



Cycle Superhighways

Route 8

Stage 4a Road Safety Audit

Ref: 1821.08/VAR/VAR/TLRN/2013

Prepared for:

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Version	Status	Date
A	Audit report issued to Client	10/09/2013



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1 INTRODUCTION

1.1 Commission

- 1.1.1 This report results from a Stage 4a Road Safety Audit carried out on the Cycle Superhighways, Route 8 scheme.
- 1.1.2 This report utilises 36 months of collision data prior to the commencement of the scheme, and 12 months of collision data post completion of the proposals.
- 1.1.3 The Audit was undertaken by TfL Safety, Risk and Design Services in accordance with the Audit Brief issued by the Client Organisation during June 2013. It took place at the Palestra offices of TfL during June and July 2013 and comprised an examination of the documents provided as listed in Appendix A, plus visits to the site of the proposed scheme.
- 1.1.4 The visit to the site of the proposed scheme were made during June and July 2013. During the site visit the weather was mostly sunny and the existing road surface was mostly dry.

1.2 Terms of Reference

- 1.2.1 The Terms of Reference of this Audit are as described in TfL Procedure SQA-0170 Issue 6. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and how it impacts on all road users and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit. An absence of comment relating to specific road users / modes in Section 3 of this report does not imply that they have not been considered, instead the Audit Team feel they are not adversely affected by the proposed changes.
- 1.2.2 This Safety Audit is not intended to identify pre-existing hazards which remain unchanged due to the scheme introduced; hence they will not be raised in Section 5 of this report as they fall outside the remit of Road Safety Audit in general as specified in the procedure SQA-0170 Issue 6. Safety issues identified during the Audit and site visit that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in Section 6 of this report.
- 1.2.3 Nothing in this Audit should be regarded as a direct instruction to include or remove a measure from within the scheme. Responsibility for designing the scheme lies with the designer and as such the Audit Team accepts no design responsibility for any changes made to the scheme as a result of this Audit.
- 1.2.4 Unless general to the scheme, all comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan located in Appendix B.
- 1.2.5 It is the responsibility of the designer to complete the designers' response section of this Audit report. It is the responsibility of the Client Officer, in collaboration with the Senior Client Officer (where appropriate), to complete the Client comment section of this Audit report. Signatures from both the Design Team and the Senior Client Officer must be added within Section 8 of this Audit report. A copy of which must be returned to the Audit Team.



1.3 Main Parties to the Audit

1.3.1 Client Organisation

Client Officer: [REDACTED] TfL CDT

Senior Client Officer: [REDACTED] TfL CDT

1.3.2 Design Organisation

Designer: AECOM

1.3.3 Audit Team

Audit Team Leader: [REDACTED] – TfL Roads Directorate

Audit Team Member: [REDACTED] TfL Roads Directorate

Audit Team Observer: None present.

2 SCHEME OVERVIEW

2.1 Scheme Details

2.1.1 Cycle Superhighways Route 8 (CS8) runs from Wandsworth to the Westminster area and provides a fast, safe, direct, continuous and comfortable route for people to cycle into Central London. The route is aimed primarily at commuter cyclists, both existing and new. The route was completed and launched on 19th July 2011 and comprises a series of infrastructure interventions to assist cyclists such as ASLs [advance cycle stop lines], blue surfacing, carriageway surface renewals, signage, modified junctions and roadside safety measures.*

* Taken directly from Audit Brief Checklist.

2.1.2 The scheme can be broken down into a series of links and nodes, with are replicated below, together with the construction period for the CS8 measures.

