

Date: 7 July 2015

Item: Road Safety Update

This paper will be considered in public

1 Summary

- 1.1 The accompanying presentation provides an update of the activities taken to reduce the numbers of people killed or seriously injured on TfL's roads.
- 1.2 The presentation covers the following areas:
- (a) Safe Streets for London - a data led approach;
 - (b) Safe Streets for London and a focus on Vulnerable Road Users;
 - (c) Examples of key programmes;
 - (d) Road safety data and governance;
 - (e) Key progress – Casualties in Greater London; and
 - (f) Future road safety actions.

2 Recommendation

- 2.1 The Panel is asked to note this paper and presentation.

List of appendices to this report:

Appendix 1: Road Safety Update presentation

List of Background Papers:

None

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Road Safety Update

Safety Accessibility and Sustainability Panel
(SASP)

July 2015

Purpose / Contents

- The slide deck aims to update the Safety Accessibility and Sustainability Panel (SASP) with a summary of the Road Safety Portfolio *'Delivering a 40% reduction in Killed and Seriously Injured casualties'*.

Contents

1. Safe Streets for London - a data led approach
2. Safe Streets for London and a focus on Vulnerable Road Users
3. Examples of key programmes
4. Road safety data and governance
5. Key progress – Casualties in Greater London
6. Future road safety actions



Safe Streets for London: The London road safety plan

- Safe Streets for London, London's Road Safety Action Plan (SSfL): launched 6 June 2013
- Delivers TfL Surface Transport outcome **“Continuing the downward trend in casualties on London's roads and public transport network”**



- Ambitious plan to **reduce the number of KSI casualties by 40% by 2020** (2005-9 baseline)
- Longer term ambition: **“Working together, towards roads free from death and serious injury”**
- **56 key actions** themed by **Safe Roads, Safe Vehicles, Safe People and Delivering in Partnership**
- Investment as part of a broader roads **investment package of £4bn** over the business plan
- In order to achieve its challenging road safety target, TfL has more than **doubled the level of investment** in making London's roads safer to **£257 million over the period of the business plan to 2021/2022**

Safe Streets for London

The Road Safety Action Plan for London 2020

Working together, towards roads free from death and serious injury



Safe Streets for London: Approach

- SSfL includes a fundamental change of approach using ‘safe system’ thinking
- A need to understand the system better: how, when and where collisions and casualties can be prevented
- Three central principles underpin a ‘safe system’ approach:

“People make mistakes”

Road users can be unpredictable in their movements and adherence to laws, guidance and accepted behaviour, despite educational and behavioural interventions.

“There are physical limits to what the human body can tolerate”

When a collision occurs, the impact energy can lead to trauma. The level of injury experienced is determined by many factors including the speed of impact, the design of vehicles and infrastructure and the susceptibility to injury, or frailty, of the road user.

“All those with a role in designing, building, operating, managing and using the road network have a responsibility to improve safety”

We all have a responsibility to use and share the roads we travel on in a safe and responsible way, mindful of our own safety and the safety of others.

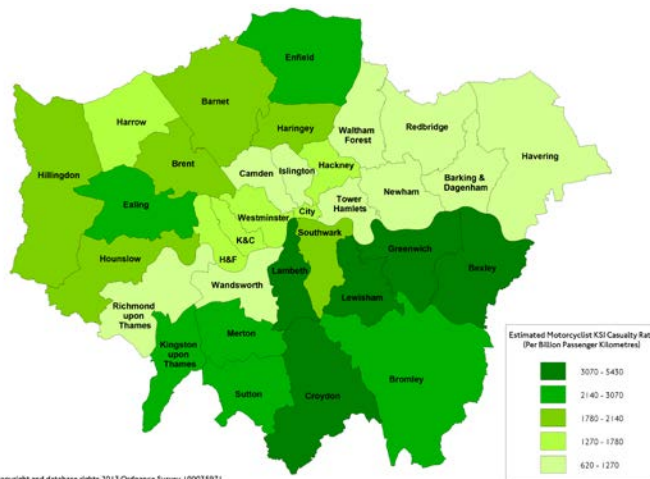


Safe Streets for London: A data led approach

Vulnerable road user priority locations and junctions



Motorcycle KSI risk by London borough



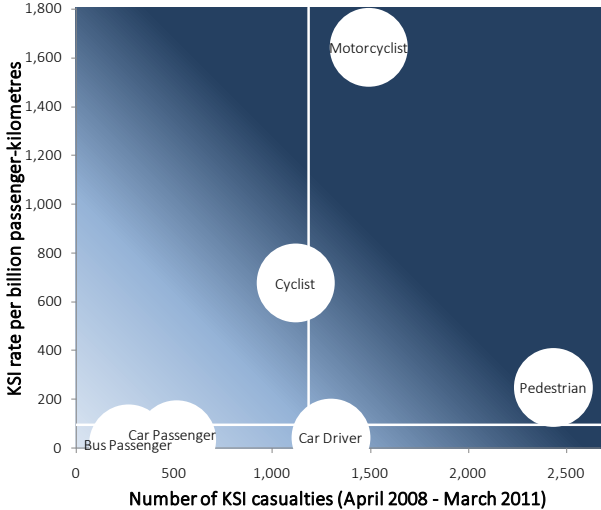
- TfL collects and publishes all collision and casualty data in London to allow monitoring of casualty trends
- TfL undertakes detailed analysis of road safety data, including the identification of priority locations (by nature of their casualty history) which drives the investment programme. This is shared with the boroughs to help target local action
- To determine whether there are particular user groups who are at greater risk than others, TfL has undertaken risk analysis, published online at: <http://www.tfl.gov.uk/cdn/static/cms/documents/road-risk-and-vulnerable-road-user-working-paper.pdf> . This provides a resource for TfL and borough road safety practitioners to target actions to improve road safety
- In addition, the interrogation of a wide variety of other road safety data sources, information and intelligence builds the evidence on which to base action and track progress
- TfL has an Open Data approach to transparently publish and share collision and casualty information



