8**	4	**3**	proposed 16/17	3	1	0	0	2	1	0	0	0	0	0	0
PR038	Archery Road Area	**7**	8	**4**	proposed 16/17	2	1	0	2	0	0	0	0	0	1	0	0
PR035	Alnwick Road Area	**6**	10	**5**		2	0	0	2	0	0	1	0	0	1	0	0
PR001	Greenwich Millennium Village Area	**6**	5	**6**		2	1	0	0	0	1	0	0	0	1	0	0
PR031	Briset Road Area	**5**	12	**7**		1	1	0	1	0	1	0	0	0	0	0	0
PR049	Dominic Drive Area	**4**	18	**8**		3	0	0	1	0	0	0	0	0	0	0	0
PR025	Tewson Road Area	**4**	15	**9**		2	0	0	2	0	0	0	0	0	0	0	0
PR011	Greenhaven Drive Area	**4**	14	**10**		1	0	0	0	1	0	1	0	0	1	0	0
PR012	Woodpecker Road Area	**4**	11	**11**		1	0	0	1	0	0	1	0	0	1	0	0
PR026	Waterdale Road Area	**3**	27	**12**		1	0	0	0	1	0	0	0	0	0	1	0
PR019	St John's Park Area	**3**	17	**13**		2	0	0	0	1	0	0	0	0	0	0	0
PR016	Welland Street Area	**3**	16	**14**		1	0	0	1	0	0	0	0	0	1	0	0
PR046	West Park Area	**3**	13	**15**		2	0	0	0	1	0	0	0	0	0	0	0
PR043	Merchland Road Area	**2**	26	**16**		2	0	0	0	0	0	0	0	0	0	0	0
PR028	Arsenal Road Area	**2**	22	**17**		2	0	0	0	0	0	0	0	0	0	0	0
PR044	Blanmerle Road Area	**2**	21	**18**		1	0	0	0	0	0	0	0	0	1	0	0
PR027	Crookston Road Area	**2**	19	**19**		1	0	0	0	0	0	0	0	0	1	0	0
PR032	Shawbrook Road Area	**2**	9	**20**		1	0	0	0	0	0	0	0	0	1	0	0
PR018	Coldbath Street Area	**1**	29	**21**		0	0	0	0	0	0	0	0	0	1	0	0
PR042	Sparrows Lane Area	**1**	25	**22**		1	0	0	0	0	0	0	0	0	0	0	0
PR040	Colepits Wood Road Area	**1**	24	**23**		1	0	0	0	0	0	0	0	0	0	0	0
PR037	North Park Area	**1**	20	**24**		1	0	0	0	0	0	0	0	0	0	0	0
PR052	Telson Avenue Area	**0**	44	**25**		0	0	0	0	0	0	0	0	0	0	0	0
PR051	Cedarhurst Drive Area	**0**	43	**26**		0	0	0	0	0	0	0	0	0	0	0	0
PR045	Broad Lawn Area	**0**	42	**27**		0	0	0	0	0	0	0	0	0	0	0	0
PR039	Southend Close Area	**0**	41	**28**		0	0	0	0	0	0	0	0	0	0	0	0
PR036	Kings Orchard Area	**0**	40	**29**		0	0	0	0	0	0	0	0	0	0	0	0
PR030	Elmbrook Gardens Area	**0**	39	**30**		0	0	0	0	0	0	0	0	0	0	0	0
PR024	Prince Imperial Road Area	**0**	38	**31**		0	0	0	0	0	0	0	0	0	0	0	0
PR015	Clarence Road Area	**0**	37	**32**		0	0	0	0	0	0	0	0	0	0	0	0
PR013	White Hart Area	**0**	36	**33**		0	0	0	0	0	0	0	0	0	0	0	0
PR004	Antelope Road Area	**0**	35	**34**		0	0	0	0	0	0	0	0	0	0	0	0
PR048	Larchwood Road Area	**0**	34	**35**		0	0	0	0	0	0	0	0	0	0	0	0
PR002	Fearon Street	**0**	33	**36**		0	0	0	0	0	0	0	0	0	0	0	0
PR020	Langton Way Area	**0**	32	**37**		0	0	0	0	0	0	0	0	0	0	0	0
PR050	Alliance Road Area	**0**	31	**38**		0	0	0	0	0	0	0	0	0	0	0	0
PR029	Prince Rupert Road Area	**0**	30	**39**		0	0	0	0	0	0	0	0	0	0	0	0
PR021	Kidbrooke Grove Area	**0**	28	**40**		0	0	0	0	0	0	0	0	0	0	0	0
PR034	Horn Park Lane Area	**0**	23	**41**		0	0	0	0	0	0	0	0	0	0	0	0

Table 3.1: Borough-wide 20 mph zones Programme – Schemes List

The Mayor's 'Better Streets' Initiative

3.1.10 It is increasingly recognised that transport generally is only 'a means to an end', whereas the desired end of responsible urban planning is to deliver successful and genuinely sustainable towns where people wish to live and businesses can flourish. Meeting the many demands for movement can be a complex task, and the Mayor's 'Better Streets' initiative has sought to move away from single mode, single discipline responses that have created unintended consequences such as:

- community severance and social exclusion
- the suppression of sustainable transport modes
- the death of central areas outside shopping hours
- physically unattractive, even hostile environments.

The resolution of such problems can be achieved through new joined-up thinking and cross-discipline working to meet transport needs within a more attractive urban environment. The outcome should be a higher quality of public realm that is more finely tuned towards the needs of pedestrians, cyclists and local residents. The award-winning transformation of Plumstead Road and the Woolwich Squares are a good examples of such treatments. Based on similar principles the Council has recently acquired funding to design and implement a proposed 'major scheme' to transform Eltham High Street, which is programmed for completion by autumn 2016.

