

# Collisions Before and After the Removal of Pedestrian Railings at 70 Junctions and Crossings on the Transport for London Road Network



*Review by:*



**Street Behaviour**

*For Client:*



**Transport for London**

## Contents

Executive Summary	3
1 Purpose	4
2 Background	4
3 Methodology	4
4 Raw Results	5
Railings Removal Sites	5
Whole TLRN	6
Whole TLRN v Railings Removal Sites	7
Site Specific Data	8
5 Reviewed Results	9
Set 1	9
Set 2	10
Comparison	11
6 Staggered Crossings	11
7 Results Analysis	12
7 Conclusion	13
Appendix A	
Railings Removal Sites Collision Summary	14
Appendix B	
Whole TLRN Collision Summary	15
Appendix C	
Reviewed Set 1 - Collision Summary and Omitted Collisions	20
Appendix D	
Reviewed Set 2 - Collision Summary and Omitted Collisions	23
Appendix E	
Staggered Crossings review	26
Appendix F	
Statistical Significance Tests	30
Appendix G	
Site Details	32
Appendix H	
Stats19 data for all sites (omitted from this report due to file size but available separately)	

## Executive Summary

In 2011 TfL commenced a programme to remove large amounts of pedestrian railings on the TfL Road Network (TLRN). Street Behaviour was commissioned by TfL to review collisions 3 years before and after the removal of these railings at 70 junctions and crossings in London. The sites included 90 'staggered' crossings. Sites were chosen based on the following criteria:

- The removal date had been recorded
- 3 years worth of 'after' collision data was available
- No other major physical changes had taken place in the 3 years before or after the removal
- A significant amount of railings had been removed at each site
- The site included at least one crossing

Data was gathered and separated into collisions involving all users and pedestrians only for slight and killed and seriously injured (KSI).

The results showed that following the removal of railings at the 70 sites there was a statistically significant fall of 56% (43 to 19) in the number of collisions involving pedestrians who were killed or seriously injured. There was also a fall of 48% (109 to 57) in the number of KSI collisions for all users. Further analysis was undertaken in order to put these figures into a wider context. In the 6 to 3 year period before removal at these sites (when railings were retained), KSI collisions fell by 7% and 3% respectively. On the whole TLRN during the 3 year period after the removal of the railings, KSI collisions fell by 14% and 19% respectively.

The data at the 70 sites was further reviewed to remove unusual collisions (eg passengers falling over in buses). When these collisions were removed they roughly canceled each other out and the before/after reduction was similar at 53% and 47% for pedestrians and all users.

A detailed analysis was also carried out of every collision involving a pedestrian to try and identify those that occurred in the vicinity of 'staggered' crossings. This showed reductions of 76% (17 to 4) and 67% (9 to 3) in KSI collisions after railings were removed at 'reverse' and 'forward' staggered crossings (the former being statistically significant).

## 1. Purpose

Street Behaviour was commissioned by TfL to review collisions before and after the removal of pedestrian railings at 70 junctions and crossings in London on the Transport for London Road Network (TLRN).

## 2. Background

Railings alongside crossings are a common feature throughout the country. They have usually been installed with the justification of safety for pedestrians by guiding them towards a designated crossing point and/or preventing them from crossing in other areas. However there was a desire for them to be removed, primarily to improve pedestrian amenity and the urban realm. In late 2011 TfL began a project involving the large scale removal of railings on the TfL Network in central London. The removals went further than those in the past and included whole junctions and a large number of 'staggered' crossings. This study includes 90 such crossings.

## 3. Methodology

1. Sites were included in the study based on 5 main criteria:
  - The removal date had been recorded
  - 3 years worth of 'after' collision data was available
  - No other major physical changes had taken place in the 3 years before or after the removal
  - A significant amount of railings had been removed at each site
  - The site included at least one crossing
2. STATS19 collision data was obtained for each site with a radius of 40-50m.
3. Data was separated into collisions involving slight, serious and fatal injuries for all users, and just those that included a pedestrian. All figures are the number of collisions.
4. In order to compare any change against background trends, collision data for the whole TLRN was obtained. As most of the removals took place in 2012, an average was taken for 3 years before and after every month in 2012.
5. In order to obtain a further historical baseline, data for the period 3 to 6 years before the removals at each site was also obtained.
6. TfL's road safety target is to reduce the number of people killed or seriously injured (KSI). There is no target for 'slight'. Also given that the purpose of the railings is to influence pedestrian behaviour and safety, the study has focused on pedestrian KSI collisions.
7. This report contains both 'raw' unedited figures and data which has been further reviewed to omit collisions deemed not to be relevant. By its nature and the less than perfect information in the police collision reports, reviewing data involves an element of subjectivity. All reviewed collision can be found in the appendixes listed by reference number for the reader to review. A separate comprehensive spreadsheet also exists which links all together.
8. Results for the removal sites have been checked for statistical significance using the paired student T test at the 95% confidence level which compares the mean for individual sites.

☑ = indicates the change is statistically significant

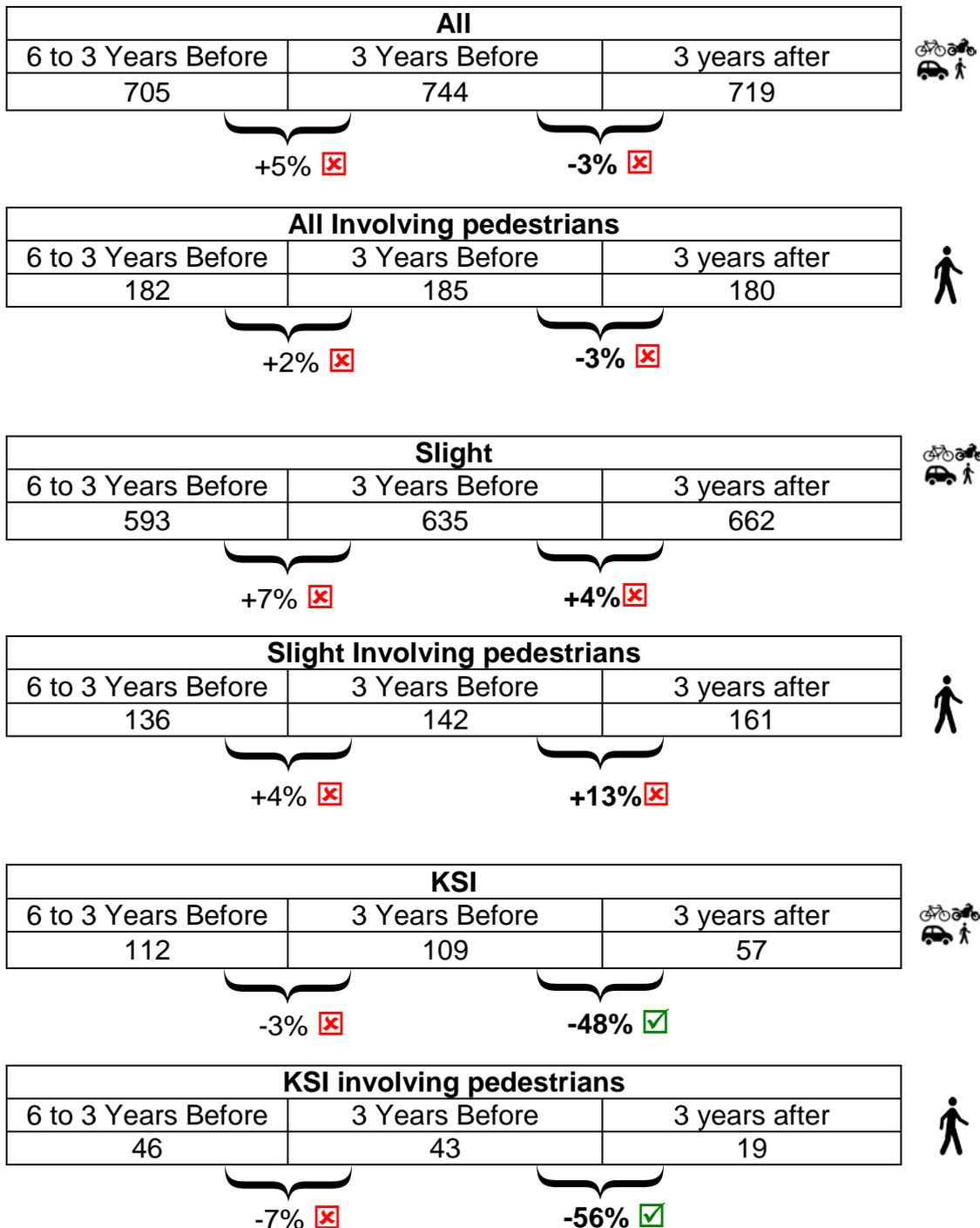
☒ = indicates the change is *not* statistically significant

**Before = with railings, After = without railings**

## 4. Raw Results

### Railings Removal Sites

The tables below show the changes in collisions before and after the removal of railings. Comparing the '6 to 3 year before' period to the '3 years before' period shows how collisions varied during 2 periods when the railings were retained. It effectively acts as control to compare the after period with.



As can be seen there were statistically significant reductions in the number of KSIs and KSIs involving pedestrians. These reductions were also much higher than the historical reduction over the previous 6 years suggesting that something has caused this to occur.

### Whole TfL Network

TfL undertakes a variety of road safety activities that are not site specific (for example advertising campaigns) that may have an impact on reducing collisions. The data below shows the number of collisions on the whole TfL Network over the same 9 year period to allow the results at the removal sites to be seen in a wider context. As these are total figures rather than individual sites it is not possible to carry out the same statistical significance test.

All		
6 to 3 Years Before	3 Years Before	3 years after
19848	21374	21899
+8%		+2%



All Involving pedestrians		
6 to 3 Years Before	3 Years Before	3 years after
3129	3320	3409
+6%		+3%



Slight		
6 to 3 Years Before	3 Years Before	3 years after
16979	18820	19831
+11%		+5%



Slight Involving pedestrians		
6 to 3 Years Before	3 Years Before	3 years after
2237	2543	2744
+14%		+8%