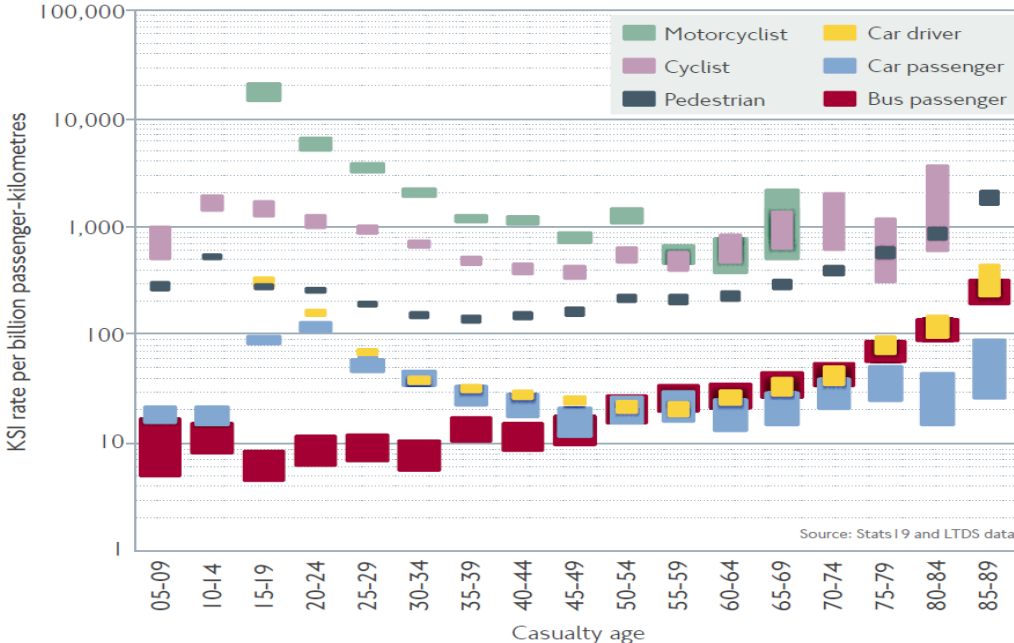
Safe Streets for London: A data led approach

- Different road user groups experience very different levels of risk on London’s roads as shown on risk-incidence quadrants (right)
- Further insight can be gained by analysing each user group independently and breaking the data down into age groups (below). This allows the creation of ‘risk paths’ showing how, for a particular road user group, risk and casualty numbers vary with age and the targeting of interventions

Risk-incidence plot for road user groups



KSI casualty rate per billion kilometres by age for each – with confidence intervals



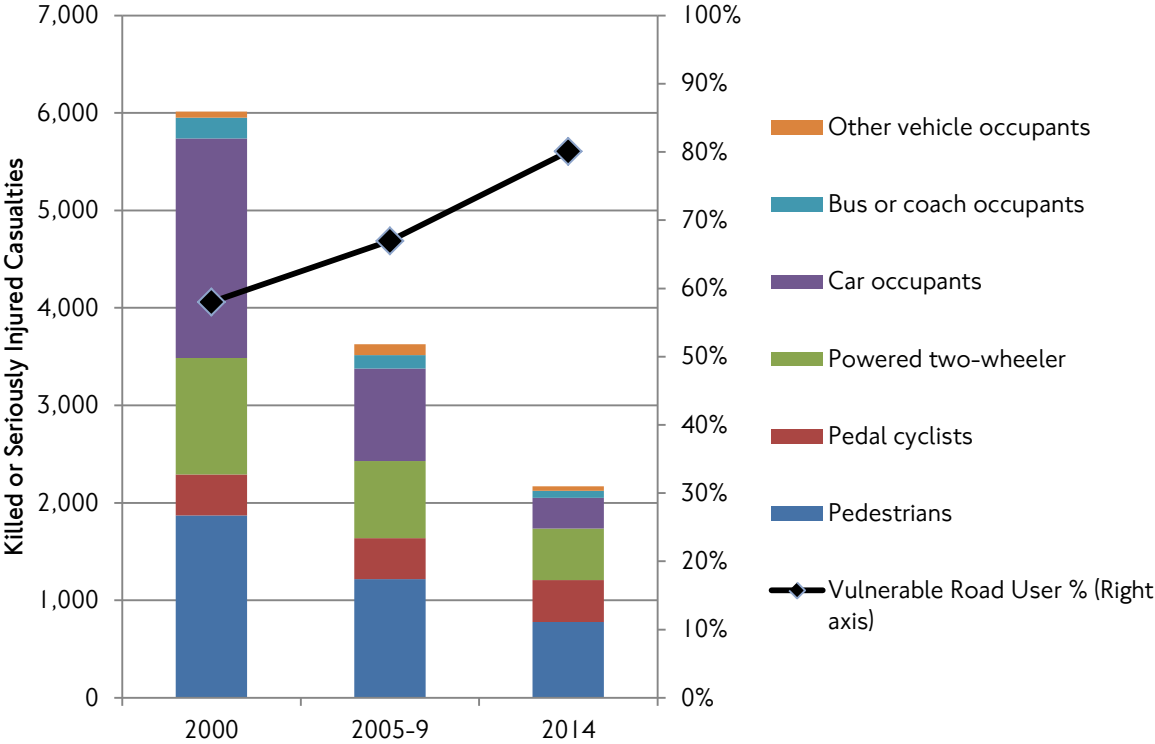
Safe Streets for London: A focus on vulnerable road users