3.1.11 New developments and traffic management schemes will be designed with reference to the *'Manual for Streets 2'* and Local Transport Note 1/08, *'Traffic Management and Streetscape'*. Where appropriate other opportunities will be taken to improve accessibility for pedestrians and cyclists. Where necessary, wider footways and formal pedestrian/cycle crossings will continue to be provided in consultation with TfL. Where appropriate, footways and crossings will be made accessible for shared-use by cycles. In designing all road crossings, particular attention is paid to the needs of the mobility impaired and the blind/partially sighted. Audible signals and/or tactile devices will be provided as required on signal-controlled crossings. The Council is close to completing a programme of works to ensure that all road crossing facilities (formal and informal) are wheelchair accessible and furnished with appropriate tactile paving.

The Cycle Network

3.1.12 In conjunction with TfL, the Council has made significant investments over a number of years to upgrade and improve the Borough cycle network in line with the desire of stakeholders expressed through the 'Best Value Review' process. Recently, this has focussed on widening and improving cycle lanes on the A206 corridor (with 2m wide cycle lanes now introduced in various sections) and developing a series of 'greenways' links – notably in the Avery Hill and Eltham Parks. The Ridgeway path has also been recently upgraded to provide some 3 kilometres of high quality greenway through Plumstead and Abbey Wood.

3.1.13 These provisions provide crucial off-road, traffic-free facilities for beginner/leisure cyclists. Additional schemes in the pipeline include on-road cycle lanes improvements along Rochester Way. The network has now been developed more strategically through the recently published Royal Borough of Greenwich Cycling Strategy. This envisages a five-fold increase in cycling by 2026 which will be delivered, to a large degree, via infrastructure improvements.

3.1.14 As part of this Strategy a series of inter-connected cycle networks are envisaged, including both 'primary' routes along the main road corridors, 'quietway' routes using minor roads, greenways links, and local 'neighbourhood' networks of small-scale cut-throughs, permeability measures etc. Significant junctions will also be improved. At the heart of these enhancements will be cycle safety, helping the Borough to achieve the Cycling Strategy vision of 'more cycling, more often and more safely'.

Powered 2-wheelers

3.1.15 The Council is also committed to the better protection of motorcycle riders, who are amongst the most vulnerable of road users. P2W casualties are predominantly male in the mid-20s – mid-40s age bracket, so road safety campaigns aimed at changing rider behaviour need to be targeted at this audience. Most of the current initiatives are being developed at the sub-regional level, e.g. TfL's educational programmes "BikeSafe-London" and "ScooterSafe-London", which have made a significant contribution to reducing casualties. Themes have included encouraging riders to take care on familiar journeys and encouraging drivers to take more care in looking out for motorcycles.

3.1.16 A recent study into the characteristics of fatal motorcycle collisions found that:

- The majority of motorcyclists were exceeding the speed limit prior to the fatal collision (around two-thirds where the speed was known)
- Loss of control was the main contributory factor in collisions where the motorcycle was the only vehicle involved
- Collisions with one or more other vehicles most often involved a car/taxi turning right across the path of the motorcycle at a junction or from a side road
- In half of the cases where a motorcycle was in collision with another vehicle, contributory factors were attributed to both the rider and the vehicle driver
- Other features of motorcycle fatal collisions were rider inexperience, alcohol, drugs, and motorcyclists riding without a licence or insurance.

3.1.17 This suggests that the focus needs to be on managing the speed of P2Ws and to reducing the risks associated with turning manoeuvres, including redoubling efforts to encourage greater hazard perception awareness. TfL is currently working with stakeholders to deliver a Motorcycle Safety Action Plan. The research into fatal collisions will be used to ensure that those who are most at risk are identified and action is targeted accordingly.

3.1.18 P2Ws are also disproportionately affected by poor standards of highway maintenance leading to potholes or ruts in the road surface. To safeguard 2-wheeler riders, the Council carries out regular safety inspections, in accordance with the Highways Maintenance Code of Good Practice, to identify damaged or distressed road surfaces and effect prompt emergency repairs as necessary.

3.1.19 Following trials, provision to allow motorcycles in bus lanes has now been made permanent. An associated road safety campaign highlighting the need for continued vigilance by road users to watch out for motorcycles in bus lanes will continue, together with increased enforcement of motorcycle speeds.

Safety Audit

3.1.20 An integral part of the design process for most highway engineering works is the Safety Audit procedure (carried out in accordance with the Design Manual for Roads and Bridges, HA42/94 and HD19/94 - Guidance on Road Safety Audits). This is a rigorous examination of all elements of the scheme for compliance with appropriate road safety standards by a qualified person who is independent of the design process. The object of the exercise is to bring to the designers' attention any oversights or omissions, so minimising the potential for conflicts to occur. The procedure comprises the identification of possible problems followed by recommendations on how these might be resolved. The designer is required to respond to the problems identified, stating the measures that have been taken to address the auditor's concerns or giving reasons why no changes are deemed necessary.