Table 2.1 – Breakdown of Links and Nodes along CS8 (northeast to southwest)

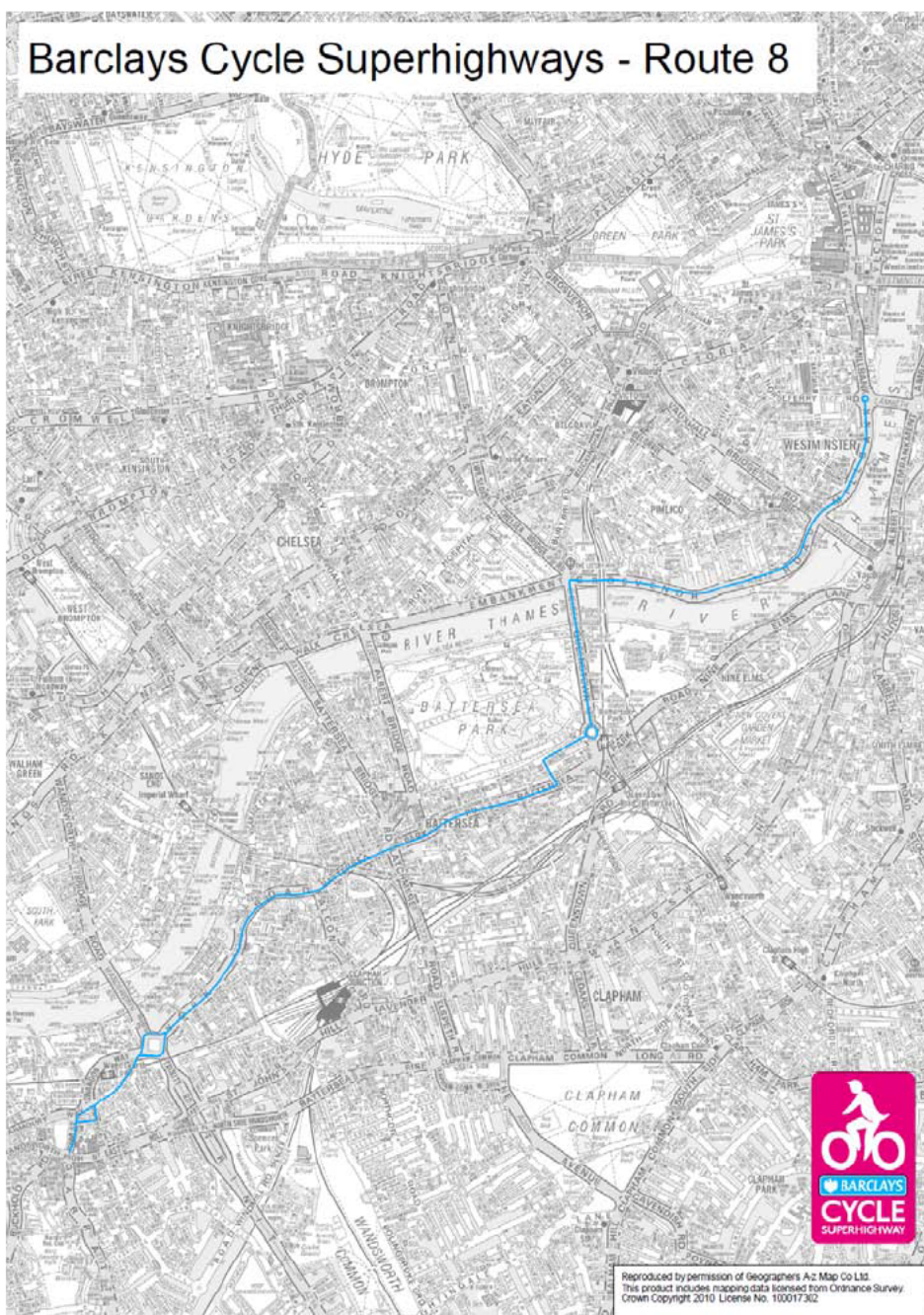
Description	Constructed
Lambeth Bridge Roundabout (Node 44)	02/11 - 05/11
Millbank (between Atterbury Street and Lambeth Bridge Rbt) (Link 21-44)	02/11 - 05/11
Millbank junction with Atterbury Street (Node 21)	02/11 - 05/11
Millbank (between Atterbury Street and Vauxhall Bridge) (Link 13-21)	02/11 - 05/11
Vauxhall Bridge junction with Millbank (Node 13)	03/11 - 05/11
Grosvenor Road (Vauxhall Bridge to Claverton Street) (Link 6-13)	03/11 - 05/11
Grosvenor Road junction with Claverton Street (Node 6)	03/11 - 05/11
Grosvenor Road (Claverton Street to Lupus Street) (Link 3-6)	03/11 - 05/11
Grosvenor Road junction with Lupus Street (Node 3)	03/11 - 05/11
Grosvenor Road (Lupus Street to Chelsea Bridge) (Link 3-721)	03/11 - 05/11
Chelsea Bridge junction with Grosvenor Road (Node 721)	03/11 - 04/11
Chelsea Bridge (Grosvenor Road to Borough Boundary) (Link 721-774)	03/11 - 04/11
Chelsea Bridge Borough Boundary (Node 774)	03/11 - 04/11
Queenstown Road (Borough Boundary to Queens Circus) (Link 224-774)	05/11 - 06/11
Queens Circus Roundabout (Node 224)	05/11 - 06/11
Prince of Wales Drive (Queens Circus to Macduff Road) (Link 213-224)	11/10 - 06/11
Macduff Road (Prince of Wales Drive to Battersea Park Road) (Area)	11/10 - 06/11
Battersea Park Road (Macduff Road to Albert Bridge Road) (Link 202-214)	02/11 - 03/11
Battersea Park Road junction with Albert Bridge Road (Node 202)	02/11 - 03/11
Battersea Park Road (Albert Bridge Road to Latchmere Road) (Link 201-202)	02/11 - 03/11
Battersea Park Road junction with Latchmere Road (Node 201)	04/11 - 05/11
Battersea Park Road (Latchmere Road to Falcon Road) (Link 192-201)	01/11 - 07/11
Battersea Park Road junction with Falcon Road (Node 192)	01/11 - 07/11
Battersea Park Road (Falcon Road to Lombard Road) (Link 191-192)	01/11 - 07/11
Battersea Park Road junction with Lombard Road (Node 191)	01/11 - 07/11
York Road (Lombard Road to Plough Road) (Link 188-191)	01/11 - 07/11
York Road junction with Plough Road (Node 188)	04/11 - 07/11
York Road (Plough Road to Wandsworth Bridge Rbt) (Link 179-188)	01/11 - 05/11
Wandsworth Bridge Roundabout (Node 179)	03/11 - 04/11
Swandon Way (Wandsworth Bridge Rbt to Old York Road) (Link 173-179)	06/11 - 07/11
Old York Road (Area)	06/11 - 07/11