Working together, towards roads free from death and serious injury



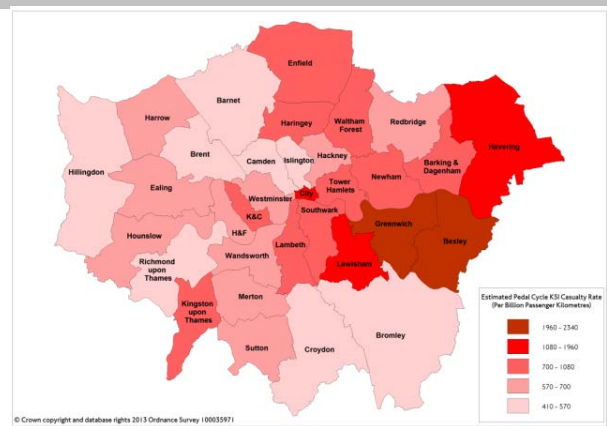
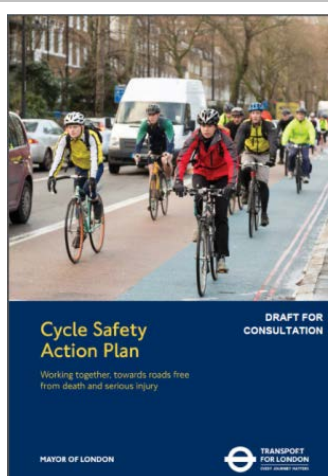
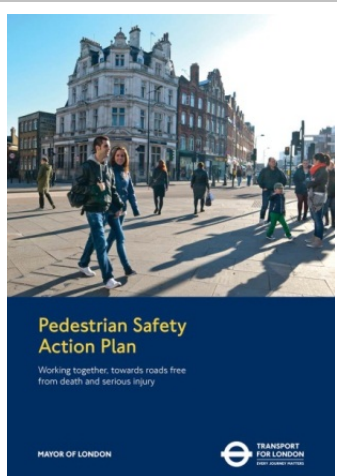
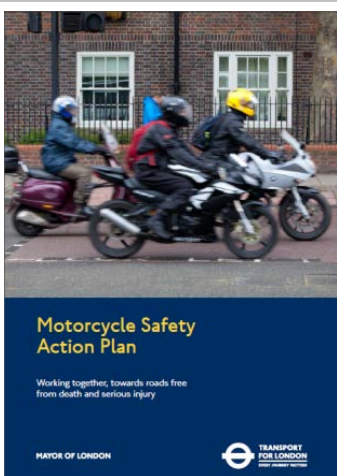
Safe Streets for London: Focus on vulnerable road users



- Pedestrians, cyclists and motorcyclists now make up **80 per cent of serious or fatal casualties** in London, putting them at the heart of the road safety strategy
- Proportion of KSI among vulnerable road users has increased in last ten years
- Other road user groups (e.g. car occupants) have had faster KSI reductions

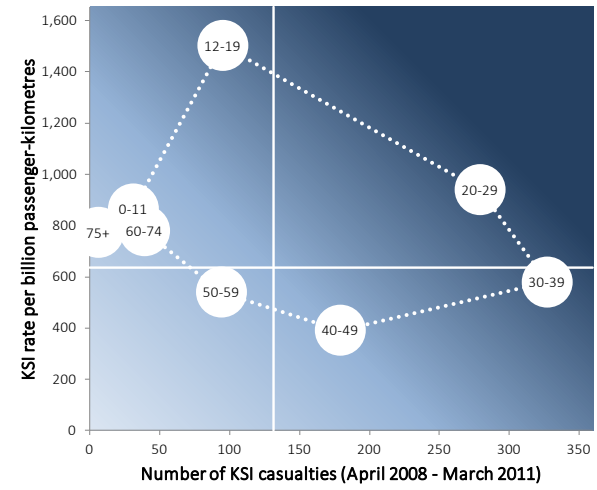


Safe Streets for London: Vulnerable road users Action Plans



Heat map of cyclist risk by borough

- In 2014, TfL developed and published specific vulnerable road user action plans based upon in depth analysis of the data
- The action plans identify and direct actions towards the locations, demographics, and specific situations where pedestrians, cyclists and motorcyclists are at greatest risk



Risk path for cyclists based on KSI casualties



Surface Transport Road Safety Budget: to achieve the Surface Outcome “Continuing the downward trend in casualties on London’s roads and public transport network”