Transport Development Control

3.1.21 The development process has an important role to play in ensuring that the future use of land fits into a sustainable plan for reducing traffic and minimising the risk of accidents. Planning applications are carefully vetted as necessary to assess the traffic impact of the proposed development. Policies on parking provision are intended to ensure that the end-use of the site

limits non-essential car trips and unnecessary traffic intrusion. New accesses and road layouts must be properly designed to ensure compliance with the relevant geometric and visibility standards, paying proper regard to the needs of pedestrians, cyclists and public transport access. Where appropriate developers are asked to prepare green travel plans and to enter into legal agreements to secure contributions to sustainable transport infrastructure. The process also seeks to ensure that new access roads are built to safe standards suitable (where appropriate) for adoption by the highway authority. The latter facilitates the proper maintenance of roads and footpaths at the public expense, so obviating the risks to road users that can arise when private streets fall into disrepair.

Outcome Data Monitoring of Completed Schemes

3.1.22 TfL requires London Boroughs to monitor the performance of Local Safety Schemes that have been financed through funding settlements. By identifying the worst sites from the most recent 'link', 'node' and 'cell' casualty listings (see Appendix 2), the Local Safety Schemes Programme is periodically updated. Thereafter, and once sufficient time has elapsed for meaningful data to be gathered (preferably 3 years) monitoring exercises are carried out to assess the casualty savings (or 'outcome') of the completed schemes.

3.1.23 Appendix 4, summarised in Table 3.2, shows the Outcome Monitoring Data for a number of schemes that have been completed since 1999. The cost of these has been adjusted to reflect present day costs assuming an average annual inflation rate of 2%. In recent years, much effort has been targeted towards 20 mph zones in residential areas, reflected in favourable 'cell' trends (see 2.3.6 - 7 above). The 20-zones for which 'after' data is available currently show a 59% net reduction in casualties with 70% fewer ksi. These figures compare favourably with TRL's findings for London 20-zones as a whole. At the time of writing, 'after' data was available for 16 recent 'Link' (major road) improvements and 5 'Nodes' (main junction) schemes. These likewise are showing a positive return on investment. From the totals summarised below, it will be seen that the net casualty saving for all schemes examined to December 2014 is 53%, with 67% fewer ksi, yielding 149% return on invested capital every year (based on 2013 casualty values).

Scheme Type	Actual Casualty Savings per annum			Adjusted Scheme Costs £,000	Economic Rate of Return
	All	Ksi	Value £,000		
CELLS (20-ZONES)	59%	70%	£5,340	£4,378	122%
LINKS (MAJOR ROADS)	45%	60%	£4,507	£2,520	179%
NODES (MAIN JUNCTIONS)	76%	100%	£802	£236	340%
ALL SCHEMES	**53%**	**67%**	**£10,649**	**£7,134**	**149%**

Table 3.2: Outcome Monitoring Data to December 2014, Totals Summary

Local Safety Schemes Programme

3.1.24 The latest 3-year Local Safety Schemes Programme is shown in Appendix 5 with costs/benefits summarised in Table 3.3 below. This identifies the schemes with highest priority for which funding will be sought for 2016-17 and others that are provisionally programmed for later years, but the latter will be subject to further scrutiny in the light of future casualty data. It will be seen that a total of 38 local safety schemes are provisionally programmed for completion before 2019 at an estimated cost of £2.09 million, and that a total of 344 casualties had been recorded at these localities in the three years to December 2014.

3.1.25 Assuming that these would be designed specifically to address the casualty issues, the Programme is targeting a two-thirds casualty reduction for all 2016-19 local safety schemes.

As can be seen from Table 3.3, such would prevent some 76 casualties annually, worth about £1.88million (at 2013 values). While this is an optimistic forecast, recent Outcome Monitoring Data shows that such a target is not unrealistic.

Scheme Programme Year	Current Accidents in latest 3 years	Estimated Scheme Costs £,000	Forecast Annual Savings Assuming 1/3 Reduction		Forecast Annual Savings Assuming 2/3 Reduction	
			Casualties Prevented Annually	Value of savings £,000/annum	Casualties Prevented Annually	Value of savings £,000/annum
2016-17	152	675	17	476	34	952
2017-19	192	1,410	21	463	43	925
Total	344	2,085	38	939	76	1,877

Table 3.3: Projected Costs and Benefits of Programmed Road Safety Schemes, 2015-18

3.1.26 Details of the Three Year Programme are shown in Appendix 5. Pessimistically all schemes could be expected to deliver, on average, a one third reduction in casualties, so Table 3.3 shows a summary of the estimated scheme costs and projected annual savings based on a one third and two thirds (the target) casualty reduction. Naturally schemes of lesser priority, provisionally programmed for later years, would yield a lower rate of return than those programmed for earlier implementation. The Appendix 5 Preamble to the Local Safety Schemes Programme describes the formula used for calculating the value of the casualty savings for links and nodes. As described in 2.1 above, the methodology affords some priority to schemes with greater potential to reduce casualties in the vulnerable road-user categories.

3.1.27 It is recognised that the high cost of a fatal accident could distort priorities in situations where an odd random fatality might cause a site with an otherwise good road safety record to take economic precedence over others with consistently worse records but no recent fatalities. It should be noted, therefore, that for the purposes of outcome monitoring and benefits forecasting, the DfT cost for a 'serious' casualty is assigned to both the 'fatal' and 'serious' categories under a single "*ksi"* heading (see Appendix 5 Preamble). This means that the actual and forecast savings summarised above will generally under-estimate the casualty reduction benefits insofar as they exclude the high costs associated with a small numbers of random fatalities. This obviates any possibility that the Council has overstated the value of its Local Safety Schemes Programme, so affording a realistic assessment of the likely benefits to be derived from these initiatives.

<u>Synergy with "Safe Streets for London" (SSL) Actions</u>

3.1.28 The following are the SSL action references that are most relevant to the Council's Engineering initiatives described above. RB Greenwich will co-operate with TfL in the implementation of these actions towards the targeted reduction in casualties by 2020.