KSI		
6 to 3 Years Before	3 Years Before	3 years after
2869	2554	2068
-11%		-19%



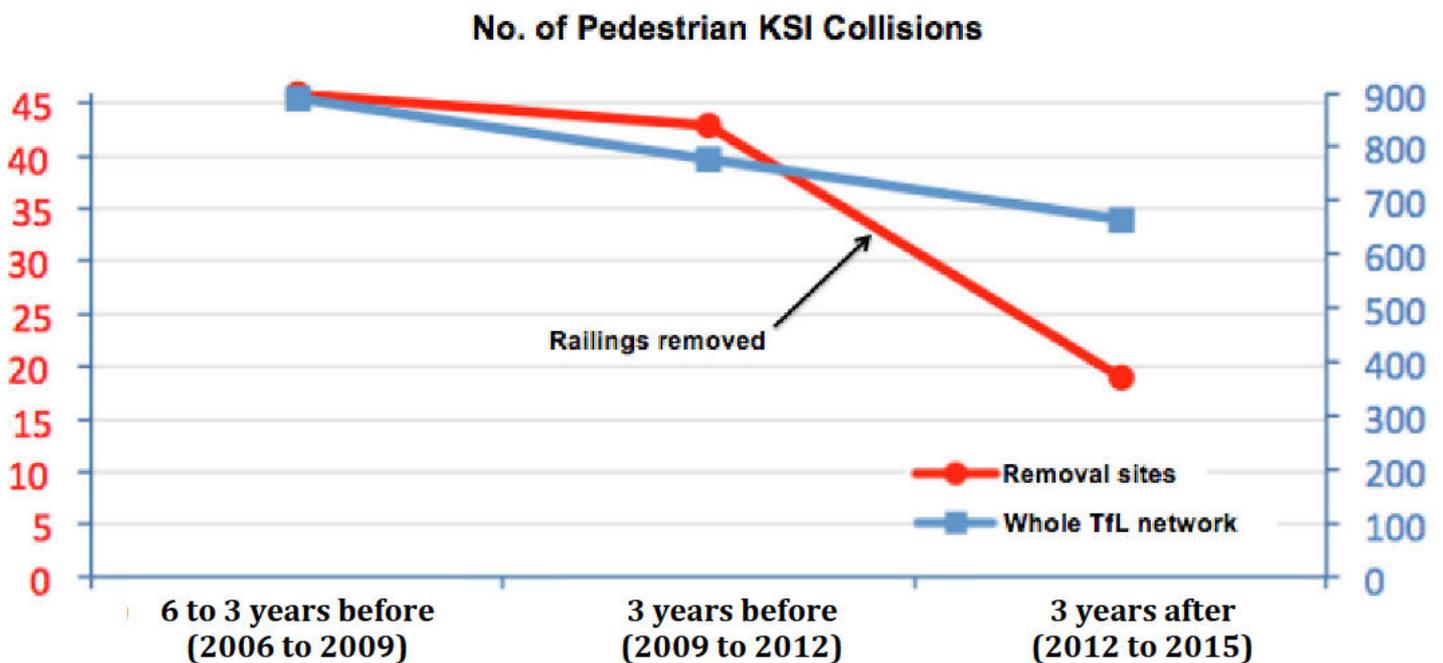
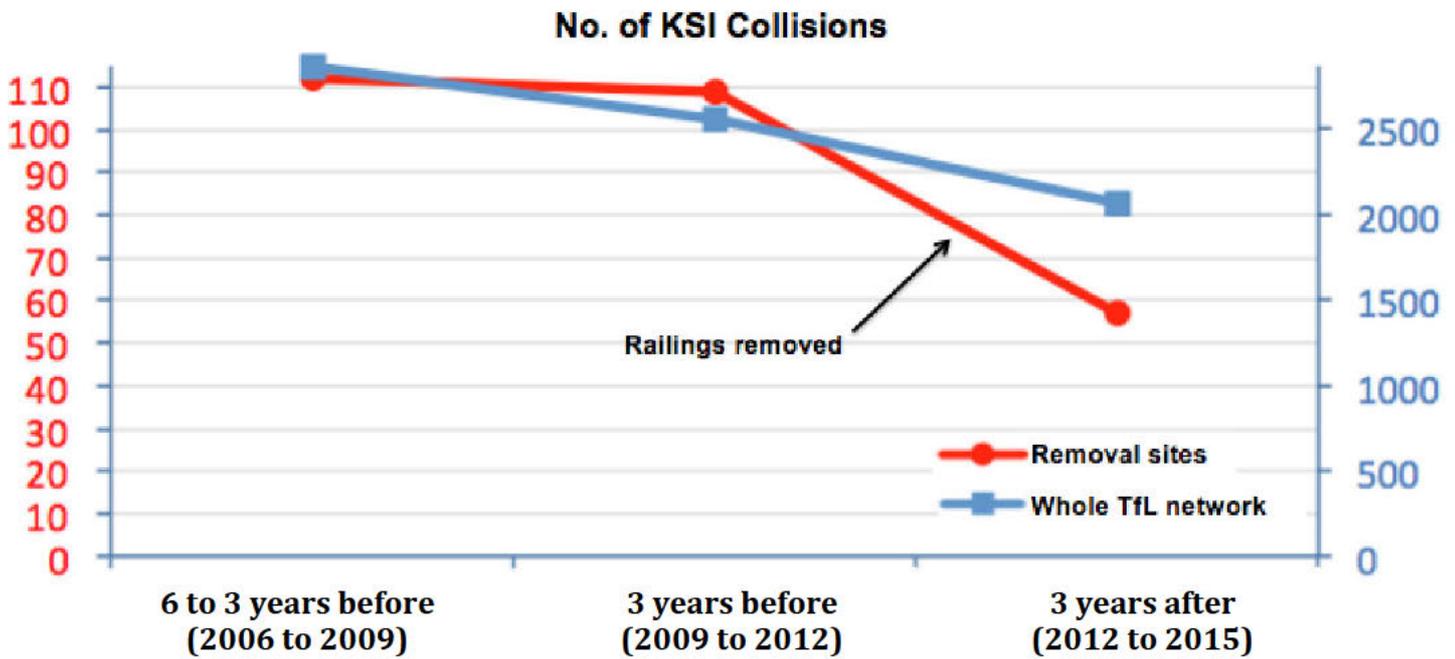
KSI Involving pedestrians		
6 to 3 Years Before	3 Years Before	3 years after
892	777	665
-13%		-14%



The figures show that KSIs have been falling on the whole TfL network. Comparing the 6 to 3 year period to the 3 year period before, this was at a slightly higher rate than at the railing removal sites. However in the 3 year before and after periods this was at much lower rate than the railing removal sites. This shows that KSIs fell at a much higher level at the railings removal sites compared to the TfL network as a whole.

### Whole TLRN v railings removal sites

The information from the previous two pages has been combined together to show a comparison graphically. The graphs below show the KSI results for the whole TfL network against the removal sites.



Although there has been a slight downward trend in KSI collisions on the whole TfL network and historically at the study sites, the graphs show that there was a much larger significant downward shift in the number of collisions after railings were removed at the study sites.

### Site Specific Data

Click on the map below for a link to view the change in KSI pedestrian collisions at each site. When you click each site there is also a link to Google Street View.

-1

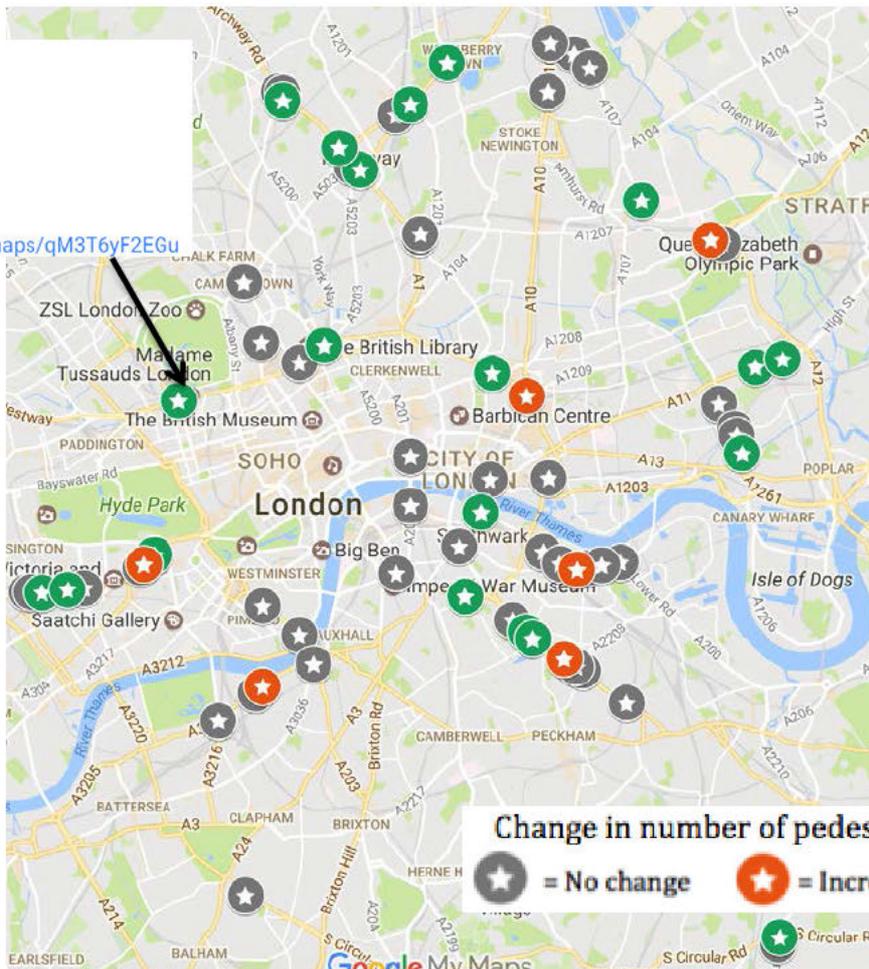
description

Removal date 01/09/11

Site 46

KSI: Before 2, After 1

Street view: <https://goo.gl/maps/qM3T6yF2EGu>



By clicking on the timeline (top left) in street view you can see each site before and after.

In total of the 70 sites, at 19 there was a reduction in pedestrian KSI collisions, at 6 there was an increase and at 45 there was no change. At the sites where there was an increase, all were an increase of 1 collision. At the sites where there was a reduction, these ranged between 1 and 3.

## 5. Reviewed Results

### Set 1

A review was carried out of every individual collision in the 3 years before and after to identify and omit the items below based on the description within the collision report.

(due to the large amount of data analysis involved this review was not carried out on the 6 to 3 years before data)

Item	No. of collisions omitted			No. of ped collisions omitted		
	Before	After	Total	Before	After	Total
At stand alone crossings, where the collision occurred more than 50m from the crossing (except at sites 14, 20 and 35 where railings were also removed from considerable lengths to the side)	26	33	59	4	10	14
Collisions with extenuating circumstances. Examples include drunk drivers and scaffolding falling from a building	4	3	7	2	2	4
Passengers falling over on buses (code C001)	27	18	45			
<b>Total</b>	<b>58</b>	<b>53</b>	<b>111</b>	<b>6</b>	<b>12</b>	<b>18</b>

All		
3 Years Before	3 Years After	% change
687	666	-3% <input checked="" type="checkbox"/>



All involving pedestrians		
3 Years Before	3 Years After	% change
180	168	-7% <input checked="" type="checkbox"/>



Slight		
3 Years Before	3 Years After	% change
583	611	+5% <input checked="" type="checkbox"/>



Slight involving pedestrians		
3 Years Before	3 Years After	% change
139	149	+7% <input checked="" type="checkbox"/>



KSI		
3 Years Before	3 Years After	% change
104	55	-47% <input checked="" type="checkbox"/>



KSI involving pedestrians		
3 Years Before	3 Years After	% change
41	19	-54% <input checked="" type="checkbox"/>



**Set 2**

At the 15 stand alone crossing sites, all had all the railings within the staggered crossing removed. Of the 55 junctions, 47 had railings removed from all arms, 2 had railings retained on 1 or more arms and at 6 there was no railings to start with on some arms. For these 8 junctions, a review has been carried out of the pedestrian collisions to, where possible, identify and remove those that occurred on arms that had no railings removed. More site details can be found in Appendix G.

This type of analysis can be quite subjective in terms of the specific collisions but mainly the fact of doing it all. The presence or lack off railings on one arm of a junction may have no effect on another arm, in which case this analysis is prudent. However this is based on the assumption that railings only influence their immediate vicinity. On the other hand, the area of influence could be greater than the specific arm and it may have an impact on driver and pedestrian behaviour elsewhere in the junction. For example pedestrians could choose different routes to avoid the railings and drivers may reduce their speed and drive more cautiously through the whole junction. Nonetheless it has been carried out and readers can choose to use or disregard the information. The same also applies to the staggered crossing analysis on the following pages.

The review of these 8 junctions resulted in the omission of 15 pedestrian collisions, 8 before and 7 after.

The resulting data after the above has been removed and combined with the reviewed data from set 1 are shown below:

<b>All</b>			
3 Years Before	3 Years After	% change	
679	659	-3%	

<b>All involving pedestrians</b>			
3 Years Before	3 Years After	% change	
172	161	-6%	

<b>Slight</b>			
3 Years Before	3 Years After	% change	
576	604	+5%	

<b>Slight involving pedestrians</b>			
3 Years Before	3 Years After	% change	
132	142	+8%	

<b>KSI</b>			
3 Years Before	3 Years After	% change	
103	55	-47%	

<b>KSI involving pedestrians</b>			
3 Years Before	3 Years After	% change	
40	19	-53%	

### Comparison of raw v reviewed results for all collisions

	% change 3 years after v before		
	All	Slight	KSI
Raw data	-3%	+4%	-48%
Reviewed set 1	-3%	+5%	-47%
Reviewed set 2	-3%	+5%	-47%

### Comparison of raw v reviewed results for pedestrian collisions

	% change 3 years after v before		
	All	Slight	KSI
Raw data	-3%	+13%	-56%
Reviewed set 1	-7%	+7%	-54%
Reviewed set 2	-6%	+8%	-53%

Comparing the raw data to the reviewed data has shown hardly any change, and no change to the fact that there was statistically significant falls in KSI collisions. In general the process of omitting collisions deemed not to be relevant has cancelled each other out in the before and after periods, as may have been expected.

## 6. Staggered Crossings

There are two main types of staggered crossing. A ‘reverse’ staggered crossing is where pedestrians walk in the central island away from oncoming traffic. A forward staggered crossing is where they walk towards oncoming traffic

Example of a reverse staggered crossing



Example of a forward staggered crossing



In the study there are 58 reverse and 32 forward staggered crossings. This review has analysed the specific location within a site of each pedestrian collision 3 years before and after and recorded those within the vicinity of a staggered crossing.

Collisions involving pedestrians in the vicinity of:

**'Reverse' Staggered Crossings**

<b>All involving pedestrians</b>		
3 Years Before	3 Years After	% change
56	43	-23% 

<b>Slight involving pedestrians</b>		
3 Years Before	3 Years After	% change
39	39	0% 

<b>KSI involving pedestrians</b>		
3 Years Before	3 Years After	% change
17	4	-76% 

**'Forward' Staggered Crossings**

<b>All involving pedestrians</b>		
3 Years Before	3 Years After	% change
41	23	-44% 

<b>Slight involving pedestrians</b>		
3 Years Before	3 Years After	% change
32	20	-38% 

<b>KSI involving pedestrians</b>		
3 Years Before	3 Years After	% change
9	3	-67% 

The results show the only statistically significant changes were a 76% reduction in KSI collisions involving pedestrians at reverse staggered crossings (17 to 4), and a 44% reduction in all collisions involving pedestrians at forward staggered crossings (41 to 23).