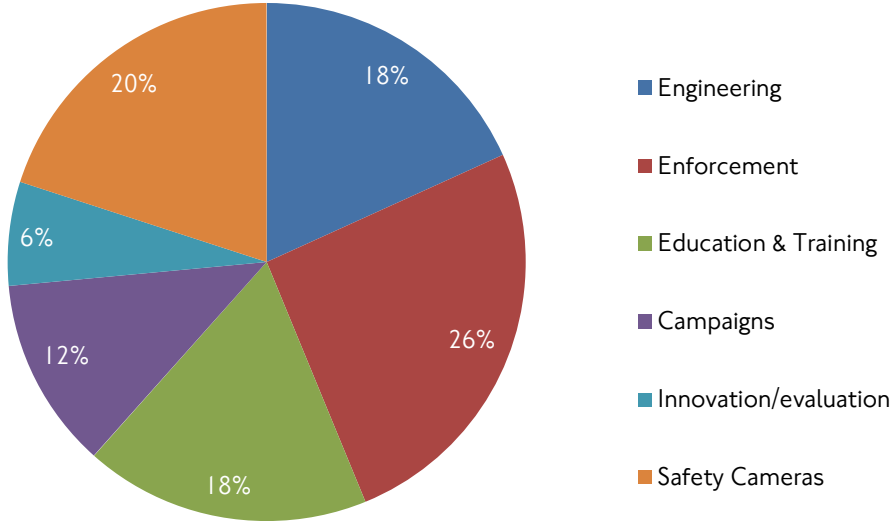
Working together, towards roads free from death and serious injury



Safe Streets for London: Road Safety Portfolio budget

- Across the life of the business plan to 2021/22, TfL will invest over £257m in road safety
- The road safety budget is structured across six core work areas:
 - Engineering
 - Enforcement
 - Education and Training
 - Campaigns
 - Innovation/ evaluation, and the
 - Safety Camera replacement programme
- Detailed budgets for each of these work areas is contained in the table below
- TfL’s road safety investment is greater in practice than £257m, as parallel programmes including Cycle Superhighways, Better Junctions, Borough LIP schemes and the Freight and Fleet programme all contribute to casualty reduction. These budgets are not included in the table below

Road Safety Portfolio Budget Breakdown



£m	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	TOTAL
Engineering	4.2	4.8	4.1	5.2	4.9	5.2	6.3	6.2	6.3	47.2
Enforcement	8.2	8.2	8.2	6.5	6.5	6.7	6.9	7.1	7.4	65.7
Education & Training	5.6	5.4	4.7	4.8	4.9	5	5.1	5.2	5.2	45.9
Campaigns	2.8	3.6	3	3.4	3.5	3.3	3.4	3.6	4.1	30.7
Innovation/evaluation	1.3	1.8	1.9	1.9	1.9	1.9	1.9	2	2.1	16.7
Safety Cameras	-	5	25	21.5	-	-	-	-	-	51.5
	22.1	28.8	46.9	43.3	21.7	22.1	23.6	24.1	25.1	257.7



Safe Streets for London: Road Safety Portfolio budget

- The road safety portfolio has core areas of work that will continue throughout the business plan and also discrete projects and initiatives that will end before 2021/22
- The road safety portfolio will reduce Killed and Serious injury casualties in London and reduce the large cost to society that they represent. Over the course of the business plan the road safety portfolio seeks to prevent casualties whose social and economic cost would have been over £1bn*
- In addition to the direct value of preventing road injuries, reducing collisions will reduce congestion caused by road traffic collisions

Road Safety Portfolio		£m
Road Safety Engineering	Road Safety engineering accelerated programme	21.8
	Pedestrian Town Centres	10.0
	Regional Improvement Plan schemes	15.4
Enforcement	On street enforcement	34.3
	Safety camera operations	31.4
Education and training	Young Drivers	7.2
	Child education and active travel	26.1
	Motorcyclist training and enforcement	12.6
Campaigns	Road Safety Marketing campaigns	30.7
Innovation	Research and evaluation	5.8
	Bus technology trials (being scoped)	3.0
	Bus ISA trial (being scoped)	2.0
	Pedestrian Countdown installations	1.0
	Safer Lorry scheme	2.9
	20mph limit trials (being scoped)	2.0
Safety Cameras	Safety Cameras replacement programme and Average Speed Cameras	51.5
		257.7

*(based on DfT Average value of prevention per reported casualty)



Safe Streets for London: Examples of key programmes



Working together, towards roads free from death and serious injury



Safe Streets for London: Examples of key programmes

Demonstrating KSI reduction in practice

- Safe Streets for London has 56 actions which are themed by Safe Roads, Safe Vehicles, Safe People
- The four examples that follow highlight examples of the road safety portfolio's focus on Safe Roads, Safe Vehicles and Safe People, with four case studies.