SSL Ref	Action
5	**TfL will ensure boroughs have the best available data** by providing each with information about 'high risk' locations on their networks and enable boroughs to monitor schemes by supporting use of the TADS to understand the impact of local safety schemes on borough casualty numbers (annually).
6	TfL will work with the boroughs to **ensure the road safety audit procedure is applied on LIP-funded borough schemes** that involve a substantive change to borough roads. TfL will then engage the boroughs in the 'lessons learnt programme based on RSAs of borough schemes (ongoing).
7	**Ensure that TfL design standards are fully updated and improved** by bringing them in line with best national and international practice (London Cycle Design Standards 2013, and Pedestrian Comfort Guidance 2014). TfL will work with the boroughs to embed the use of these design guidelines in all LIP and TfL-funded schemes, and raise the standard of all professionals involved in scheme design and

	delivery by providing training to TfL and borough engineers (following revision).
8	TfL will use 'crowd sourcing' techniques through **promotion of the Report IT system, empowering members of the public to report safety issues** arising from pavement and road defects (ongoing). Through better coordination between boroughs and TfL, customer alerts of safety-critical issues will be used to prioritise the planning and execution of road and pavement maintenance to reduce pedestrian slips, trips, falls and collisions (ongoing).
10	Working with partners in the London boroughs and police, TfL will **replace old wet film cameras with new digital safety cameras and identify potential new sites** where cameras are the most effective solution to reduce speed-related fatalities and collisions, including those on borough roads, to be funded through LIPs.
11	Building on the success of more than 400 20mph zone schemes in London, TfL will **support the installation of further 20mph zones and limits on borough roads** where compatible with the functions of the local road network. This will be delivered through: • Funding of new zones and limits through LIPs • Engaging with police and boroughs to establish effective methods of ensuring compliance and maximising casualty reduction impacts • Including consideration of enforcement by cameras (2013 onwards) • Supporting boroughs in evaluating ways of ensuring casualty reduction through 20mph limits (2013 onwards)
39	**TfL will build on its ground breaking work to tackle injury inequality through targeted, evidence-led interventions** to reduce inequality by ethnic group, deprivation, and for those with mobility impairments and special educational needs (2014 onwards). TfL will ensure new road safety schemes engage those groups with particular road safety needs (e.g. those with mobility, visual and hearing impairments) (ongoing).
40	**TfL will continue to lead the way in adopting an integrated approach to delivering safety benefits for particular road user groups by delivering all 52 actions in the Cycle Safety Action Plan**, reviewing and updating it (2013).
41	**TfL will extend this integrated approach by developing and delivering a Pedestrian Safety Action Plan and a Motorcycle Safety Action Plan** based on the recent pedestrian and motorcycle fatalities research reports (2013).

3.1.29 Additionally in respect of engineering measures the Council proposes at the local level to:

- **Review accident data annually as a basis for outcome monitoring and determining future Local Safety Schemes Programmes.**
- **Develop accident remedial schemes in partnership with local communities, the Police, transport providers and other interested bodies.**
- **Carry out safety audits (as necessary) at the design stage to ensure that best practices are maintained.**
- **Review schemes a suitable period after implementation and take action as necessary.**
- **Ensure that new development is consistent with sustainable transport plans and does not lead to conditions prejudicial to the safety of road users.**
- **Give high priority to schemes to reduce traffic speeds, protect vulnerable road users and promote the 'better streets' agenda.**
- **Carry out prompt emergency repair to damaged and distressed road surfaces to mitigate risks to cycles and powered 2-wheelers.**
- **In addition to the Local Safety Schemes Programmes, to provide additional dedicated LIP funding streams for cycling and walking programmes to enhance safety for those two vulnerable road user groups.**

Personnel

3.1.30 The primary responsibility for implementing the Action Plan rest with several key personnel who co-ordinate the delivery of traffic management, highway improvements and road safety education in different parts of the Borough. Details of these personnel are provided in Appendix 3.

3.2 Education, Training and Publicity

3.2.1 Road safety education and training is co-ordinated from within the Regeneration, Enterprise and Skills Directorate where officers also retain responsibility for the collection and analysis of accident data, school travel plans, the school crossing patrol service and cyclist training. Road safety education and training is data-led and prioritised, and carries the following service objectives:

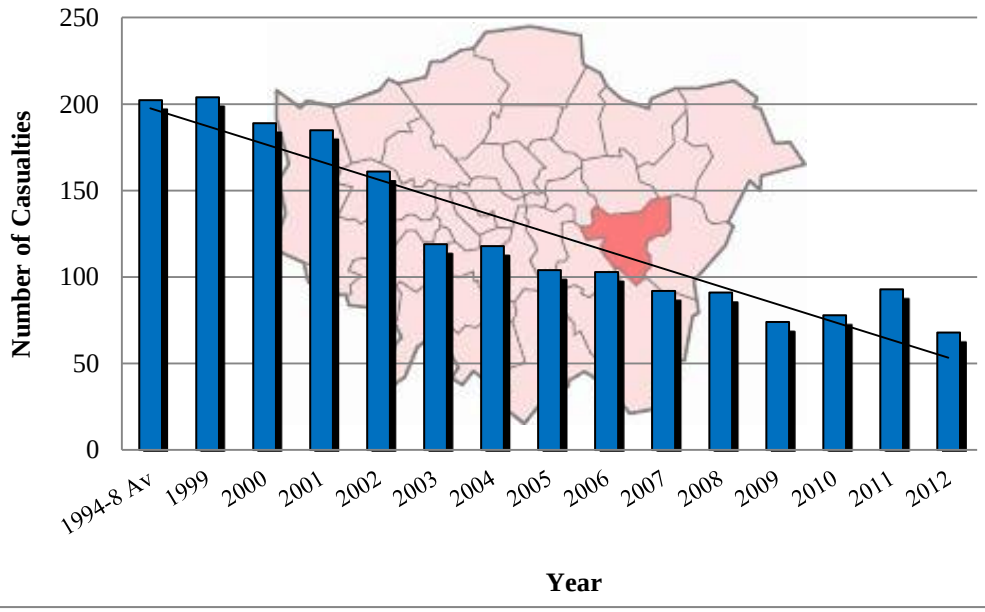
i. To facilitate pre-school safety programmes to help children recognise traffic hazards and adopt simple behaviours to stay safe on the roads.
ii. To help primary and secondary school children develop traffic awareness along with the appropriate skills, knowledge, attitudes and behaviours around roads.
iii. To reduce accidents to children travelling to school by implementation of School Travel Plans.
iv. To carry out cyclist training programmes to the 'Bikeability' national standards for children and adults and to carry out appropriate road-user campaigns.
v. To carry out campaign and project work aimed at reducing the number of collisions on the road resulting from inappropriate adult knowledge, skills, attitudes and behaviours on the road.

Child Road Safety Audit

3.2.2 A comprehensive Child Road Safety audit 2008-2012 was completed in April 2014, the key findings of which includes as below. A new updated Child Road Safety Audit will be completed in 2015 which will include the latest 2014 collision data.

- The Royal Borough has exceeded all Child Road Safety targets that have been set by the Mayor of London and DfT to date; Figure 3.2 shows the progress made since 1998.

Figure 3.2: Yearly Child Casualties



- The cost to the community for child casualties over the assessment period is an average £4.1 million per year.
- The majority of child casualties are pedestrians (55%).
- The majority of child casualties occur in the morning 8-9 am and afternoon 3-4 pm peak times.
- There is a higher amount of child casualties when children are reaching the end of the school Key Stages.
- 'Failing to Look' is the main pedestrian and driver causation factor.

- The wards of Woolwich Riverside and Woolwich Common were found to have the highest amount of child casualties out of all of the Borough's wards.
- The change and growth in the child population in various parts of the Borough is likely to effect the numbers of child casualties.
- While there has been significant improvement in casualty figures over the 5 year study period, Royal Greenwich still has a relatively high total child casualty rate compared to some other London boroughs, making it all the more important that child road safety remains a priority.

Pre-school Safety Programmes

3.2.4 Education work in the early years helps to establish good safety habits in later life. Road safety education with pre-school groups, nurseries and children centres are facilitated as resources allow. The Children's Traffic Club continues to be supported.

Greenwich Schools

3.2.5 There are currently 15 children's centre federations, 4 nursery schools, 64 primary schools, 15 secondary schools including 4 academies, 1 free school and 1 university technical college, 4 special schools including 1 special academy and 1 pupil referral unit.

Primary Schools

3.2.6 Road Safety Officers make regular visits to primary schools with class-based and practical skills training programmes. Project work and road safety weeks are actively encouraged, as is the incorporation of road safety in the curriculum. Practical training both off-road and on-road is carried out where officer time allows. The Junior Safety Officer scheme - a peer led road safety initiative - is promoted. Work to support transition to secondary school is prioritised; this includes training teaching staff to work with children who need extra support with independent travel.

The Road Safety Team is also the lead the Greenwich Junior Citizen scheme which is a 2 week multi agency programme where Year 6 children are invited to experience 'real life' scenarios presented to them and learn from these experiences, agencies including the Met Police, London Fire Brigade, London NHS Trust, TfL present to around 1200 pupils during the 2 weeks.

The challenge now is to maintain casualty reduction and to continue working to reduce the numbers still further. The relatively small number of child casualties means that small fluctuations may show large percentage casualty changes on a year-to-year basis.

Secondary Schools

3.2.7 There are 15 secondary schools in Greenwich, including Shooters Hill Sixth Form College, three private primary and secondary schools, and two special needs private secondary schools. The Youth Travel Ambassador scheme continues in 2015/2016 involving pupils to plan, pitch and execute road safety/travel awareness campaigns of their choice. Work with transition age children is prioritised to build independent travel skills, including work with special needs and vulnerable children.

Cyclist Training

3.2.8 Cycle training for children is carried out during school time and is delivered to the National Bikeability Standard by qualified nationally accredited instructors. Children in years 5 and 6 are prioritised. Trainees are required to wear cycle helmets and conspicuity aids. They are informed about the benefits of safety aids, how to use them correctly and encouraged to make safer choices. Funding for the cycle training programme, on- and off-road training, with a target of 1000 children trained is bid for annually through the Local Implementation Plan (LIP). During the financial year 2014-2015, 1,452 young children benefitted from cycle training.

3.2.9 Training is also provided for adults, both as weekend group training throughout the year and client specific courses on request. The courses range from those for people who have never

ridden a bicycle to one-to-one tailored training for clients wanting to ride to work or to a particular location, or clients who wish to improve their general fitness. One of the main reasons adults state they require training is to learn how to cope with London traffic. The instructors have knowledge and strategies to make the best of planning a route, assessing situations and taking the best approach to complex and dynamic situations. During the financial year 2014-2015, 284 adults benefitted from the cycle training program.