## 7. Results Analysis

*Why have KSIs dropped so much after the removal of railings?*

Knowing the exact reason why this change has occurred is difficult to pinpoint. However the Engineer at TfL responsible for the railings removal programme (Sam Wright) gives some insight based on his experience of observing the sites before and after. "Railings can sometimes give drivers 'tunnel vision' and a feeling that pedestrians are safely tucked behind them. Without the railings people tend to cross in more locations on an 'ad hoc' basis. Rather than this being more dangerous, the feeling that pedestrians could step out from anywhere appears to make drivers slow down and pay more care and attention. In addition the railings caused some pedestrians to become trapped in the road, taking longer to reach the safety of the footway. Removing them means they now actually spend less time in the road. As a result, junctions and crossings are safer without railings".



## 8. Conclusion

Following the removal of pedestrian railings at 70 junctions and crossings in London there was a statistically significant fall of 56% in the number of collisions involving pedestrians who were killed or seriously injured. There was also a fall of 48% in the number of KSI collisions for all users. This compares to a background trend on the whole TfL Road Network of falls of 14% and 19% respectively.

Upon reviewing the data to remove collisions which may not be relevant, the reductions in KSI collisions were 53% and 47% for pedestrians and all users.

Further detailed analysis was carried out to identify pedestrian collisions that occurred in the vicinity of 'reverse' and 'forward' staggered crossings. This showed reductions of 76% and 67% in KSI collisions at each type respectively with the former being statistically significant.

For further information contact:

[info@street-behaviour.co.uk](mailto:info@street-behaviour.co.uk) or [pedestrianguardrail@tfl.gov.uk](mailto:pedestrianguardrail@tfl.gov.uk)

## Appendix A

### Removal Sites Collision Summary –

3 Years Before and After  
6 to 3 Years before

3 Years Before and After Collision Data

Site No.	Location	Type	No. R/S crossings	No. F/S crossings	Raw Data																														
					All Collisions										Just Pedestrian Collisions																				
					Before					After					Difference					Before					After					Difference					
					Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	
1	Archway Rd / Archway Gytratory – north arm of gytratory	J	1	0	8	0	0	8	0	4	0	0	4	0	-4	0	0	-4	0	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	
2	Bassborough Gardens / Grosvenor Rd	J	4	0	22	2	0	24	2	26	2	0	28	2	4	0	0	4	0	1	1	0	2	1	3	1	0	4	1	2	0	0	2	0	
3	Battersea Park Rd / Queenstown Rd	J	0	0	10	0	0	10	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2	0	5	0	0	5	0	0	0	0	3	0	
4	Blackfriars Rd / Southwark St	J	1	2	10	3	0	13	3	9	1	0	10	1	-1	-2	0	-3	-2	3	1	0	4	1	2	1	0	3	1	-1	0	0	-1	0	
5	Borough High St / Marshalsea Rd	J	1	2	6	2	0	8	2	14	1	0	15	1	8	-1	0	7	-1	5	0	0	5	0	5	0	0	5	0	0	0	0	0	0	
6	Bow Rd / Alfred St – to the east of the junction	SAC	0	1	16	4	0	20	4	16	2	0	18	2	0	-2	0	-2	-2	2	3	0	5	3	2	0	0	2	0	0	-3	0	-3	-3	
7	Bow Rd / Fairfield Rd	J	0	1	14	4	0	18	4	10	1	0	11	1	-4	-3	0	-7	-3	5	2	0	7	2	3	1	0	4	1	-2	-1	0	-3	-1	
8	Bromley Rd / Catford Rd	J	0	1	6	2	0	8	2	6	0	0	6	0	0	-2	0	-2	-2	0	1	0	1	1	2	0	0	2	0	2	-1	0	1	-1	
9	Bromley Rd / Sangley Rd	J	0	1	3	0	0	3	0	9	0	0	9	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	0	5	0	0	5	0	
10	Brompton Rd / Beauchamp Place	J	0	1	6	0	0	6	0	5	0	0	5	0	-1	0	0	-1	0	3	0	0	3	0	2	0	0	2	0	-1	0	0	-1	0	
11	Brompton Rd / Brompton Place	SAC	0	1	7	0	0	7	0	5	1	0	6	1	-2	1	0	-1	1	4	0	0	4	0	3	1	0	4	1	-1	1	0	0	1	
12	Brompton Rd / Hans Crescent	SAC	1	0	7	2	0	9	2	2	1	0	3	1	-5	-1	0	-6	-1	2	1	0	3	1	0	0	0	0	0	-2	-1	0	-3	-1	
13	Brompton Rd to the west of Lancelot Place	SAC	0	1	7	0	0	7	0	2	0	0	2	0	-5	0	0	-5	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	
14	Burdett Rd / Ackroyd Drive	SAC	0	1	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Burdett Rd / Bow Common Lane	J	2	0	7	1	0	8	1	9	0	0	9	0	2	-1	0	1	-1	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	
16	Burdett Rd / St Pauls Way	J	1	1	18	0	0	18	0	25	1	0	26	1	7	1	0	8	1	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	
17	Burdett Rd / Thomas Rd	SAC	1	0	5	2	0	7	2	8	0	0	8	0	3	-2	0	1	-2	1	1	0	2	1	1	0	0	1	0	0	-1	0	-1	-1	
18	Camden Rd / Caledonian Rd	J	0	0	6	1	0	7	1	3	0	0	3	0	-3	-1	0	-4	-1	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	
19	Clapton Common bet Braydon Rd & Portland Ave	SAC	0	1	2	0	0	2	0	7	0	0	7	0	5	0	0	5	0	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	0	1	6	1	0	7	1	6	0	0	6	0	0	-1	0	-1	-1	3	0	0	3	0	0	0	0	0	0	-3	0	0	-3	0	
21	Cromwell Rd / Collingham Rd	J	1	0	3	1	0	4	1	4	0	0	4	0	1	-1	0	0	-1	1	1	0	2	1	3	0	0	3	0	2	-1	0	1	-1	
22	Cromwell Rd / Gloucester Rd	J	0	0	13	2	0	15	2	13	0	0	13	0	0	-2	0	-2	-2	2	1	0	3	1	11	0	0	11	0	9	-1	0	8	-1	
23	Cromwell Rd / Knareborough Place	J	1	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0		
24	Cromwell Rd / Marloes Rd	J	1	0	5	1	0	6	1	0	1	0	1	1	-5	0	0	-5	0	2	1	0	3	1	0	1	0	1	1	-2	0	0	-2	0	
25	Cromwell Rd / Queens Gate	J	4	0	11	3	0	14	3	9	1	0	10	1	-2	-2	0	-4	-2	3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0	
26	Euston Rd / Dukes Rd Churchway	J	0	0	9	0	0	9	0	6	0	1	7	1	-3	0	1	-2	1	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	
27	Euston Rd / Pancras Rd	J	1	0	23	4	0	27	4	8	0	0	8	0	-15	-4	0	-19	-4	5	2	0	7	2	2	0	0	2	0	-3	-2	0	-5	-2	
28	Hampstead Rd o/s BP station - ped refuge	SAC	1	0	4	1	0	5	1	1	0	0	1	0	-3	-1	0	-4	-1	1	0	0	1	0	0	0	0	0	-1	0	0	-1	0		
29	Highbury Corner / Canonbury Rd	J	0	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30	Highbury Corner / St Pauls Rd	J	0	0	7	0	0	7	0	5	0	0	5	0	-2	0	0	-2	0	4	0	0	4	0	1	0	0	1	0	-3	0	0	-3	0	
31	Holloway Rd / Loraine Rd	SAC	1	0	5	0	0	5	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	-3	0	0	-3	0	
32	Holloway Rd / Sandridge St	J	1	0	12	2	0	14	2	9	1	0	10	1	-3	-1	0	-4	-1	1	2	0	3	2	2	0	0	2	0	1	-2	0	-1	-2	
33	Holloway Rd / Tufnell Park Rd - traffic island	J	1	0	10	1	0	11	1	9	0	0	9	0	-1	-1	0	-2	-1	5	1	0	6	1	3	0	0	3	0	-2	-1	0	-3	-1	
34	Jamaica Rd / Abbey St	J	1	1	5	2	0	7	2	8	1	0	9	1	3	-1	0	2	-1	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	
35	Jamaica Rd / Bermondsey LU Station	SAC	0	1	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2	10	1	0	11	1	6	2	0	8	2	-4	1	0	-3	1	2	0	0	2	0	0	1	0	1	1	-2	1	0	-1	1	
37	Jamaica Rd / Rotherhithe Tunnel Rdbt - traffic island west	J	0	1	12	1	0	13	1	8	0	0	8	0	-4	-1	0	-5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38	Jamaica Rd / Tooley St / Shad Thames	J	2	0	4	1	1	6	2	1	2	0	3	2	-3	1	-1	-3	0	2	0	0	2	0	0	0	0	0	0	-2	0	0	-2	0	
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	1	0	4	0	0	4	0	6	0	0	6	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	
40	Kentish Town Rd / Camden Rd	J	0	0	27	3	0	30	3	20	3	0	23	3	-7	0	0	-7	0	10	2	0	12	2	6	2	0	8	2	-4	0	0	-4	0	
41	Kenworthy Rd / Wick Rd	J	0	0	4	0	0	4	0	6	1	0	7	1	2	1	0	3	1	0	0	0	0	0	0	1	0	1	1	0	1	0	1	1	
42	London Bridge / Duke St Hill	J	2	0	15	4	1	20	5	14	2	0	16	2	-1	-2	-1	-4	-3	4	2	1	7	3	7	0	0	7	0	3	-2	-1	0	-3	
43	Lower Clapton Rd / Urswick Rd	J	0	1	5	3	1	9	4	5	3	0	8	3	0	0	-1	-1	-1	0	1	1	2	2	1	1	0	2	1	1	0	-1	0	-1	
44	Ludgate Circus	J	2	0	24	2	0	26	2	30	4	2	36	6	6	2	2	10	4	5	0	0	5	0	9	0	0	9	0	4	0	0	4	0	
45	Mansell St / Goodman's Yard	J	0	0	5	0	0	5	0	4	1	0	5	1	-1	1	0	0	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	
46	Martyn Rd / Baker St	J	2	0	16	4	0	20	4	23	2	0	25	2	7	-2	0	5	-2	5	2	0	7	2	8	1	0	9	1	3	-1	0	2	-1	
47	New Kent Rd to the middle east of Balfour St	SAC	0	1	6	1	1	8	2	10	0	0	10	0	-1	-1	-1	-2	-2	2	1	0	3	1	2	0	0	2	0	0	-1	0	-1	-1	
48	Nine Elms Lane southwest of Cringle St	SAC	0	1	2	0	0	2	0	1	3	0	4	3	-1	3	0	2	3	0	0	0	0	0	0	1	0	1	1	0	1	0	1	1	
49	Nine Elms Lane / Kirtling St	J	1	1	4	0	0	4	0	3	0	0	3	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
50	Nine Elms Lane / Wandsworth Rd	J	0	1	10	1	0	11	1	15	1	0	16	1	5	0	0	5	0	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	
51	Old Kent Rd / Dunton Rd	J	1	0	9	5	0	14	5	16	1	0	17	1	7	-4	0	3	-4	1	2	0	3	2	6	0	0	6	0	5	-2	0	3	-2	
52	Old Kent Rd / Hendre Rd	J	0	1	9	1	0	10	1	9	0	0	9	0	0	-1	0	-1	-1	3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0	
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2	15	2	0	17	2	14	0	1	15	1	-1	-2	1	-2	-1	4	1	0	5	1	2	0	0	2	0	-2	-1	0	-3	-1	
54	Old Kent Rd / Ilderton Rd	J	2	0																															