Table 2.1 (Cont) – Breakdown of Links and Nodes along CS8 (northeast to southwest)

Description	Constructed
Old York Road junction with Swandon Way (Node 661)	03/11 - 05/11
Barchard Street (Area)	03/11 - 05/11
Fairfield Street (Old York Road to Barchard Street) (Link 155-661)	03/11 - 05/11
Armoury Way to Swandon Road (Link 159-661)	09/10 - 11/10
Armoury Way junction with Ram Street (Node 159)	09/10 - 11/10
Ram Street (Armoury Way to Wandsworth High Street) (Link 158-159)	09/10 - 11/10
Wandsworth High Street junction with Ram Street (Node 158)	09/10 - 11/10

2.2 Site Location Plan



3 COLLISION ANALYSIS

3.1 Introduction

- 3.1.1 Collision data for the 36 month period prior to the construction of the scheme has been analysed and compared with the collision data for the 12 month period following completion of the scheme. The construction dates for each section are as detailed in Table 2.1.
- 3.1.2 Whilst comment has been given within this collision analysis section, it is important to note that the small numbers of collisions make robust comparison between the 'before' and 'after' data sets a matter of judgement.
- 3.1.3 It is to be noted that due to the sites location within London it is impossible to identify all other highway works that may have been conducted at or close to the site under analysis. For this reason other measures may have had an impact on the 'before' and 'after' collision rates at this location that may not be identified within this Audit.