3.2.10 Safer urban driving courses, focusing on cycle safety have been provided to the Council's own fleet drivers in waste services and other departments. These courses have also been offered to external companies. The Council has run two annual 'Exchanging Places' events, normally in Greenwich Park, using a HGV to show cyclists the vehicle's blind spots and appropriate safe cycling techniques near larger vehicles. These events also encourage cyclists to sit in the vehicle cab and get a driver's perspective of what they can see.

School Travel Planning

3.2.11 The Council has drawn up a School Travel Plan Strategy and has appointed a full time School Travel Plan (STP) Coordinator specifically to oversee this work. The funding for the strategy including the Coordinator's post is applied for annually through the LIP. This major initiative demonstrates the Council's commitment to reducing car use for the 'school run', as well as developing an enhanced awareness in children of their local environment, along with a sense of responsibility for themselves and others. Many teachers find that children who walk to school are more alert and brighter when they arrive than those who are driven. The School Travel Plan approach is one of partnership with the schools community, the local community and others to bring about the changes in public attitude needed to achieve the desired modal shift.

3.2.12 All local authority controlled schools (primary/secondary/SEN), 4 stand-alone Nurseries/Early Year Centres and 9 independent schools had received TfL approval for their School Travel Plans by June 2009 (99% of all schools). The framework for School Travel Plans is outlined in the Sustainable Modes of Travel Strategy (SMoTS) which references road safety education work with schools.

Adult Education

3.2.13 Adults are mainly targeted by publicity campaigns. Major themes are speed reduction, the use of seat belts (including child safety-seat use), campaigns against drinking and driving, and driving whilst under the influence of drugs. In partnership with the Police and other agencies, local campaigns are used to support national campaigns where accident data suggests a need for more concerted local action.

Powered two wheelers (P2W) - motorcyclists, moped and scooter riders

3.2.14 Work is being undertaken with employers in the borough targeting moped and scooter users to encourage them to ride safely and to wear appropriate protective clothing. There is a website supporting this http://www.2wheelslondon.com.. During 2015-16 the Council will look at providing subsidised further training for powered 2 wheeler users with the Metroplolitan Police tasking team: http://www.bikesafe-london.co.uk/.

School Crossing Patrols

3.2.15 Within its remit of Education and Training, the Council took over the running of the School Crossing Patrol (SCP) Service in April 2000. Currently there are 60 SCP sites with 57 staff in post as at May 2014. Achieving this level of staffed crossing points is the result of a continuous and vigorous programme of recruitment and retention. School Crossing Patrol receive regular supervision and on-going training. The recruiting of staff has been difficult in some areas. School Crossing Patrols fulfil a vital function in ensuring the safety of children on the way to and from school. Since the end of January 2001 legislation has changed to allow SCP personnel to stop traffic to allow adults to cross. This has proven to be of particular value to elderly and disabled people.

Synergy with "Safe Streets for London" Actions

3.2.16 The following are the SSL action references that are most relevant to the Council's Education and Training initiatives described above. RB Greenwich will co-operate with TfL in the implementation of these actions towards the target reduction in ksi casualties by 2020.

SSL Ref	Action
20	**TfL will help improve the skills of borough officers in road safety best practice in relation to Construction Logistic Plans** (**CLPs) and delivery service plans**, to minimise the risks associated from large goods traffic (2014 onwards).
22	**TfL will also engage actively with courier and food delivery companies** to improve the safety of professional cyclists and motorcyclists through revising and re-launching the courier code for London (2014).
27	**TfL will continue to lead the way in making best use of innovative marketing and education resources for specific audiences.** Children, cyclists, pedestrians, younger and older drivers, and motorcyclists require specific information to make travelling safer for them. There will be a particular focus on the behaviours of all road users which put vulnerable road users at risk, such as speeding, passing too close to cyclists, and failure to look properly (ongoing).
29	**TfL will continue to create award-winning education resources as part of the wider safety action plans for pedestrians, cyclists and motorcyclists. This will include:** • Supporting the Motorcycle Safety Action Plan (MSAP) – create materials to support delivery of MSAP, including data and best practice guidance. Following publication of the MSAP, TfL will publicise the work of the Motorcycle Tasking Team, support the boroughs with their motorcycle safety initiatives and work with the Driver and Vehicle Licensing Agency (DVLA) and criminal justice system to target those riding dangerously (2013 onwards) • Supporting the Pedestrian Safety Action Plan (PSAP) – with a particular focus on child pedestrians and older pedestrians. Following publication of the PSAP, TfL will develop pedestrian safety campaigns to encourage drivers to look out for the safety of pedestrians, create new school curriculum resources including the first stage of a pan-London roll out of a secondary school ambassador scheme, and develop secondary school specific projects such as STAR, the School Travel Accredited and Recognised scheme (2013 onwards). • Supporting the Cycle Safety Action Plan (CSAP) – following publication of the revised CSAP, TfL will look to double the number of cyclists receiving cycle training each year, offer cycle training to every primary school in London, develop a safe cycling package to deliver to businesses, and increase freight driver training for cycle safety (2013 onwards)
30	**TfL will continue to ensure that the road safety 'journey' starts from the earliest age, by ensuring London pre-school children are road safety 'savvy'.** This will be achieved by continuing a comprehensive programme of engagement with nurseries, other childcare and health care providers, London boroughs, local education authorities, Sure Start and Children's Centres (2013 onwards). This programme will also review and improve Children's Traffic Club and JRSO schemes and offer every primary school in London support in developing a JRSO scheme (2013 onwards). Provide road safety information to London's school children through the London Transport Museum (2013 onwards).
31	**TfL will continue to support a comprehensive programme of road safety training for key road user groups. This will include:** • Continuing to work with boroughs to promote cycle training in schools via their LIPs (2013 onwards) • Providing a new procurement framework to make it easier for all London boroughs to deliver child and adult cycle training (2013 onwards) • Making TfL road safety marketing materials freely available to London boroughs to • maximise the impact of collaborative activity across London (ongoing) • Working with cycle manufacturers and retailers (such as the Cycling Retailer and Manufacturer Forum) to promote cycle safety directly to customers (ongoing) • Using focus groups with teachers and children, making sure campaigns aimed at improving children's safety reach more children with more effective messages (2013 onwards)
32	**TfL will build on existing educational road safety initiatives for riders of motorcycles and scooters to tackle the relatively high casualty rates among this road user group.** Use collision and other data to improve the content and targeting of initiatives such as BikeSafe-London and ScooterSafe-London (2013 onwards).