6-3 Years Before Removal Collision Data

Site No.	Location	Type	No. R/S crossings	No. F/S crossings	Raw Data									
					All Collisions					Just Pedestrian Collisions				
					Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total
1	Archway Rd / Archway Gyrotory – north arm of gyrotory	J	1	0	2	0	0	2	0	1	0	0	1	0
2	Bassborough Gardens / Grosvenor Rd	J	4	0	19	3	1	23	4	3	1	1	5	2
3	Battersea Park Rd / Queenstown Rd	J	0	0	12	1	0	13	1	3	1	0	4	1
4	Blackfriars Rd / Southwark St	J	1	2	10	1	0	11	1	2	0	0	2	0
5	Borough High St / Marshalsea Rd	J	1	2	17	2	0	19	2	4	1	0	5	1
6	Bow Rd / Alfred St – to the east of the junction	SAC	0	1	8	3	0	11	3	1	2	0	3	2
7	Bow Rd / Fairfield Rd	J	0	1	11	0	0	11	0	1	0	0	1	0
8	Bromley Rd / Catford Rd	J	0	1	7	3	0	10	3	2	1	0	3	1
9	Bromley Rd / Sangley Rd	J	0	1	5	0	0	5	0	0	0	0	0	0
10	Brompton Rd / Beauchamp Place	J	0	1	8	1	0	9	1	3	1	0	4	1
11	Brompton Rd / Brompton Place	SAC	0	1	4	0	0	4	0	3	0	0	3	0
12	Brompton Rd / Hans Crescent	SAC	1	0	3	0	0	3	0	0	0	0	0	0
13	Brompton Rd to the west of Lancelot Place	SAC	0	1	7	0	0	7	0	4	0	0	4	0
14	Burdett Rd / Ackroyd Drive	SAC	0	1	0	1	0	1	1	0	0	0	0	0
15	Burdett Rd / Bow Common Lane	J	2	0	5	1	0	6	1	2	0	0	2	0
16	Burdett Rd / St Pauls Way	J	1	1	19	5	0	24	5	3	1	0	4	1
17	Burdett Rd / Thomas Rd	SAC	1	0	3	2	0	5	2	1	1	0	2	1
18	Camden Rd / Caledonian Rd	J	0	0	3	1	0	4	1	0	1	0	1	1
19	Clapton Common bet Braydon Rd & Portland Ave	SAC	0	1	8	1	0	9	1	0	0	0	0	0
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	0	1	4	1	0	5	1	1	0	0	1	0
21	Cromwell Rd / Collingham Rd	J	1	0	4	1	0	5	1	2	1	0	3	1
22	Cromwell Rd / Gloucester Rd	J	0	0	17	2	0	19	2	12	2	0	14	2
23	Cromwell Rd / Knaresborough Place	J	1	0	5	3	0	8	3	0	2	0	2	2
24	Cromwell Rd / Marloes Rd	J	1	0	8	1	0	9	1	3	0	0	3	0
25	Cromwell Rd / Queens Gate	J	4	0	9	0	0	9	0	2	0	0	2	0
26	Euston Rd / Dukes Rd Churchway	J	0	0	8	2	0	10	2	1	0	0	1	0
27	Euston Rd / Pancras Rd	J	1	0	6	2	1	9	3	4	0	1	5	1
28	Hampstead Rd o/s BP station - ped refuge	SAC	1	0	3	2	0	5	2	0	1	0	1	1
29	Highbury Corner / Canonbury Rd	J	0	0	1	0	0	1	0	0	0	0	0	0
30	Highbury Corner / St Pauls Rd	J	0	0	4	1	0	5	1	0	0	0	0	0
31	Holloway Rd / Loraine Rd	SAC	1	0	4	0	0	4	0	1	0	0	1	0
32	Holloway Rd / Sandridge St	J	1	0	8	1	0	9	1	3	0	0	3	0
33	Holloway Rd / Tufnell Park Rd - traffic island	J	1	0	4	0	0	4	0	0	0	0	0	0
34	Jamaica Rd / Abbey St	J	1	1	7	1	0	8	1	0	0	0	0	0
35	Jamaica Rd / Bermondsey LU Station	SAC	0	1	5	0	0	5	0	1	0	0	1	0
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2	7	2	0	9	2	0	1	0	1	1
37	Jamaica Rd / Rotherhithe Tunnel Rdbt - traffic island west	J	0	1	3	1	0	4	1	0	0	0	0	0
38	Jamaica Rd / Tooley St / Shad Thames	J	2	0	3	1	0	4	1	0	1	0	1	1
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	1	0	10	0	0	10	0	0	0	0	0	0
40	Kentish Town Rd / Camden Rd	J	0	0	23	6	0	29	6	9	5	0	14	5
41	Kenworthy Rd / Wick Rd	J	0	0	4	0	0	4	0	1	0	0	1	0
42	London Bridge / Duke St Hill	J	2	0	12	3	0	15	3	7	2	0	9	2
43	Lower Clapton Rd / Urswick Rd	J	0	1	12	2	0	14	2	4	1	0	5	1
44	Ludgate Circus	J	2	0	15	3	0	18	3	5	0	0	5	0
45	Mansell St / Goodman's Yard	J	0	0	2	1	0	3	1	0	0	0	0	0
46	Marlybone Rd / Baker St	J	2	0	27	7	0	34	7	5	3	0	8	3
47	New Kent Rd to the middle east of Balfour St	SAC	0	1	6	0	0	6	0	1	0	0	1	0
48	Nine Elms Lane southwest of Cringle St	SAC	0	1	2	1	0	3	1	0	0	0	0	0
49	Nine Elms Lane / Kirtling St	J	1	1	3	1	0	4	1	0	0	0	0	0
50	Nine Elms Lane / Wandsworth Rd	J	0	1	9	1	0	10	1	1	1	0	2	1
51	Old Kent Rd / Dunton Rd	J	1	0	4	1	0	5	1	1	0	0	1	0
52	Old Kent Rd / Hendre Rd	J	0	1	12	0	0	12	0	4	0	0	4	0
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2	21	0	0	21	0	4	0	0	4	0
54	Old Kent Rd / Ilderton Rd	J	2	0	12	1	0	13	1	4	0	0	4	0
55	Old Kent Rd / Malt St	J	2	0	8	2	0	10	2	1	1	0	2	1
56	Old Kent Rd / Olmar St	J	2	0	3	0	0	3	0	0	0	0	0	0
57	Old Kent Rd / Peckham Park Rd	J	1	0	4	0	0	4	0	0	0	0	0	0
58	Old Kent Rd / St James Rd	J	2	0	16	7	0	23	7	1	2	0	3	2
59	Old Str / Vince Str	SAC	1	0	12	4	0	16	4	2	2	0	4	2
60	Poynders Rd / Cavendish Rd	J	0	0	0	1	0	1	1	0	0	0	0	0
61	Seven Sisters Rd / Blackstock Rd	J	0	1	13	3	0	16	3	4	1	0	5	1
62	Seven Sisters Rd / Green Lanes Rd	J	2	2	36	7	0	43	7	3	1	0	4	1
63	Seven Sisters Rd / Isledon Rd	J	1	0	8	3	0	11	3	2	2	0	4	2
64	Shoreditch High St / Great Eastern St	J	4	0	21	3	0	24	3	2	1	0	3	1
65	St George's Rd / Lambeth Rd	J	0	0	2	1	1	4	2	0	0	1	1	1
66	St John's Way / Archway Gyrotory – east arm of gyrotory	J	0	0	1	1	0	2	1	1	0	0	1	0
67	Stamford Hill / Clapton Common	J	1	0	20	2	1	23	3	8	2	0	10	2
68	Stamford Hill to the north of Windus Rd - o/s Morrisons	SAC	1	0	2	0	0	2	0	2	0	0	2	0
69	Vauxhall Bridge Rd / Warwick Way	J	0	0	10	0	1	11	1	1	0	1	2	1
70	Wick Rd/ Cadogan Terrace	J	0	1	2	0	0	2	0	0	0	0	0	0
Totals			58	32	593	107	5	705	112	136	42	4	182	46

# Appendix B

## All TLRN Collision Summary

## All Personal injury collisions on the TLRN

Jan 2009-Dec 2015										Jan 2006-Dec 2012											
Average of 12 months before and after Jan to Dec 12										Average of 12 months before and after Jan 09											
No. of Collisions										No. of Collisions											
Year	Month	1 Fatal	2 Serious	3 Slight	Total	3 years before and after					Year	Month	1 Fatal	2 Serious	3 Slight	Total	6 v 3 years before				
2009	January	6	68	369	443						2006	January	6	68	417	491					
2009	February	3	52	331	386						2006	February	8	81	420	509					
2009	March	4	50	488	542						2006	March	7	87	484	578					
2009	April	5	90	461	556						2006	April	8	72	421	501					
2009	May	2	61	506	569						2006	May	5	76	524	605					
2009	June	6	78	525	609						2006	June	8	96	542	646					
2009	July	3	70	528	601						2006	July	5	90	547	642					
2009	August	2	61	509	572						2006	August	3	74	480	557					
2009	September	3	72	549	624						2006	September	8	81	563	652					
2009	October	3	72	557	632						2006	October	12	75	575	662					
2009	November	4	74	555	633						2006	November	4	91	495	590					
2009	December	9	65	437	511						2006	December	8	66	438	512					
2010	January	2	45	430	477						2007	January	6	79	413	498					
2010	February	5	61	446	512						2007	February	3	68	402	473					
2010	March	0	94	541	635						2007	March	8	77	490	575					
2010	April	7	58	448	513						2007	April	7	77	427	511					
2010	May	2	85	525	612						2007	May	5	81	491	577					
2010	June	2	81	558	641						2007	June	4	77	478	559					
2010	July	6	65	562	633						2007	July	2	104	514	620					
2010	August	1	58	501	560						2007	August	5	79	453	537					
2010	September	3	68	564	635						2007	September	7	85	522	614					
2010	October	7	86	607	700						2007	October	6	66	518	590					
2010	November	3	72	564	639						2007	November	4	78	490	572					
2010	December	3	27	389	419						2007	December	7	58	384	449					
2011	January	4	38	423	465						2008	January	7	68	361	436					
2011	February	2	55	424	481						2008	February	6	73	448	527					
2011	March	11	59	565	635						2008	March	4	67	425	496					
2011	April	2	70	516	588						2008	April	5	73	450	528					
2011	May	4	76	619	699						2008	May	2	96	497	595					
2011	June	3	69	580	652						2008	June	6	81	510	597					
2011	July	5	60	647	712						2008	July	6	67	509	582					
2011	August	4	59	462	525						2008	August	7	56	440	503					
2011	September	1	78	551	630						2008	September	7	86	507	600					
2011	October	6	75	620	701						2008	October	4	74	564	642					
2011	November	8	63	580	651						2008	November	5	49	469	523					
2011	December	3	57	541	601						2008	December	7	71	418	496					
2012	January	3	70	478	551						2009	January	6	68	369	443					
2012	February	5	66	449	520						2009	February	3	52	331	386					
2012	March	6	83	576	665						2009	March	4	50	488	542					
2012	April	2	54	454	510						2009	April	5	90	461	556					
2012	May	3	90	549	642						2009	May	2	61	506	569					
2012	June	2	63	510	575						2009	June	6	78	525	609					
2012	July	3	92	610	705						2009	July	3	70	528	601					
2012	August	4	81	571	656						2009	August	2	61	509	572					
2012	September	2	72	555	629						2009	September	3	72	549	624					
2012	October	3	86	612	701						2009	October	3	72	557	632					
2012	November	5	59	541	605						2009	November	4	74	555	633					
2012	December	6	71	472	549						2009	December	9	65	437	511					
2013	January	1	49	368	418						2010	January	2	45	430	477					
2013	February	1	48	393	442						2010	February	5	61	446	512					
2013	March	5	49	444	498						2010	March	0	94	541	635					
2013	April	3	52	482	537						2010	April	7	58	448	513					
2013	May	6	56	532	594						2010	May	2	85	525	612					
2013	June	4	44	596	644						2010	June	2	81	558	641					
2013	July	3	60	597	660						2010	July	6	65	562	633					
2013	August	7	47	571	625						2010	August	1	58	501	560					
2013	September	5	46	591	642						2010	September	3	68	564	635					
2013	October	3	73	653	729						2010	October	7	86	607	700					
2013	November	4	63	586	653						2010	November	3	72	564	639					
2013	December	3	53	479	535						2010	December	3	27	389	419					
2014	January	3	51	527	581						2011	January	4	38	423	465					
2014	February	2	45	517	564						2011	February	2	55	424	481					
2014	March	1	41	559	601						2011	March	11	59	565	635					
2014	April	5	37	524	566						2011	April	2	70	516	588					
2014	May	4	56	564	624						2011	May	4	76	619	699					
2014	June	1	51	644	696						2011	June	3	69	580	652					
2014	July	6	50	623	679						2011	July	5	60	647	712					
2014	August	4	41	618	663						2011	August	4	59	462	525					
2014	September	4	46	621	671						2011	September	1	78	551	630					
2014	October	7	62	707	776						2011	October	6	75	620	701					
2014	November	4	40	637	681						2011	November	8	63	580	651					
2014	December	7	33	480	520						2011	December	3	57	541	601					
2015	January	6	55	507	568						2012	January	3	70	478	551					
2015	February	5	38	452	495						2012	February	5	66	449	520					
2015	March	6	48	520	574						2012	March	6	83	576	665					
2015	April	3	51	530	584						2012	April	2	54	454	510					
2015	May	2	38	567	607						2012	May	3	90	549	642					
2015	June	2	39	608	649						2012	June	2	63	510	575					
2015	July	3	54	696	753						2012	July	3	92	610	705					
2015	August	4	41	557	602						2012	August	4	81	571	656					
2015	September	3	48	582	633						2012	September	2	72	555	629					
2015	October	1	41	626	668						2012	October	3	86	612	701					
2015	November	1	44	578	623						2012	November	5	59	541	605					
2015	December	4	32	534	570						2012	December	6	71	472	549					