Safe Roads: Accelerated Engineering schemes

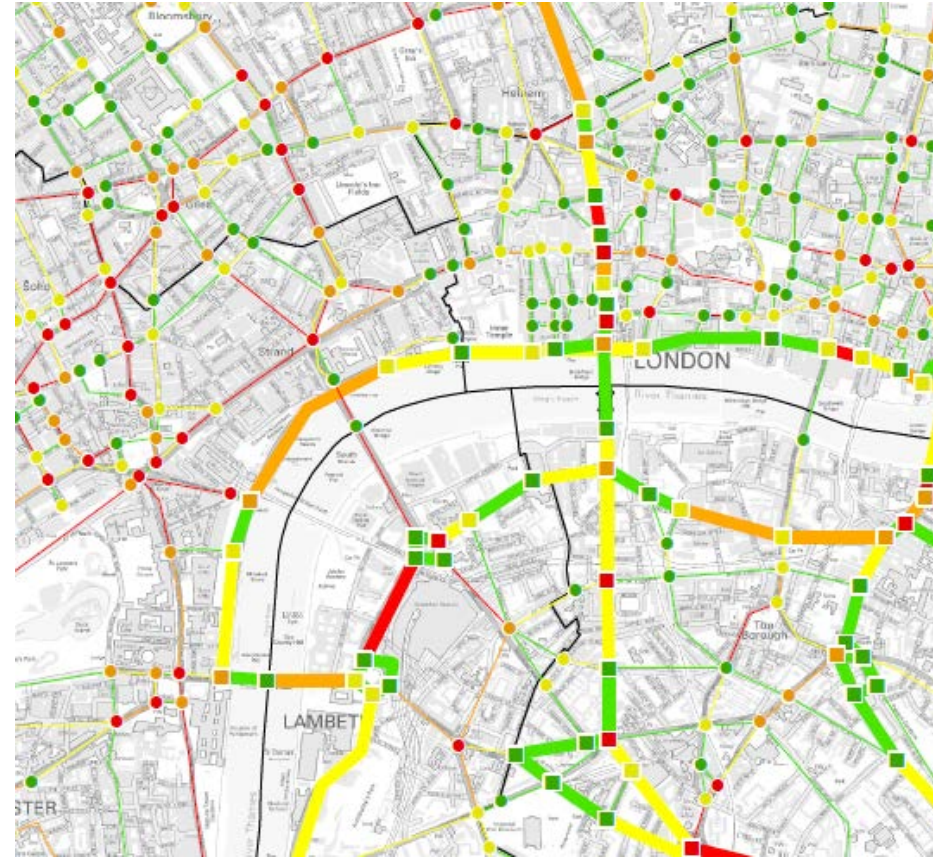
- On an annual basis, all junctions and links in London are analysed for their relative number of vulnerable road user KSI collisions to prioritise sites for remedial engineering measures
- High priority locations have collision studies undertaken and engineering schemes are developed

Cost – approximately £47.2m to 2021/22

- Over the course of the business plan **£47.2m will be invested** in road safety engineering schemes
- 26 accelerated schemes were progressed (with collision investigation and design) in 2014 and a further 14 will be progressed in 2015

Benefits

- Analysis of safety schemes on the TLRN shows that they make large contribution to improving safety with on average a **24 per cent reduction in collisions post implementation**
- All schemes are monitored using the Traffic Accident Diary System (TADS) to ensure that scheme safety objectives are being met



Safe Roads: 20mph limit pilots

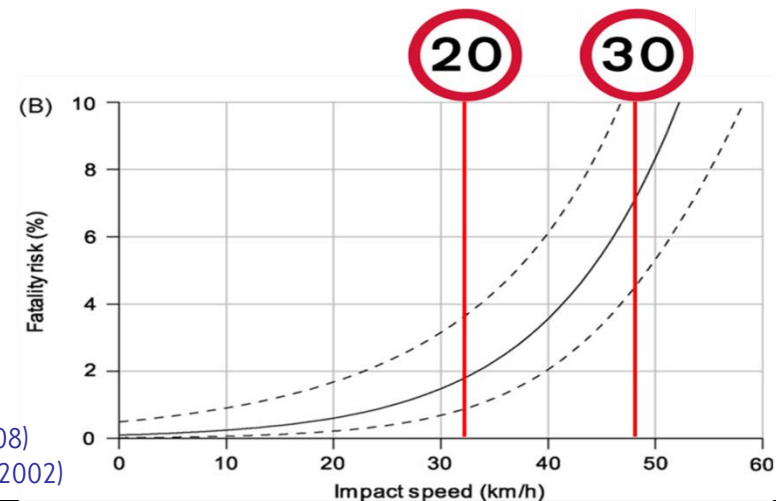
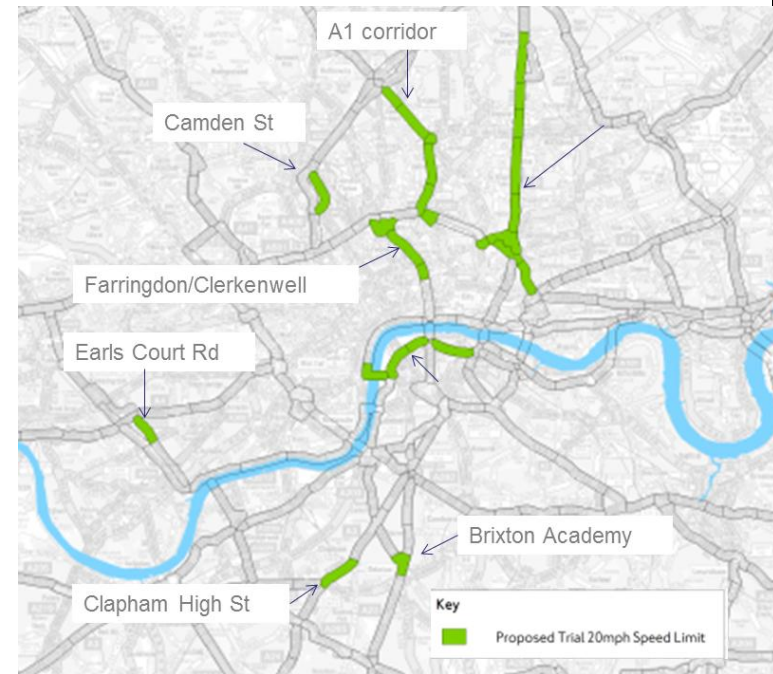
- In March 2015, TfL announced eight further sites for trialling 20mph on the TLRN, following the introduction of two trial corridors on the TLRN in the City of London in July 2014