3.2.17 Additionally in respect of education and training the Council proposes at the local level to:

- **Visit primary schools and pre-school groups (where resources allow) every year to provide or facilitate road safety training programmes tailored as appropriate to the various age groups.**
- **Encourage secondary schools to develop road safety education programmes and to focus on casualty prevention to transition years.**
- **Carry out cyclist training to the Bikeability National Standard to give an improved service to schools and residents and to promote the use of cycle helmets and conspicuity aids.**
- **Liaise with the Police and other agencies in support of national road safety campaigns to encourage more socially responsible adult behaviour in respect of speeding, seat belt wearing, drink/drug-driving, moped and scooter riding and parking away from 'school keep clear' markings.**
- **Promote the use of appropriate child car seats and safety restraints, ensuring that they are correctly fitted.**
- **Investigate funding for road safety education schemes.**
- **Keep the child road safety audit current.**
- **Carry out regular site assessment, training, monitoring and vigorous regular recruitment campaigns for School Crossing Patrol personnel.**

3.2.18 Personnel

The primary responsibility for implementing the Action Plan rests with several key personnel who co-ordinate the delivery of road safety education and training within different parts of the Borough. Personnel details are provided in Appendix 3.

3.3 Enforcement

Police Liaison

3.3.1 RB Greenwich enforces parking controls in the Borough (as do all London authorities), but has yet to exercise its powers under the London Local Authorities and Transport for London Act 2003 to take on other civil enforcement of vehicle offences. As the agency still responsible for enforcement against moving traffic offences in Greenwich, therefore, the Metropolitan Police continues make a crucial contribution to local road safety. In partnership with the Police, Greenwich Council has brought forward a number of road safety initiatives comprising the introduction of speed safety cameras and mobile enforcement. These activities continue to be monitored and periodically reviewed as necessary.

Motorcycle safety

3.3.2 London has seen a recent substantial increase in the use of powered 2-wheelers for commuter journeys and other local trips. Recent research shows that speed is a large contributory factor to motorcycle fatalities, while, anecdotally motorcyclists are amongst the worst offenders when it comes to observing other rules of the road. The Council continues to liaise with the Police in respect of these matters (see also 3.1.15 – 19).

Trading Standards

3.3.3 Greenwich Council Trading Standards officers contribute to road safety as part of their enforcement function. Forecourt checks are carried out, often in conjunction with the Police, to inspect the condition of second hand vehicles offered for sale and investigate complaints about vehicles alleged not to be roadworthy. Child safety seats are tested for compliance with the relevant British Standard specifications. Trading Standards' weighbridge facilities are used to check for overweight vehicles that impose damage on the road surface and are not able to stop or manoeuvre as well as correctly loaded vehicles.

Parking Enforcement

3.3.4 Parking enforcement has been carried out by the Council since July 1994 and is believed to play a valuable role in the prevention of accidents by ensuring reasonable compliance with sensible parking restrictions. Stopping on 'school keep clear' markings and the controlled approaches to pelican/zebra crossings are amongst the more consistent complaints, so high priority is given to enforcement against these offences. Consideration will continue to be given to use of CCTV in these and similar situations where habitual offending poses a significant risk to road safety, particularly to children and other vulnerable road users.

Fly Posting

3.3.5 Fly posters can sometimes be a safety hazard where they distract drivers' attention. The Council takes enforcement action to remove illegally sited posters or hoardings where they have been put up without planning permission.

Air Quality

3.3.6 Air pollution is potentially hazardous to everyone, and that from road traffic is mostly responsible for poor air quality in urban areas. The Council has monitored pollutants for a number of years and has introduced lorry bans, where appropriate, to effect localised improvements. The Government has introduced a National Air Quality Strategy, which aims to improve air quality across the whole country.

3.3.7 Local authorities were required to assess pollution and identify those pollutants likely to exceed the Government's standard by 2005. London authorities have powers to declare an Air Quality Management Area (AQMA) and develop action plans in consultation with the resident community. The Council carried out consultation several years ago, pursuant to which the entire borough was declared an AQMA and an air quality action plan has been put into effect.

Synergy with "Safe Streets for London" Actions'

3.3.8 The following is the SSL "action reference" most relevant to the Council's Enforcement initiatives described above. RB Greenwich will co-operate with TfL in the implementation of these actions towards the target reduction in ksi casualties by 2020.