## Collisions involving pedestrians on the TLRN

**Jan 2009-Dec 2015**  
Average of 12 months before and after Jan to Dec 12  
**No. of Collisions**

**Jan 2006-Dec 2012**  
Average of 12 months before and after Jan 09  
**No. of Collisions**

3 years before and after					6 v 3 years before																
Year	Month	1 Fatal	2 Serious	3 Slight	Total	Year	Month	1 Fatal	2 Serious	3 Slight	Total	Year	Month	1 Fatal	2 Serious	3 Slight	Total				
2009	January	2	17	49	<b>68</b>						2006	January	2	22	59	<b>83</b>					
2009	February	1	13	54	<b>68</b>	<b>KSI</b>					2006	February	7	23	62	<b>92</b>	<b>KSI</b>				
2009	March	3	21	59	<b>83</b>	<b>Before</b>					2006	March	2	39	73	<b>114</b>	<b>Before</b>				
2009	April	1	21	48	<b>70</b>	Jan 12	741	730			2006	April	1	18	47	<b>66</b>	Jan 09	928	741		
2009	May	0	19	59	<b>78</b>	Feb 12	747	727			2006	May	3	19	55	<b>77</b>	Feb 09	923	747		
2009	June	4	18	66	<b>88</b>	Mar 12	761	712			2006	June	5	24	66	<b>95</b>	Mar 09	907	761		
2009	July	2	20	59	<b>81</b>	Apr 12	764	695			2006	July	3	17	57	<b>77</b>	Apr 09	890	764		
2009	August	1	11	59	<b>71</b>	May 12	762	687			2006	August	2	18	49	<b>69</b>	May 09	893	762		
2009	September	1	22	66	<b>89</b>	Jun 12	777	667	% change		2006	September	2	24	70	<b>96</b>	Jun 09	890	777		
2009	October	2	26	86	<b>114</b>	Jul 12	776	655			2006	October	3	17	78	<b>98</b>	Jul 09	883	776	% change	
2009	November	2	20	86	<b>108</b>	Aug 12	789	639			2006	November	1	28	76	<b>105</b>	Aug 09	885	789		
2009	December	7	21	75	<b>103</b>	Sep 12	804	632			2006	December	3	26	66	<b>95</b>	Sep 09	877	804		
2010	January	1	16	67	<b>84</b>	Oct 12	798	627			2007	January	3	22	55	<b>80</b>	Oct 09	874	798		
2010	February	2	23	71	<b>96</b>	Nov 12	805	604			2007	February	3	20	50	<b>73</b>	Nov 09	882	805		
2010	March	0	27	67	<b>94</b>	Dec 12	803	600			2007	March	5	20	75	<b>100</b>	Dec 09	875	803		
2010	April	1	17	58	<b>76</b>	Avg	777	665	-14%		2007	April	3	19	57	<b>79</b>	Avg	892	777	-13%	
2010	May	1	20	67	<b>88</b>	<b>Slight</b>					2007	May	3	27	78	<b>108</b>					
2010	June	0	15	67	<b>82</b>	Jan 12	2479	2705			2007	June	2	16	56	<b>74</b>	<b>Slight</b>				
2010	July	2	17	66	<b>85</b>	Feb 12	2495	2726			2007	July	0	33	73	<b>106</b>	Jan 09	2255	2479		
2010	August	0	15	56	<b>71</b>	Mar 12	2505	2741			2007	August	1	25	53	<b>79</b>	Feb 09	2245	2495		
2010	September	2	20	88	<b>110</b>	Apr 12	2521	2730			2007	September	4	29	62	<b>95</b>	Mar 09	2237	2505		
2010	October	3	23	83	<b>109</b>	May 12	2554	2722			2007	October	4	24	72	<b>100</b>	Apr 09	2223	2521		
2010	November	2	22	76	<b>100</b>	Jun 12	2557	2739			2007	November	0	30	61	<b>91</b>	May 09	2224	2554		
2010	December	1	9	77	<b>87</b>	Jul 12	2563	2742	% change		2007	December	4	25	55	<b>84</b>	Jun 09	2228	2557	% change	
2011	January	1	10	66	<b>77</b>	Aug 12	2576	2764			2008	January	5	30	52	<b>87</b>	Jul 09	2228	2563	% change	
2011	February	0	13	63	<b>76</b>	Sep 12	2580	2757			2008	February	3	21	59	<b>83</b>	Aug 09	2230	2576		
2011	March	7	20	93	<b>120</b>	Oct 12	2568	2776			2008	March	2	15	64	<b>81</b>	Sep 09	2240	2580		
2011	April	0	14	60	<b>74</b>	Nov 12	2557	2761			2008	April	2	27	67	<b>96</b>	Oct 09	2236	2568		
2011	May	2	21	67	<b>90</b>	Dec 12	2558	2768			2008	May	2	29	78	<b>109</b>	Nov 09	2244	2557		
2011	June	2	17	78	<b>97</b>	Avg	2543	2744	8%		2008	June	3	18	55	<b>76</b>	Dec 09	2254	2558		
2011	July	2	15	72	<b>89</b>	<b>All</b>					2008	July	2	18	56	<b>76</b>	Avg	2237	2543	14%	
2011	August	2	17	58	<b>77</b>	Jan 12	3220	3435			2008	August	1	16	48	<b>65</b>					
2011	September	0	26	70	<b>96</b>	Feb 12	3242	3453			2008	September	3	28	63	<b>94</b>					
2011	October	3	24	77	<b>104</b>	Mar 12	3266	3453			2008	October	3	25	75	<b>103</b>	<b>All</b>				
2011	November	4	19	79	<b>102</b>	Apr 12	3285	3425			2008	November	3	14	72	<b>89</b>	Jan 09	3183	3220		
2011	December	2	26	87	<b>115</b>	May 12	3316	3409			2008	December	3	24	61	<b>88</b>	Feb 09	3168	3242		
2012	January	2	23	65	<b>90</b>	Jun 12	3334	3406			2009	January	2	17	49	<b>68</b>	Mar 09	3144	3266		
2012	February	4	24	64	<b>92</b>	Jul 12	3339	3397			2009	February	1	13	54	<b>68</b>	Apr 09	3113	3285		
2012	March	2	25	75	<b>102</b>	Aug 12	3365	3403			2009	March	3	21	59	<b>83</b>	May 09	3117	3316		
2012	April	1	19	81	<b>101</b>	Sep 12	3384	3389			2009	April	1	21	48	<b>70</b>	Jun 09	3118	3334		
2012	May	3	31	62	<b>96</b>	Oct 12	3366	3403	% change		2009	May	0	19	59	<b>78</b>	Jul 09	3111	3339	% change	
2012	June	1	20	72	<b>93</b>	Nov 12	3362	3365			2009	June	4	18	66	<b>88</b>	Aug 09	3115	3365		
2012	July	2	33	72	<b>107</b>	Dec 12	3361	3368			2009	July	2	20	59	<b>81</b>	Sep 09	3117	3384		
2012	August	2	25	63	<b>90</b>	Avg	3320	3409	3%		2009	August	1	11	59	<b>71</b>	Oct 09	3110	3366		
2012	September	1	16	54	<b>71</b>						2009	September	1	22	66	<b>89</b>	Nov 09	3126	3362		
2012	October	3	32	75	<b>110</b>						2009	October	2	26	86	<b>114</b>	Dec 09	3129	3361		
2012	November	1	19	87	<b>107</b>						2009	November	2	20	86	<b>108</b>	Avg	3129	3320	6%	
2012	December	4	33	84	<b>121</b>						2009	December	7	21	75	<b>103</b>					
2013	January	1	20	60	<b>81</b>						2010	January	1	16	67	<b>84</b>					
2013	February	1	17	67	<b>85</b>						2010	February	2	23	71	<b>96</b>					
2013	March	2	17	65	<b>84</b>						2010	March	0	27	67	<b>94</b>					
2013	April	2	19	51	<b>72</b>						2010	April	1	17	58	<b>76</b>					
2013	May	2	17	67	<b>86</b>						2010	May	1	20	67	<b>88</b>					
2013	June	1	13	76	<b>90</b>						2010	June	0	15	67	<b>82</b>					
2013	July	1	12	82	<b>95</b>						2010	July	2	17	66	<b>85</b>					
2013	August	2	14	71	<b>87</b>						2010	August	0	15	56	<b>71</b>					
2013	September	3	11	78	<b>92</b>						2010	September	2	20	88	<b>110</b>					
2013	October	2	23	95	<b>120</b>						2010	October	3	23	83	<b>109</b>					
2013	November	1	20	93	<b>114</b>						2010	November	2	22	76	<b>100</b>					
2013	December	2	20	90	<b>112</b>						2010	December	1	9	77	<b>87</b>					
2014	January	2	20	82	<b>104</b>						2011	January	1	10	66	<b>77</b>					
2014	February	2	14	87	<b>103</b>						2011	February	0	13	63	<b>76</b>					
2014	March	1	7	74	<b>82</b>						2011	March	7	20	93	<b>120</b>					
2014	April	3	12	81	<b>96</b>						2011	April	0	14	60	<b>74</b>					
2014	May	3	17	75	<b>95</b>						2011	May	2	21	67	<b>90</b>					
2014	June	0	12	73	<b>85</b>						2011	June	2	17	78	<b>97</b>					
2014	July	2	8	75	<b>85</b>						2011	July	2	15	72	<b>89</b>					
2014	August	2	9	64	<b>75</b>						2011	August	2	17	58	<b>77</b>					
2014	September	1	14	86	<b>101</b>						2011	September	0	26	70	<b>96</b>					
2014	October	5	18	87	<b>110</b>						2011	October	3	24	77	<b>104</b>					
2014	November	1	14	95	<b>110</b>						2011	November	4	19	79	<b>102</b>					
2014	December	3	11	77	<b>91</b>						2011	December	2	26	87	<b>115</b>					
2015	January	2	20	86	<b>108</b>						2012	January	2	23	65	<b>90</b>					
2015	February	1	12	79	<b>92</b>						2012	February	4	24	64	<b>92</b>					
2015	March	2	8	64	<b>74</b>						2012	March	2	25	75	<b>102</b>					
2015	April	1	11	73	<b>85</b>						2012	April	1	19	81	<b>101</b>					
2015	May	2	12	79	<b>93</b>						2012	May	3	31	62	<b>96</b>					
2015	June	1	8	75	<b>84</b>						2012	June	1	20	72	<b>93</b>					
2015	July	1	18	94	<b>113</b>						2012	July	2	33	72	<b>107</b>					
2015	August	3	17	56	<b>76</b>						2012	August	2	25	63	<b>90</b>					
2015	September	1	11	73	<b>85</b>						2012	September	1	16	54	<b>71</b>					
2015	October	0	12	60	<b>72</b>						2012	October	3	32	75	<b>110</b>					
2015	November	1	15	94	<b>110</b>						2012	November	1	19	87	<b>107</b>					