Cost – approximately £2m for eight further trial sites

- The cost of introducing 20mph trials is dependent on existing mean speeds
- Existing mean speeds of less than 24mph = £50-£100k, over 24mph = c.£100k+ per trial corridor, as more comprehensive engineering measures are required to promote compliance with the lower speed limit

Benefits

- A study of 20 mph zones in London found they resulted in a 42 per cent reduction in all casualties and a **53 per cent reduction in killed or seriously injured (KSI) casualties**, adjusting for background trends¹
- It is estimated that each 1mph reduction in speed might be expected to reduce the frequency of all severities of collision by around 5 per cent²
- TfL will monitor the impact of the 20mph trial sites to identify benefits in casualty reduction, increased active travel and effects on journey times and journey time reliability



¹20mph zones and road safety in London, (London school of hygiene and tropical medicine, 2008)

²The effects of drivers' speed on the frequency of road accidents (TRL report 421, Taylor et al, 2002)

Safe Vehicles: Safer Lorry Scheme

- HGVs are disproportionately involved in fatal pedal cycle collisions. Between 2008 and 2012 they were involved in 53 per cent of London cyclist deaths, despite making up only four per cent of traffic
- From 1 September 2015, the Safer Lorry Scheme (SLS) will apply to HGVs over 3.5 tonnes. It will require HGVs to be fitted with side guards and close proximity mirrors

Cost - £2.98m for implementation of the scheme

- Fleet operators will bear the cost of vehicle enhancements with costs of c.£160 for close proximity mirrors and c. £450 side guards per vehicle

Benefits

- A non-statutory consultation (July-September 2014) showed:
 - 90 per cent of respondents agreed that the SLS would improve safety for both pedestrians and cyclists
 - Over 75 per cent of lorry drivers who responded agreed with the proposed schemes
- TRL research findings estimate that between **3 and 7 fatalities and 1 and 5 serious casualties** to pedal cyclists and pedestrians could be prevented in a 5 year period through the scheme
- This level of casualty reduction equates to avoided social and economic costs of c.£5.5m - £13.2m (DfT Average value of prevention per reported casualty)



Safe People: Marketing campaigns

- TfL's road safety campaigns are delivered as a cluster, taking an even handed and balanced approach to messaging and media placement

Cost – approximately £30.7m to 2021/22

- The campaigns work alongside each other to target different road users at the same time.
- TfL is working to use new sources of data to inform its activity and the key road user groups and collision types to target

Benefit

- All campaigns are evaluated to ensure their behaviour change objectives are successfully achieved

The image displays a collection of TfL road safety campaign materials, each associated with a specific target group:

- Share the Road:** A poster showing a car and a cyclist with the text "CYCLISTS, RIDE A DOOR'S WIDTH FROM PARKED CARS" and "DRIVERS, LOOK OUT WHEN GETTING OUT".
- Cycle Safety:** A poster showing a cyclist and a car with the text "CYCLISTS, RIDE A DOOR'S WIDTH FROM PARKED CARS" and "DRIVERS, LOOK OUT WHEN GETTING OUT".
- Teens:** A poster featuring a stylized rabbit head with the text "MOT'S MIND" and "FAST LOSES WHEN CROSSING".
- Motorists:** A billboard with a road junction graphic and the text "77% of all collisions occur at junctions. Drivers. Look properly.".
- Powered Two Wheelers:** A photo of a person in a high-visibility jacket riding a motorcycle.
- Young car drivers:** A photo of a young person looking out of a car window.
- Share the Road (Video):** A video frame showing people walking in a tunnel.

Logos for the Mayor of London and Transport for London are visible at the bottom of several posters.



Safe Streets for London: Road Safety Data and Governance

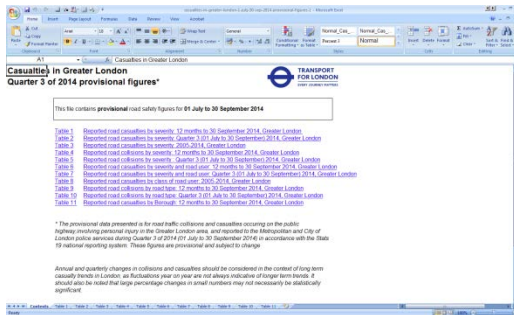


Working together, towards roads free from death and serious injury



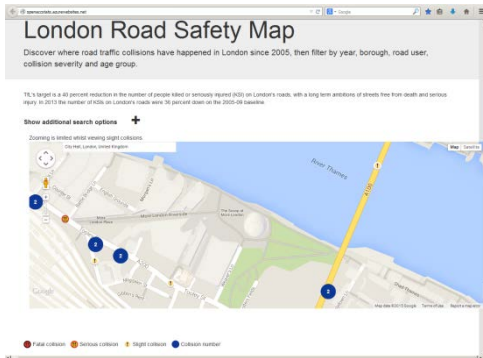
Reporting and sharing of road safety data