3.2 Collision Overview

- 3.2.1 Detailed below is a summary of the collisions per annum in the three years prior to the implementation of the CSH8 measures compared to the twelve months collision data following completion of the measures. A detailed analysis of each of the individual links and nodes along CSH8 is also included within this section.

Table 3.2.1 – Overview of Collisions along entire length of CSH8*

Link / Node	All Collisions				Cycle Collisions			
	Before	After	Var	%	Before	After	Var	%
Node 44	8.33	7.00	-1.33	-16.00	5.67	5.00	-0.67	-11.76
Link 21-44	3.67	5.00	1.33	36.24	0.67	3.00	2.33	347.76
Node 21	2.33	1.00	-1.33	-57.08	1.33	1.00	-0.33	-24.81
Link 13-21	0.67	2.00	1.33	198.51	0.33	0.00	-0.33	-100.00
Node 13	8.00	6.00	-2.00	-25.00	5.00	3.00	-2.00	-40.00
Link 6-13	5.33	9.00	3.67	68.86	1.67	5.00	3.33	199.40
Node 6	1.67	1.00	-0.67	-40.12	1.00	0.00	-1.00	-100.00
Link 3-6	1.33	2.00	0.67	50.38	0.00	2.00	2.00	100.00
Node 3	2.33	2.00	-0.33	-14.16	1.00	0.00	-1.00	-100.00
Link 3-721	0.67	1.00	0.33	49.25	0.00	0.00	0.00	0.00
Node 721	5.00	7.00	2.00	40.00	1.33	5.00	3.67	275.94
Link 721-774	1.67	2.00	0.33	19.76	1.00	1.00	0.00	0.00
Node 774	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Link 224-774	9.00	5.00	-4.00	-44.44	3.33	3.00	-0.33	-9.91
Node 224	7.00	3.00	-4.00	-57.14	5.00	2.00	-3.00	-60.00
Link 213-224	0.67	1.00	0.33	49.25	0.00	0.00	0.00	0.00
Macduff Road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Link 202-214	9.67	14.00	4.33	44.78	2.67	4.00	1.33	49.81
Node 202	0.33	0.00	-0.33	-100.00	0.00	0.00	0.00	0.00
Link 201-202	1.33	5.00	3.67	275.94	0.00	1.00	1.00	100.00
Node 201	4.00	5.00	1.00	25.00	0.33	0.00	-0.33	-100.00
Link 192-201	9.00	15.00	6.00	66.67	3.00	3.00	0.00	0.00
Node 192	5.00	2.00	-3.00	-60.00	0.67	0.00	-0.67	-100.00

Table 3.2.1 (cont) – Overview of Collisions along entire length of CSH8*

Link / Node	All Collisions				Cycle Collisions			
	Before	After	Var	%	Before	After	Var	%
Link 191-192	1.00	2.00	1.00	100.00	0.33	0.00	-0.33	-100.00
Node 191	2.00	2.00	0.00	0.00	0.00	1.00	1.00	100.00
Link 188-191	1.67	2.00	0.33	19.76	0.33	1.00	0.67	203.03
Node 188	2.33	2.00	-0.33	-14.16	1.00	1.00	0.00	0.00
Link 179-188	13.67	8.00	-5.67	-41.48	3.00	2.00	-1.00	-33.33
Node 179	9.00	10.00	1.00	11.11	2.00	2.00	0.00	0.00
Link 173-179	0.33	0.00	-0.33	-100.00	0.00	0.00	0.00	0.00
Old York Road	0.67	2.00	1.33	200.00	0.00	1.00	1.00	100.00
Node 661	1.67	1.00	-0.67	-40.12	0.00	0.00	0.00	0.00
Barchard Street	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Link 155-661	0.33	1.00	0.67	203.03	0.33	0.00	-0.33	-100.00
Link 159-661	0.33	2.00	1.67	500.00	0.00	2.00	2.00	100.00
Node 159	1.33	1.00	-0.33	-25.00	0.67	0.00	-0.67	-100.00
Link 158-159	0.33	0.00	-0.33	-100.00	0.33	0.00	-0.33	-100.00
Node 158	4.00	3.00	-1.00	-25.00	1.33	0.00	-1.33	-100.00
Totals	125.67	131.00	5.33	4.24	43.32	48.00	4.68	10.81