# Appendix C

## Reviewed Set 1 –

### Collision Summary Omitted Collisions

3 Years Before and After Collision Data - Reviewed data set 1

Site No.	Location	Type	No. R/S crossings	No. F/S crossings
1	Archway Rd / Archway Gyrotory – north arm of gyrotory	J	1	0
2	Bassborough Gardens / Grosvenor Rd	J	4	0
3	Battersea Park Rd / Queenstown Rd	J	0	0
4	Blackfriars Rd / Southwark St	J	1	2
5	Borough High St / Marshalsea Rd	J	1	2
6	Bow Rd / Alfred St – to the east of the junction	SAC	0	1
7	Bow Rd / Fairfield Rd	J	0	1
8	Bromley Rd / Catford Rd	J	0	1
9	Bromley Rd / Sangley Rd	J	0	1
10	Brompton Rd / Beauchamp Place	J	0	1
11	Brompton Rd / Brompton Place	SAC	0	1
12	Brompton Rd / Hans Crescent	SAC	1	0
13	Brompton Rd to the west of Lancelot Place	SAC	0	1
14	Burdett Rd / Ackroyd Drive	SAC	0	1
15	Burdett Rd / Bow Common Lane	J	2	0
16	Burdett Rd / St Pauls Way	J	1	1
17	Burdett Rd / Thomas Rd	SAC	1	0
18	Camden Rd / Caledonian Rd	J	0	0
19	Clapton Common bet Braydon Rd & Portland Ave	SAC	0	1
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	0	1
21	Cromwell Rd / Collingham Rd	J	1	0
22	Cromwell Rd / Gloucester Rd	J	0	0
23	Cromwell Rd / Knaresborough Place	J	1	0
24	Cromwell Rd / Marloes Rd	J	1	0
25	Cromwell Rd / Queens Gate	J	4	0
26	Euston Rd / Dukes Rd Churchway	J	0	0
27	Euston Rd / Pancras Rd	J	1	0
28	Hampstead Rd o/s BP station - ped refuge	SAC	1	0
29	Highbury Corner / Canonbury Rd	J	0	0
30	Highbury Corner / St Pauls Rd	J	0	0
31	Holloway Rd / Loraine Rd	SAC	1	0
32	Holloway Rd / Sandridge St	J	1	0
33	Holloway Rd / Tufnell Park Rd - traffic island	J	1	0
34	Jamaica Rd / Abbey St	J	1	1
35	Jamaica Rd / Bermondsey LU Station	SAC	0	1
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2
37	Jamaica Rd / Ro herithe Tunnel Rdbt - traffic island west	J	0	1
38	Jamaica Rd / Tooley St / Shad Thames	J	2	0
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	1	0
40	Kentish Town Rd / Camden Rd	J	0	0
41	Kenworthy Rd / Wick Rd	J	0	0
42	London Bridge / Duke St Hill	J	2	0
43	Lower Clapton Rd / Urswick Rd	J	0	1
44	Ludgate Circus	J	2	0
45	Mansell St / Goodman's Yard	J	0	0
46	Marlybone Rd / Baker St	J	2	0
47	New Kent Rd to the middle east of Balfour St	SAC	0	1
48	Nine Elms Lane southwest of Cringle St	SAC	0	1
49	Nine Elms Lane / Kirtling St	J	1	1
50	Nine Elms Lane / Wandsworth Rd	J	0	1
51	Old Kent Rd / Dunton Rd	J	1	0
52	Old Kent Rd / Hendre Rd	J	0	1
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2
54	Old Kent Rd / Ilderton Rd	J	2	0
55	Old Kent Rd / Malt St	J	2	0
56	Old Kent Rd / Olmar St	J	2	0
57	Old Kent Rd / Peckham Park Rd	J	1	0
58	Old Kent Rd / St James Rd	J	2	0
59	Old Str / Vince Str	SAC	1	0
60	Poynders Rd / Cavendish Rd	J	0	0
61	Seven Sisters Rd / Blackstock Rd	J	0	1
62	Seven Sisters Rd / Green Lanes Rd	J	2	2
63	Seven Sisters Rd / Isledon Rd	J	1	0
64	Shoreditch High St / Great Eastern St	J	4	0
65	St George's Rd / Lambeth Rd	J	0	0
66	St John's Way / Archway Gyrotory – east arm of gyrotory	J	0	0
67	Stamford Hill / Clapton Common	J	1	0
68	Stamford Hill to the north of Windus Rd - o/s Morrisons	SAC	1	0
69	Vauxhall Bridge Rd / Warwick Way	J	0	0
70	Wick Rd/ Cadogan Terrace	J	0	1
Totals			58	32

All collisions														
Before					After					Difference				
Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total
8	0	0	8	0	4	0	0	4	0	-4	0	0	-4	0
21	2	0	23	2	26	2	0	28	2	5	0	0	5	0
10	0	0	10	0	10	0	0	10	0	0	0	0	0	0
10	3	0	13	3	9	1	0	10	1	-1	-2	0	-3	-2
5	2	0	7	2	13	1	0	14	1	8	-1	0	7	-1
13	4	0	17	4	10	2	0	12	2	-3	-2	0	-5	-2
13	4	0	17	4	10	1	0	11	1	-3	-3	0	-6	-3
4	2	0	6	2	5	0	0	5	0	1	-2	0	-1	-2
3	0	0	3	0	9	0	0	9	0	6	0	0	6	0
6	0	0	6	0	5	0	0	5	0	-1	0	0	-1	0
6	0	0	6	0	3	1	0	4	1	-3	1	0	-2	1
4	2	0	6	2	2	1	0	3	1	-2	-1	0	-3	-1
1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0
2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0
7	1	0	8	1	9	0	0	9	0	2	-1	0	1	-1
18	0	0	18	0	25	1	0	26	1	7	1	0	8	1
5	2	0	7	2	6	0	0	6	0	1	-2	0	-1	-2
5	1	0	6	1	3	0	0	3	0	-2	-1	0	-3	-1
2	0	0	2	0	3	0	0	3	0	1	0	0	1	0
5	1	0	6	1	6	0	0	6	0	1	-1	0	0	-1
3	0	0	3	0	3	0	0	3	0	0	0	0	0	0
13	2	0	15	2	13	0	0	13	0	0	-2	0	-2	-2
3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0
5	1	0	6	1	0	1	0	1	1	-5	0	0	-5	0
11	3	0	14	3	9	1	0	10	1	-2	-2	0	-4	-2
9	0	0	9	0	5	0	1	6	1	-4	0	1	-3	1
19	4	0	23	4	7	0	0	7	0	-12	-4	0	-16	-4
4	1	0	5	1	0	0	0	0	0	-4	-1	0	-5	-1
3	0	0	3	0	3	0	0	3	0	0	0	0	0	0
7	0	0	7	0	5	0	0	5	0	-2	0	0	-2	0
3	0	0	3	0	3	0	0	3	0	0	0	0	0	0
12	2	0	14	2	9	1	0	10	1	-3	-1	0	-4	-1
10	1	0	11	1	9	0	0	9	0	-1	-1	0	-2	-1
5	2	0	7	2	8	1	0	9	1	3	-1	0	2	-1
2	0	0	2	0	3	0	0	3	0	1	0	0	1	0
10	1	0	11	1	5	2	0	7	2	-5	1	0	-4	1
11	1	0	12	1	8	0	0	8	0	-3	-1	0	-4	-1
4	1	1	6	2	1	2	0	3	2	-3	1	-1	-3	0
4	0	0	4	0	5	0	0	5	0	1	0	0	1	0
26	3	0	29	3	19	3	0	22	3	-7	0	0	-7	0
4	0	0	4	0	6	1	0	7	1	2	1	0	3	1
13	4	1	18	5	13	2	0	15	2	0	-2	-1	-3	-3
4	3	1	8	4	5	3	0	8	3	1	0	-1	0	-1
24	2	0	26	2	30	4	2	36	6	6	2	2	10	4
5	0	0	5	0	4	1	0	5	1	-1	1	0	0	1
16	2	0	18	2	22	1	0	23	1	6	-1	0	5	-1
4	1	0	5	1	6	0	0	6	0	2	-1	0	1	-1
2	0	0	2	0	1	2	0	3	2	-1	2	0	1	2
4	0	0	4	0	3	0	0	3	0	-1	0	0	-1	0
10	1	0	11	1	15	1	0	16	1	5	0	0	5	0
9	5	0	14	5	16	1	0	17	1	7	-4	0	3	-4
9	1	0	10	1	9	0	0	9	0	0	-1	0	-1	-1
15	2	0	17	2	14	0	1	15	1	-1	-2	1	-2	-1
5	0	0	5	0	9	0	0	9	0	4	0	0	4	0
4	1	0	5	1	7	2	0	9	2	3	1	0	4	1
2	0	0	2	0	5	0	0	5	0	3	0	0	3	0
3	1	0	4	1	10	0	0	10	0	7	-1	0	6	-1
8	3	0	11	3	10	1	0	11	1	2	-2	0	0	-2
2	2	0	4	2	4	1	0	5	1	2	-1	0	1	-1
0	0	0	0	0	4	0	0	4	0	4	0	0	4	0
14	6	0	20	6	15	0	0	15	0	1	-6	0	-5	-6
43	10	0	53	10	53	0	0	53	0	10	-10	0	0	-10
8	1	0	9	1	16	2	0	18	2	8	1	0	9	1
18	2	0	20	2	22	5	0	27	5	4	3	0	7	3
3	0	0	3	0	4	0	0	4	0	1	0	0	1	0
3	0	0	3	0	4	0	0	4	0	1	0	0	1	0
24	6	0	30	6	16	3	0	19	3	-8	-3	0	-11	-3
2	0	0	2	0	2	0	0	2	0	0	0	0	0	0
11	2	0	13	2	9	0	0	9	0	-2	-2	0	-4	-2
2	0	0	2	0	2	0	0	2	0	0	0	0	0	0

Pedestrian collisions														
Before					After					Difference				
Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total
2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0
1	1	0	2	1	3	1	0	4	1	2	0	0	2	0
2	0	0	2	0	5	0	0	5	0	3	0	0	3	0
3	1	0	4	1	2	1	0	3	1	-1	0	0	-1	0
4	0	0	4	0	5	0	0	5	0	1	0	0	1	0
2	3	0	5	3	1	0	0	1	0	-1	-3	0	-4	-3
5	2	0	7	2	3	1	0	4	1	-2	-1	0	-3	-1
0	1	0	1	1	2	0	0	2	0	2	0	0	2	0
0	0	0	0	0	5	0	0	5	0	5	0	0	5	0
3	0	0	3	0	2	0	0	2	0	-1	0	0	-1	0
4	0	0	4	0	2	1	0	3	1	-2	1	0	-1	1
2	1	0	3	1	0	0	0	0	0	-2	-1	0	-3	-1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	1	0	2	0	0	2	0	1	0	0	1	0
0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
1	1	0	2	1	1	0	0	1	0	0	-1	0	-1	-1
2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0
1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0
3	0	0	3	0	0	0	0	0	0	-3	0	0	-3	0
1	0	0	1	0	2	0	0	2	0	1	0	0	1	0
0	0													

Omitted Collisions Set 1		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		50		51		52		53		54		55		56		57		58		59		60		61		62		63		64		65		66		67		68		69		70		71		72		73		74		75		76		77		78		79		80		81		82		83		84		85		86		87		88		89		90		91		92		93		94		95		96		97		98		99		100	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																						