Online open data files



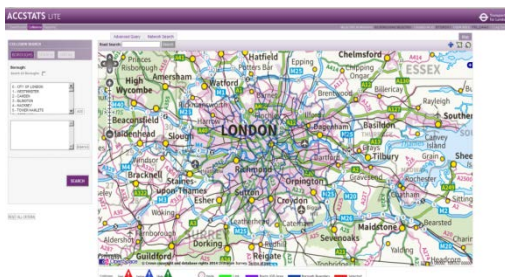
- TfL makes all road safety data available to the public
- TfL publishes quarterly provisional road safety data in line with DfT figures online
- Data is open to the public through a range of different formats

Online mapping tools



- As part of TfL's open data approach, it has developed an interactive Google mapping tool
- London boroughs also have free access to the complete STATS19 database

Online STATS19 database



- Each year TfL publishes a Road Safety Annual Report, highlighting key progress in delivery of the road safety portfolio each year, along with casualty statistics



Collisions and casualties on London's roads:
Annual report 2013

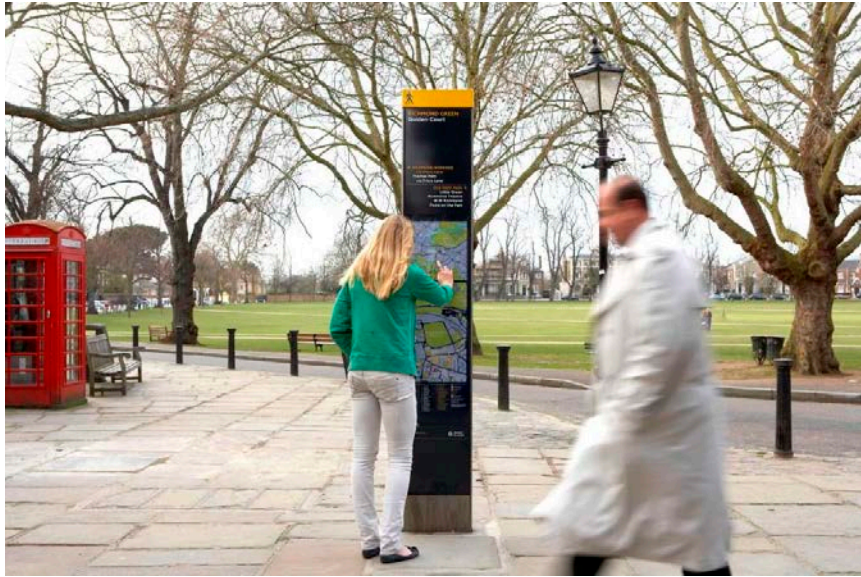
Safe Streets for London: road safety governance



- TfL has established a **Road Safety Steering Group for London (RSSG)**, made up of London's key road safety stakeholders to review and report on progress in implementing road safety policy in London
- TfL also has a **Reduced Casualties Steering Group**, a high-level internal board to ensure the road safety portfolio is on track, reporting to Surface Board.
- **Oversight and programme approvals are governed by Surface Board**
- In addition, three **vulnerable road user working groups** bring together the key cycle, pedestrian, motorcycle and road safety stakeholders to ensure the safety of these road users is paramount



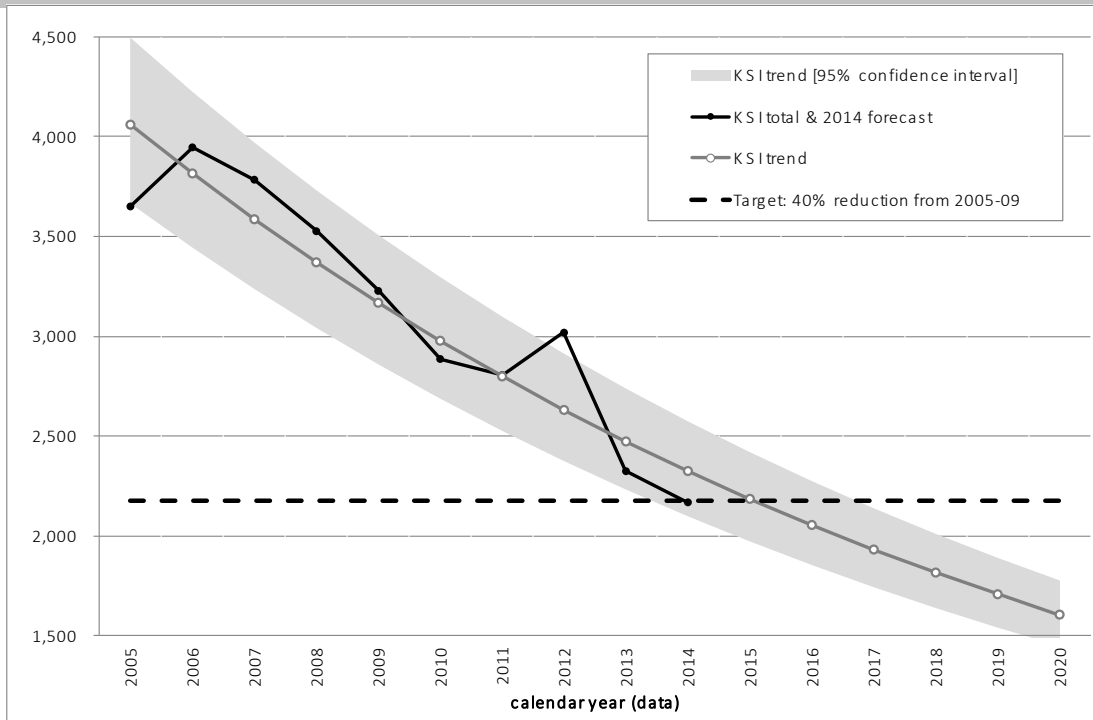
Safe Streets for London: Progress so far and the Future