SSL Ref	Action
34	**TfL will use focused enforcement activities and technologies to crack down on illegal and antisocial road user behaviour.** This will help build public confidence in the safety of London's roads through policing and enforcement activity that reflects community concerns and has victim satisfaction at its centre. For example by: • Stepping up the level of high visibility, intelligence-led police enforcement in London against illegal and antisocial road use (2013 onwards) • Tackling uninsured vehicles and unlicensed driving through supporting police Operation CUBO (2013 onwards) • Making the best use of police and the Vehicle and Operator Services Agency's (VOSA's) powers to improve vehicle and driver standards across the commercial vehicle sector (2013 onwards)

3.3.9 Additionally, in respect of enforcement the Council proposes at the local level to:

- **Liaise with the Police and other agencies as appropriate in respect of speeding, in-car safety, other road safety matters and enforcement initiatives.**
- **Check the roadworthiness of second hand vehicles offered for sale on forecourts.**
- **Monitor the weight of heavy lorries using local roads.**
- **Target parking enforcement resources to deliver higher levels of compliance in locations where unlawful parking is causing road safety problems particularly at pedestrian crossing sites and on "school-keep-clear" markings.**
- **Take action against fly-posting and unlawful signs that distract motorists.**
- **Implement the Air Quality Action Plan within the Air Quality Management Area.**

3.4 Encouragement

3.4.1 The Council recognises that road safety is a corporate issue and that all departments have a role to play in encouraging responsible behaviour by staff, particularly when engaged on Council business. Essential car users are urged to observe the rules of the road at all times and apply Customer Care principles in their interaction with other road users, i.e. the latter should be treated with the same courtesies that would normally be extended to members of the public in any other professional context.

3.4.2 Drinking and driving is strongly discouraged and the Council has banned the consumption of alcohol on its premises unless authorisation is sought for a special event. In these circumstances low and non-alcoholic drinks must also be made available. Several years ago the Council circulated information to all members of staff banning the use of mobile phones while driving on Council business (now an endorsable road traffic offence).

3.4.3 Greenwich Direct Services provides driver training under the Mini-bus Driver Assessment Scheme (MIDAS). Council vehicles carry a phone number, which members of the public can ring to report instances of dangerous or discourteous driving. By encouraging safer driving practices amongst its own employees, the Council is better placed to promote good practices to other organisations and the wider community.

Synergy with "Safe Streets for London" Actions

3.4.4 The following are the SSL action references most relevant to the Council's Encouragement initiatives described above. RB Greenwich will co-operate with TfL in the implementation of these actions towards the target reduction in ksi casualties by 2020.

SSL Ref	Action
17	**TfL will continue to encourage operators to sign up to bronze level accreditation** and push for gold level accreditation of FORS and then to use FORS membership to embark on a programme of continuous improvement for safety. TfL will review the road safety elements of FORS, seeking improvements to ensure even higher standards of safety (2013). Through ongoing work with the Freight Transport Association, Road Haulage Association, Federation of Small Businesses, Confederation of Passenger Transport, Guild of Coach Operators, Coach Marque and others, a greater uptake and promotion of FORS will be possible, leading to improvements in cycle and pedestrian safety by all fleet operators in London (ongoing).
54	**TfL will engage key partners in the governance of road safety delivery in London by establishing a new Road Safety Steering Group.** Through this group, and through broader partnership working, London's road safety stakeholders, including nongovernmental organisations, boroughs, academics and the emergency services will input into the development and delivery of road safety policies, and help oversee continuous improvements in road safety in London (2013 onwards).
55	**TfL will help mobilise action at a local level** by bringing senior elected members together annually for a borough-level review of progress, encouraging knowledge sharing, collective problem solving and best practice (annually).

3.4.4 Additionally, in respect of encouragement the Council proposes at the local level to:

- **treat road safety matters as a corporate issue.**
- **encourage the development of a code of practices for Council employees whether as drivers, cyclist or pedestrians.**
- **maintain links with fleet users in Greenwich in order to improve driver attitudes and behaviour.**

3.5 Road Safety Policy Statement

As a summary to the Road Safety Plan, the following is a statement of the policies adopted by the Council for the prevention of road traffic accidents.

3.5.1 The Council is committed to further road safety improvements in the coming years. It will co-operate with TfL towards the implementation of "Safe Streets for London", its road safety action plan, and meeting the 2020 casualty reduction target for killed and seriously injured. In partnership with the Police and other concerned agencies, the Council will continue to implement a comprehensive strategy to secure a year on year reduction in casualties throughout the Borough and will review its progress annually.

3.5.2 The Council will give a high priority to its borough-wide 20 mph zone programme to reduce excessive traffic speed in residential areas. It will also prioritise the needs of the most vulnerable road users – pedestrians and cyclists – and seek to reduce community severance along busy major roads. Powered 2-wheelers will also receive special attention. Recognising that road safety is a corporate issue, the Council will co-ordinate the activities of all relevant departments towards the implementation of the Borough Road Safety Plan.

3.6 Equality Monitoring Review and Policy Audit

3.6.1 All Departments of the Council are required to carry out Equality Monitoring Reviews for existing policies and service functions, and to audit new policies to identify any adverse effects of possible discrimination in relation to: race, gender, disability, sexual orientation and age. The above policy statement, together with the service functions described in this document have been examined in the light of the Council's '*Equality Standard for Local Government - Departmental Self-Assessment Toolkit 2002/03*'.

3.6.2 Prioritising measures to reduce casualties amongst children, cyclists and pedestrians are examples of positive action in relation to vulnerable road users who more frequently belong to socially disadvantaged groups with no access to car travel. Traffic engineering procedures will continue to target special assistance towards disabled, the elderly/infirm and visually impaired road users.

3.6.3 The Borough Road Safety Plan will be published on the Council's website for the purposes of consultation and public comment over the next year, arising from which other procedures relevant to equality legislation may be identified and subsequently monitored.