# Appendix D

## Reviewed Set 2 –

### Collision Summary Omitted Collisions

3 Years Before and After Collision Data - Reviewed data set 2

Site No.	Location	Type	No. R/S crossings	No. F/S crossings	All collisions										Pedestrian collisions																			
					Before					After					Difference					Before					After					Difference				
					Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total					
1	Archway Rd / Archway Gytratory – north arm of gytratory	J	1	0	8	0	0	8	0	4	0	0	0	4	0	-4	0	0	-4	0	2	0	0	2	0	-1	0	0	-1	0				
2	Bassborough Gardens / Grosvenor Rd	J	4	0	21	2	0	23	2	26	2	0	28	2	5	0	0	5	0	1	1	0	2	1	3	1	2	0	2	0				
3	Battersea Park Rd / Queenstown Rd	J	0	0	10	0	0	10	0	10	0	0	10	0	0	0	0	0	0	0	2	0	2	0	5	0	0	5	0	3	0			
4	Blackfriars Rd / Southwark St	J	1	2	10	3	0	13	3	9	1	0	10	1	-1	-2	0	-3	-2	3	1	0	4	1	2	1	0	3	1	-1	0			
5	Borough High St / Marshalsea Rd	J	1	2	5	2	0	7	2	13	1	0	14	1	8	-1	0	7	-1	1	0	4	0	5	0	0	5	0	1	0				
6	Bow Rd / Alfred St – to the east of the junction	SAC	0	1	13	4	0	17	4	10	2	0	12	2	-3	-2	0	-5	-2	2	3	0	5	3	1	0	0	1	0	-1	-3			
7	Bow Rd / Fairfield Rd	J	0	1	12	3	0	15	3	10	1	0	11	1	-2	-2	0	-4	-2	4	1	0	5	1	3	1	0	4	1	-1	0			
8	Bromley Rd / Catford Rd	J	0	1	4	2	0	6	2	5	0	0	5	0	1	-2	0	-1	-2	0	1	0	1	1	2	0	0	2	0	-1	-1			
9	Bromley Rd / Sangley Rd	J	0	1	3	0	0	3	0	9	0	0	9	0	6	0	0	6	0	0	0	0	0	5	0	0	5	0	0	5	0			
10	Brompton Rd / Beauchamp Place	J	0	1	4	0	0	4	0	3	0	0	3	0	-1	0	0	-1	0	1	0	0	0	0	0	0	0	0	0	-1	0			
11	Brompton Rd / Brompton Place	SAC	0	1	6	0	0	6	0	3	1	0	4	1	-3	1	0	-2	1	4	0	4	0	2	1	0	3	1	-2	1	0			
12	Brompton Rd / Hans Crescent	SAC	1	0	4	2	0	6	2	2	1	0	3	1	-2	-1	0	-3	-1	2	1	0	3	1	0	0	0	0	-2	-1	0			
13	Brompton Rd to the west of Lancelot Place	SAC	0	1	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0			
14	Burdett Rd / Ackroyd Drive	SAC	0	1	2	0	0	2	0	1	0	0	1	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0			
15	Burdett Rd / Bow Common Lane	J	2	0	7	1	0	8	1	9	0	0	9	0	2	-1	0	1	-1	1	0	0	1	0	2	0	0	2	0	1	0			
16	Burdett Rd / St Pauls Way	J	1	1	18	0	0	18	0	25	1	0	26	1	7	1	0	8	1	0	0	0	0	1	0	0	1	0	0	1	0			
17	Burdett Rd / Thomas Rd	SAC	1	0	5	2	0	7	2	6	0	0	6	0	1	-2	0	-1	-2	1	1	0	2	1	1	0	0	1	0	-1	-1			
18	Camden Rd / Caledonian Rd	J	0	0	5	1	0	6	1	3	0	0	3	0	-2	-1	0	-3	-1	2	0	2	0	1	0	0	1	0	-1	0				
19	Clapton Common bet Braydon Rd & Portland Ave	SAC	0	1	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	-1	0	-1			
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	0	1	5	1	0	6	1	6	0	0	6	0	1	-1	0	0	-1	3	0	3	0	0	0	0	0	0	-3	0	-3			
21	Cromwell Rd / Collingham Rd	J	1	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	1	0			
22	Cromwell Rd / Gloucester Rd	J	0	0	13	2	0	15	2	13	0	0	13	0	-2	0	-2	-2	2	1	0	3	1	11	0	0	11	0	9	-1	0			
23	Cromwell Rd / Knaresborough Place	J	1	0	3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0	0	0	0	0	0	0	0	0	0	0	0	0			
24	Cromwell Rd / Marloes Rd	J	1	0	5	1	0	6	1	0	1	0	1	1	-5	0	0	-5	0	2	1	0	3	1	0	1	0	1	1	-2	0			
25	Cromwell Rd / Queens Gate	J	4	0	11	3	0	14	3	9	1	0	10	1	-2	-2	0	-4	-2	3	0	3	0	1	0	0	1	0	-2	0	-2			
26	Euston Rd / Dukes Rd Churchway	J	0	0	9	0	0	9	0	5	0	1	6	1	-4	0	1	-3	1	2	0	2	0	1	0	0	1	0	-1	0	-1			
27	Euston Rd / Pancras Rd	J	1	0	19	4	0	23	4	7	0	0	7	0	-12	-4	0	-16	-4	5	2	0	7	2	2	0	2	0	-3	-2	-5			
28	Hampstead Rd o/s BP station - ped refuge	SAC	1	0	4	1	0	5	1	0	0	0	0	0	-4	-1	0	-5	-1	1	0	1	0	0	0	0	0	0	-1	0	-1			
29	Highbury Comer / Canonbury Rd	J	0	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
30	Highbury Comer / St Pauls Rd	J	0	0	7	0	0	7	0	5	0	0	5	0	-2	0	0	-2	0	4	0	4	0	1	0	0	1	0	-3	0	-3			
31	Holloway Rd / Loraine Rd	SAC	1	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	-3	0	-3	0		
32	Holloway Rd / Sandridge St	J	1	0	12	2	0	14	2	9	1	0	10	1	-3	-1	0	-4	-1	1	2	0	3	2	2	0	0	2	0	1	-2			
33	Holloway Rd / Tufnell Park Rd - traffic island	J	1	0	10	1	0	11	1	9	0	0	9	0	-1	-1	0	-2	-1	5	1	0	6	1	3	0	0	3	0	-2	-1			
34	Jamaica Rd / Abbey St	J	1	1	5	2	0	7	2	8	1	0	9	1	3	-1	0	2	-1	0	0	0	2	0	0	0	2	0	2	0	2	0		
35	Jamaica Rd / Bermondsey LU Station	SAC	0	1	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	-1	0	-1	0		
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2	10	1	0	11	1	5	2	0	7	2	-5	1	0	-4	-1	2	0	2	0	0	1	0	1	1	-2	1	0			
37	Jamaica Rd / Rotherhithe Tunnel Rd - traffic island west	J	0	1	11	1	0	12	1	8	0	0	8	0	-3	-1	0	-4	-1	0	0	0	0	0	0	0	0	0	0	0	0			
38	Jamaica Rd / Tooley St / Shad Thames	J	2	0	4	1	1	6	2	1	2	0	3	2	-3	1	-1	-3	0	2	0	2	0	0	0	0	0	-2	0	-2	0			
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	1	0	4	0	0	4	0	5	0	0	5	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0		
40	Kenish Town Rd / Camden Rd	J	0	0	26	3	0	29	3	19	3	0	22	3	-7	0	0	-7	0	10	2	0	12	2	6	2	0	8	2	-4	0	-4		
41	Kenworthy Rd / Wick Rd	J	0	0	4	0	0	4	0	6	1	0	7	1	2	1	0	3	1	0	0	0	0	0	1	0	1	0	1	0	1	1		
42	London Bridge / Duke St Hill	J	2	0	13	4	1	18	5	13	2	0	15	2	0	-2	-1	-3	-3	4	2	1	7	3	7	0	0	7	0	-2	-1			
43	Lower Clapton Rd / Urswick Rd	J	0	1	4	3	1	8	4	5	3	0	8	3	1	0	-1	0	-1	0	1	1	2	2	1	1	0	2	1	0	-1			
44	Ludgate Circus	J	2	0	20	2	0	22	2	26	4	2	32	6	6	2	2	10	4	1	0	0	1	0	5	0	0	5	0	4	0	4		
45	Mansell St / Goodman's Yard	J	0	0	5	0	0	5	0	4	1	0	5	1	-1	1	0	0	1	2	0	2	0	1	0	0	1	0	0	0	0			
46	Martybone Rd / Baker St	J	2	0	16	2	0	18	2	22	1	0	23	1	6	-1	0	5	-1	5	2	0	7	2	8	1	0	9	1	3	-1	0		
47	New Kent Rd to the middle east of Balfour St	SAC	0	1	4	1	0	5	1	6	0	0	6	0	2	-1	0	1	-1	2	1	0	3	1	1	0	0	1	0	-1	0	-2		
48	Nine Elms Lane southwest of Cringle St	SAC	0	1	2	0	0	2	0	1	2	0	3	2	-1	2	0	1	2	0	0	0	0	0	1	0	1	0	1	0	1	1		
49	Nine Elms Lane / Kirtling St	J	1	1	4	0	0	4	0	3	0	0	3	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
50	Nine Elms Lane / Wandsworth Rd	J	0	1	10	1	0	11	1	14	1	0	15	1	4	0	0	4	0	2	0	2	0	0	0	0	0	0	-2	0	-2	0		
51	Old Kent Rd / Dunton Rd	J	1	0	9	5	0	14	5	16	1	0	17	1	7	-4	0	3	-4	1	2	0	3	2	6	0	0	6	0	5	-2	0		
52	Old Kent Rd / Hendre Rd	J	0	1	9	1	0	10	1	9	0	0	9	0	0	-1	0	-1	-1	3	0	0	3	0	1	0	0	1	0	-2	0	-2		
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2	15	2	0	17	2	14	0	1	15	1	-1	-2	1	-2	-1	4	1	0	5	1	2	0	0	2	0	-2	-1			
54	Old Kent Rd / Ilderton Rd	J	2	0	5	0	0	5	0	9	0	0	9	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
55	Old Kent Rd / Malt St	J	2	0	4	1	0	5	1	7	2	0	9	2	3	1	0	4	1	2	0	2	0	2	1	0	3	1	0	0	1	1		
56	Old Kent Rd / Olmar St	J	2	0	2	0	0	2	0	5	0	0	5	0	3	0	0	3	0	0	0	0	0	1	0	0	1	0	0	0	0	0		
57	Old Kent Rd / Peckham Park Rd	J	1	0	3	1	0	4	1	10	0	0	10	0	7	-1	0	6	-1	0	0	0	0	3	0	0	3	0	0	0	3	0		
58	Old Kent Rd / St James Rd	J	2	0	8	3	0	11	3	10	1	0	11	1	2	-2	0																	





## Appendix E

# Ped Collisions in the Vicinity of Staggered Crossings

## Ped Collisions in the Vicinity of Reverse Staggered Crossings

Site No.	Location	Type	No. R/S crossings	No. F/S crossings	Pedestrian collisions														
					Before					After					Difference				
					Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total
1	Archway Rd / Archway Gyratory – north arm of gyratory	J	1	0	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0
2	Bassborough Gardens / Grosvenor Rd	J	4	0	1	1	0	2	1	3	1	0	4	1	2	0	0	2	0
4	Blackfriars Rd / Southwark St	J	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Borough High St / Marshalsea Rd	J	1	2	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
12	Brompton Rd / Hans Crescent	SAC	1	0	2	1	0	3	1	0	0	0	0	0	-2	-1	0	-3	-1
15	Burdett Rd / Bow Common Lane	J	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Burdett Rd / St Pauls Way	J	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Burdett Rd / Thomas Rd	SAC	1	0	1	1	0	2	1	1	0	0	1	0	0	-1	0	-1	-1
21	Cromwell Rd / Collingham Rd	J	1	0	0	1	1	1	1	0	0	0	0	0	0	-1	0	-1	-1
23	Cromwell Rd / Knaresborough Place	J	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Cromwell Rd / Marloes Rd	J	1	0	2	1	0	3	1	0	1	0	1	1	-2	0	0	-2	0
25	Cromwell Rd / Queens Gate	J	4	0	3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0
27	Euston Rd / Pancras Rd	J	1	0	1	2	0	3	2	0	0	0	0	0	-1	-2	0	-3	-2
28	Hampstead Rd o/s BP station - ped refuge	SAC	1	0	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0
31	Holloway Rd / Loraine Rd	SAC	1	0	3	0	0	3	0	0	0	0	0	0	-3	0	0	-3	0
32	Holloway Rd / Sandridge St	J	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Holloway Rd / Tufnell Park Rd - traffic island	J	1	0	2	0	0	2	0	0	0	0	0	0	-2	0	0	-2	0
34	Jamaica Rd / Abbey St	J	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Jamaica Rd / Tooley St / Shad Thames	J	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	1	0	1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0
42	London Bridge / Duke St Hill	J	2	0	4	0	1	5	1	4	0	0	4	0	0	0	-1	-1	-1
44	Ludgate Circus	J	2	0	1	0	0	1	0	5	0	0	5	0	4	0	0	4	0
46	Marlybone Rd / Baker St	J	2	0	4	1	0	5	1	6	0	0	6	0	2	-1	0	1	-1
49	Nine Elms Lane / Kirtling St	J	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Old Kent Rd / Dunton Rd	J	1	0	1	2	0	3	2	1	0	0	1	0	0	-2	0	-2	-2
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2	0	1	1	1	1	2	0	0	2	0	2	-1	0	1	-1
54	Old Kent Rd / Ilderton Rd	J	2	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
55	Old Kent Rd / Malt St	J	2	0	2	0	0	2	0	0	0	0	0	0	-2	0	0	-2	0
56	Old Kent Rd / Olmar St	J	2	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
57	Old Kent Rd / Peckham Park Rd	J	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0
58	Old Kent Rd / St James Rd	J	2	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
59	Old Str / Vince Str	SAC	1	0	2	2	0	4	2	1	1	0	2	1	-1	-1	0	-2	-1
62	Seven Sisters Rd / Green Lanes Rd	J	2	2	0	2	2	2	2	3	0	0	3	0	3	-2	0	1	-2
63	Seven Sisters Rd / Isledon Rd	J	1	0	3	1	0	4	1	1	0	0	1	0	-2	-1	0	-3	-1
64	Shoreditch High St / Great Eastern St	J	4	0	3	0	0	3	0	4	1	0	5	1	1	1	0	2	1
67	Stamford Hill / Clapton Common	J	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Stamford Hill to the north of Windus Rd - o/s Morrisons	SAC	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
<b>Totals</b>			<b>58</b>	<b>13</b>	<b>39</b>	<b>16</b>	<b>1</b>	<b>56</b>	<b>17</b>	<b>39</b>	<b>4</b>	<b>0</b>	<b>43</b>	<b>4</b>	<b>0</b>	<b>-12</b>	<b>-1</b>	<b>-13</b>	<b>-13</b>