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Safe Streets for London: Progress towards a 40 per cent reduction in KSIs



A 10-year trend is fitted. This trend indicates the most likely KSI figures in the near future.

The assumption is that whatever change observed in the past decade (technology, road space, behaviour, population, budget etc.) will continue at the same pace e.g. population will continue to grow.

- There has been a steady reduction in the number of KSIs to a 40 per cent reduction from the 2005-09 baseline in 2014
- Taking into account this trend, KSIs are forecast to continue to fall by 2020 against the baseline
- However any acceleration in population, traffic and cycling growth would mean it would be an ambitious challenge to **sustain** a 40 per cent reduction in KSIs to 2020, making a new **stretched target of a 50 per cent** reduction in KSIs by 2020 compared to the baseline challenging but realistic
- TfL adopted this new target of a **50 per cent** reduction in KSIs by 2020 in June 2015.



Safe Streets for London: Current progress

	Greater London 2014 (provisional figures) * show where statistically significant at the 95% confidence level			
	2013	2014	Change 2013 to 2014	Change 2005-09 to 2014
Fatal	132	127	-4%	-40%*
KSI	2,324	2,168	-7%*	-40%*
Child KSIs	187	164	-12%	-50%*
Slight	24,875	28,591	+15%*	+12%*
All	27,199	30,759	+13%*	+5%*

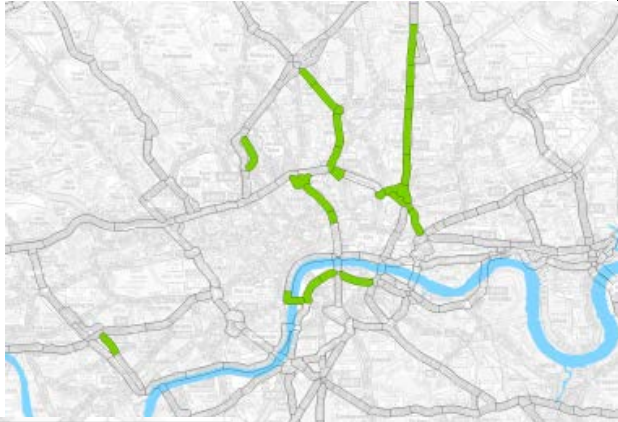
Headlines – in 2014 compared to 2013:

- There has been a significant reduction in KSI casualties of 7 per cent to 2,168 KSI, the lowest number on record
- **Child KSIs are at the lowest level ever recorded**, falling by 12 per cent to 164 KSIs and 50 per cent down on the 2005-09 baseline
- **Significant increase in slight casualties amongst all modes**, increasing by 15 per cent to 28,591 slights, the highest level since 2004 and 12 per cent up on the 2005-09 baseline
- Child slights have increased significantly by 8 per cent to 1,810, the highest level since 2011
- Reduction in fatalities of 4 per cent to 127, the second lowest on record and the lowest level recorded on borough roads



Safe Streets for London: Future road safety activity

- Future aspirations for new and ambitious road safety initiatives include:
 - the launch of the Safer Lorry Scheme on 1 September 2015
 - a greater role for innovation and vehicle technology, including a trial of Intelligent Speed Assistance (ISA) on London buses
 - the roll-out of eight further 20mph trial locations on the TLRN
 - pedestrian town centre programmes delivered in two locations across London
 - a stretched target for KSI reduction of 50 per cent by 2020, requiring greater security of road safety funding



Key
■ Proposed Trial 20mph Speed Limit



Safe Streets for London: Further analysis of collision data

- TfL is working to use new data to better inform future activity, including:
 - utilising a **big data approach** to integrate datasets from across TfL, and other sectors, with current road safety information
 - updating the **augmentation of collision and casualty data** with information on journeys made and behavioural data to better understand and reduce levels of danger
 - a study to analyse **Hospital Episode Statistics** (patient and accident and emergency records) to better understand the pattern and nature of seriously injured vulnerable road users.
 - an **in-depth 'cohort' analysis** that tracks groups of casualties in London over time, to better understand the long term trends in road safety within these groups and the impact of future forecast population increases.



Summary

- TfL has achieved the London target of a 40 per cent reduction in Killed and Seriously Injured casualties on London's roads
- However any acceleration in population, traffic and cycling growth will make it an ambitious challenge to sustain continuing reductions in KSIs to 2020
- An ambitious and wide-ranging programme of activity will help TfL to continue to improve road safety on London's roads and focus on the safety of the most vulnerable road users assuming continued investment as planned
- A stretched target for a 50 per cent reduction in KSIs by 2020 was announced by TfL in June 2015