0%    -75%    -23%    -76%

### Ped Collisions in the Vicinity of Forward Staggered Crossings

Site No.	Location	Type	No. R/S crossings	No. F/S crossings
4	Blackfriars Rd / Southwark St	J	1	2
5	Borough High St / Marshalsea Rd	J	1	2
6	Bow Rd / Alfred St – to the east of the junction	SAC	0	1
7	Bow Rd / Fairfield Rd	J	0	1
8	Bromley Rd / Cafford Rd	J	0	1
9	Bromley Rd / Sangley Rd	J	0	1
10	Brompton Rd / Beauchamp Place	J	0	1
11	Brompton Rd / Brompton Place	SAC	0	1
13	Brompton Rd to the west of Lancelot Place	SAC	0	1
14	Burdett Rd / Ackroyd Drive	SAC	0	1
16	Burdett Rd / St Pauls Way	J	1	1
19	Clapton Common bet Braydon Rd & Portland Ave	SAC	0	1
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	0	1
34	Jamaica Rd / Abbey St	J	1	1
35	Jamaica Rd / Bermondsey LU Station	SAC	0	1
36	Jamaica Rd / Bevington St / St James's Rd	J	1	2
37	Jamaica Rd / Rotherhithe Tunnel Rdbt - traffic island west	J	0	1
43	Lower Clapton Rd / Urswick Rd	J	0	1
47	New Kent Rd to the middle east of Balfour St	SAC	0	1
48	Nine Elms Lane southwest of Cringle St	SAC	0	1
49	Nine Elms Lane / Kirtling St	J	1	1
50	Nine Elms Lane / Wandsworth Rd	J	0	1
52	Old Kent Rd / Hendre Rd	J	0	1
53	Old Kent Rd / Humphrey Str / Albany Rd	J	2	2
61	Seven Sisters Rd / Blackstock Rd	J	0	1
62	Seven Sisters Rd / Green Lanes Rd	J	2	2
70	Wick Rd/ Cadogan Terrace	J	0	1
<b>Totals</b>			<b>10</b>	<b>32</b>

Pedestrian collisions															
Before					After					Difference					
Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	Slight	Serious	Fatal	Total	KSI total	
0	1	0	1	1	1	0	0	1	0	1	-1	0	0	-1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	3	0	5	3	1	0	0	1	0	-1	-3	0	-4	-3	
4	1	0	5	1	2	0	0	2	0	-2	-1	0	-3	-1	
0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	
0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	
1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	
4	0	0	4	0	2	1	0	3	1	-2	1	0	-1	1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	
1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	
3	0	0	3	0	0	0	0	0	0	-3	0	0	-3	0	
0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	
1	0	0	1	0	0	0	0	0	0	-1	0	0	-1	0	
0	0	0	0	0	0	1	0	1	1	0	1	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	1	1	1	0	0	0	0	0	0	0	-1	-1	-1	
2	1	0	3	1	1	0	0	1	0	-1	-1	0	-2	-1	
0	0	0	0	0	0	1	0	1	1	0	1	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	2	0	0	0	0	0	0	-2	0	0	-2	0	
3	0	0	3	0	1	0	0	1	0	-2	0	0	-2	0	
4	0	0	4	0	0	0	0	0	0	-4	0	0	-4	0	
1	2	0	3	2	2	0	0	2	0	1	-2	0	-1	-2	
4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>32</b>	<b>8</b>	<b>1</b>	<b>41</b>	<b>9</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>-12</b>	<b>-5</b>	<b>-1</b>	<b>-18</b>	<b>-6</b>	

-38%	-63%		-44%	-67%
------	------	--	------	------



# Appendix F

## Statistical Significance Tests

**All Sites**

		Mean		T-Value	P-Value	Significant	
		Before	After				
Raw data before and after	Slights	All	9.071	9.457	0.757	0.451	No
		Pedestrian	2.029	2.300	1.042	0.301	No
	Total	All	10.629	10.271	-0.638	0.525	No
		Pedestrian	2.643	2.571	-0.275	0.784	No
	KSI	All	1.557	0.814	-3.218	0.002	Yes
		Pedestrian	0.614	0.271	-3.191	0.002	Yes
Raw data 'before' after, 6 to 3 years before	Slights	All	8.471	9.071	1.090	0.279	No
		Pedestrian	1.943	2.029	0.350	0.727	No
	Total	All	#REF!	10.629	0.870	0.387	No
		Pedestrian	2.600	2.643	0.153	0.879	No
	KSI	All	1.600	1.557	-0.209	0.835	No
		Pedestrian	0.657	0.614	-0.382	0.704	No
Reviewed set 1 before and after	Slights	All	8.329	8.729	0.850	0.398	No
		Pedestrian	1.986	2.129	0.549	0.585	No
	Total	All	9.814	9.514	-0.575	0.567	No
		Pedestrian	2.571	2.400	-0.650	0.518	No
	KSI	All	1.486	0.786	-3.097	0.003	Yes
		Pedestrian	0.571	0.271	-2.872	0.005	Yes
Reviewed set 2 before and after	Slights	All	8.229	8.629	0.856	0.395	No
		Pedestrian	1.886	2.029	0.549	0.585	No
	Total	All	9.700	9.414	-0.554	0.582	No
		Pedestrian	2.464	2.319	-0.600	0.550	No
	KSI	All	1.486	0.786	-3.057	0.003	Yes
		Pedestrian	1.145	0.536	-2.872	0.005	Yes

**Ped Collisions in the Vicinity of Reverse Staggered Crossings**

	Mean		T-Value	P-Value	Significant
	Before	After			
Slights	1.324	1.279	0.000	1.000	No
Total	1.779	1.441	-1.305	0.200	No
KSI	0.456	0.162	-3.153	0.003	Yes

**Ped Collisions in the Vicinity of Forward Staggered Crossings**

	Mean		T-Value	P-Value	Significant
	Before	After			
Slights	1.436	1.128	-1.623	0.117	No
Total	1.015	0.746	-2.142	0.042	Yes
KSI	0.179	0.090	-1.363	0.185	No

# Appendix G

## Site Details

Site Details

Site No.	Location	Type	Date PGR Removed	No. R/S crossings	No. F/S crossings	Sides of junction PGR removed from	PGR retained on arm	Ped movements potentially unaffected
1	Archway Rd / Archway Gyrotary – north arm of gyrotary	J	01/04/12	1	0	All		
2	Bassborough Gardens / Grosvenor Rd	J	20/03/12	4	0	All		
3	Battersea Park Rd / Queenstown Rd	J	16/02/12	0	0	All		
4	Blackfriars Rd / Southwark St	J	03/04/12	1	2	All		
5	Borough High St / Marshalsea Rd	J	01/08/11	1	2	All		
6	Bow Rd / Alfred St – to the east of the junction	SAC	02/02/12	0	1			
7	Bow Rd / Fairfield Rd	J	19/07/12	0	1	East and west sides		East/west on south arm
8	Bromley Rd / Catford Rd	J	20/02/12	0	1	All		
9	Bromley Rd / Sangley Rd	J	20/02/12	0	1	All		
10	Brompton Rd / Beauchamp Place	J	18/01/12	0	1	North east side		East/west and north/south on west arm
11	Brompton Rd / Brompton Place	SAC	18/01/12	0	1			
12	Brompton Rd / Hans Crescent	SAC	28/02/12	1	0			
13	Brompton Rd / to the west of Lancelot Place	SAC	28/02/12	0	1			
14	Burdett Rd / Ackroyd Drive	SAC	30/04/12	0	1	Also removed from sides		
15	Burdett Rd / Bow Common Lane	J	30/04/12	2	0	All		
16	Burdett Rd / St Pauls Way	J	30/04/12	1	1	All		
17	Burdett Rd / Thomas Rd	SAC	30/04/12	1	0			
18	Camden Rd / Caledonian Rd	J	25/09/12	0	0	All		
19	Clapton Common bet Brydon Rd & Portland Ave	SAC	24/02/12	0	1			
20	Clapton Common bet Osbaldeston Rd & Oldhill St	SAC	24/02/12	0	1	Also removed from sides		
21	Cromwell Rd / Collingham Rd	J	18/01/12	1	0	All		
22	Cromwell Rd / Gloucester Rd	J	18/01/12	0	0	All		
23	Cromwell Rd / Knaresborough Place	J	17/01/12	1	0	East side		North/south on west arm and east/west on south side
24	Cromwell Rd / Marloes Rd	J	17/01/12	1	0	West and east side		East/west on North arm
25	Cromwell Rd / Queens Gate	J	18/01/12	4	0	All		
26	Euston Rd / Dukes Rd Churchway	J	22/01/12	0	0	All		
27	Euston Rd / Pancras Rd	J	19/01/12	1	0	All		
28	Hampstead Rd o/s BP station - ped refuge	SAC	06/01/12	1	0	Also from north side		
29	Highbury Corner / Canonbury Rd	J	01/04/12	0	0	All		
30	Highbury Corner / St Pauls Rd	J	01/04/12	0	0	All		
31	Holloway Rd / Loraine Rd	SAC	01/04/12	1	0			
32	Holloway Rd / Sandridge St	J	01/04/12	1	0	All		
33	Holloway Rd / Tufnell Park Rd - traffic island	J	01/04/12	1	0	All		
34	Jamaica Rd / Abbey St	J	02/03/12	1	1	All		
35	Jamaica Rd / Bernonsley LU Station	SAC	02/03/12	0	1	Also removed from sides		
36	Jamaica Rd / Bevington St / St James's Rd	J	02/03/12	1	2	All		
37	Jamaica Rd / Rotherhithe Tunnel Rd - traffic island west	J	02/03/12	0	1	Crossing and west side	East arm	North/south on east arm
38	Jamaica Rd / Tooley St / Shad Thames	J	02/03/12	2	0	All		
39	Jamaica Rd / West Ln / Southwark Pk Rd	J	02/03/12	1	0	All		
40	Kentish Town Rd / Camden Rd	J	22/01/12	0	0	All		
41	Kenworthy Rd / Wick Rd	J	05/03/12	0	0	All		
42	London Bridge / Duke St Hill	J	01/08/11	2	0	All		
43	Lower Clapton Rd / Urswick Rd	J	24/02/12	0	1	All		
44	Ludgate Circus	J	20/02/12	2	0	North and south sides		North/south on east and west arms
45	Mansell St / Goodman's Yard	J	01/03/12	0	0	All		
46	Marlybone Rd / Baker St	J	01/09/11	2	0	All		
47	New Kent Rd to the middle east of Balfour St	SAC	19/06/12	0	1			
48	Nine Elms Lane southwest of Cringle St	SAC	16/02/12	0	1			
49	Nine Elms Lane / Kirtling St	J	16/02/12	1	1	All		
50	Nine Elms Lane / Wandsworth Rd	J	16/02/12	0	1	South and west sides		East/west on North arm and north/south on east arm
51	Old Kent Rd / Dunton Rd	J	18/09/12	1	0	All		
52	Old Kent Rd / Hendre Rd	J	17/09/12	0	1	All		
53	Old Kent Rd / Humphrey Str / Albany Rd	J	18/09/12	2	2	All		
54	Old Kent Rd / Ilderton Rd	J	18/09/12	2	0	All		
55	Old Kent Rd / Malt St	J	17/09/12	2	0	All		
56	Old Kent Rd / Olmar St	J	17/09/12	2	0	All		
57	Old Kent Rd / Peckham Park Rd	J	15/09/12	1	0	All		
58	Old Kent Rd / St James Rd	J	17/09/12	2	0	All		
59	Old Str / Vince Str	SAC	06/06/12	1	0			
60	Poynders Rd / Cavendish Rd	J	25/02/12	0	0	All		
61	Seven Sisters Rd / Blackstock Rd	J	25/09/12	0	1	East side	West arm	North/south on West arm
62	Seven Sisters Rd / Green Lanes Rd	J	14/06/12	2	2	All		
63	Seven Sisters Rd / Isledon Rd	J	20/09/12	1	0	All		
64	Shoreditch High St / Great Eastern St	J	08/06/12	4	0	All		
65	St George's Rd / Lambeth Rd	J	03/04/12	0	0	All		
66	St John's Way / Archway Gyrotary – east arm of gyrotary	J	01/04/12	0	0	All		
67	Stamford Hill / Clapton Common	J	08/06/12	1	0	All		
68	Stamford Hill to the north of Windus Rd - o/s Morrisons	SAC	08/06/12	1	0			
69	Vauxhall Bridge Rd / Warwick Way	J	20/03/12	0	0	All		
70	Wick Rd/ Cadogan Terrace	J	05/03/12	0	1	All		
Totals				58	32			

J=Junction  
SAC=Stand alone crossing  
R/S=Reverse stagger  
F/S=Forward stagger