* The figures shown in bold above indicate where collisions have increased by more than 1.00 along either a link or at a node. The Audit Team chose an intervention level of +1.00 collisions to determine sites worth further investigation. It is the view of the Audit Team that an increase of less than +1.00 could be random variation and may therefore not necessarily represent an increase in collision risk at the junction.

- 3.2.2 It can be seen above that the collision rate along the length of CSH8 has increased by approximately 5 collisions per year along the entire length of the route. This represents an increase in the collision rate of approximately 4%.
- 3.2.3 Analysis of the cycle collision rate along the length of CSH8 shows an increase in collision rate involving cyclists of approximately 5 collisions per year. This equates to an increase in collision rate involving cyclists of approximately 11%.
- 3.2.4 It is important to note that these figures contain no adjustment for alterations to traffic volumes or factoring to account for changes in traffic patterns. It is understood that cycle volumes have increased significantly along the CSH Route 8 corridor; therefore, it is feasible that collisions involving cyclists may increase at a broadly comparable rate.
- 3.2.5 The collisions at each of the individual links and nodes specified above have been analysed in both the before and after implementation periods. This analysis, with subsequent discussion is shown in Section 3.3 onwards.
- 3.2.6 To quantify a change in collision risk at the junction, the post implementation collision data is compared to the collision data pre-construction together with the comparative Inner London average derived from TfL's 'Levels of Collision Risk in Greater London' (Issue 13, 2011).



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- 3.2.7 Sites that exhibit an increase in collision rate in the post implementation period, or a collision rate higher than the Inner London average have been analysed in depth. Conversely, if a site exhibits a reduction in collision rate, or remains lower than the comparative average then no in depth analysis has been completed.
- 3.2.8 Collision analysis is undertaken to identify patterns in collisions. Two or more collisions exhibiting similarities may be construed as an emerging pattern. Individual collisions located geographically close, but dissimilar in type may not represent a trend.

3.3 Lambeth Bridge Roundabout (Node 44)

3.3.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.3.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to January 2009	0	0	6	6
March 2009 to January 2010	0	1	8	9
March 2010 to January 2011	0	0	10	10
Total Collisions	0	0	24	25
Average Annual Collision Rate	0.00	0.33	8.00	8.33

Collision data for the 12 month period following completion of the scheme

Table 3.3.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	7	7
Total Collisions	0	0	7	7
Average Annual Collision Rate	0.00	0.00	7.00	7.00

Collision totals and percentages for the main collision types

Table 3.3.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.67	5.67	1.00	2.67	3.33	-
Percentage of total	4	8	68	12	32	40	-
Annual average collisions post works	0.00	2.00	5.00	0.00	4.00	2.00	-
Percentage of total	0	29	71	0	57	29	-
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.3.2 Collision Summary

In the 36 months prior to the scheme's construction there were 25 personal injury collisions (8.33 per year on average) compared to seven collision in the 12 months post implementation (7.00 per year). This represents a reduction in the annual collision rate at the junction.

- In the post implementation period the collisions involving pedestrians can be summarised as follows:

02/08/2011 A northbound pedestrian ran out into the path of a taxi, and;

30/01/2012 An eastbound pedestrian crossed road into path of a taxi, it is noted the pedestrian was wearing earphones and did not look properly.

These two pedestrian collisions occurred at different locations, both of which were on zebra crossings. This does not appear to constitute a trend in pedestrian collisions.

- In the post implementation period the collisions involving dark conditions can be summarised as follows:

02/08/2011 A northbound pedestrian ran out into the path of a taxi,



- 09/11/2011 A car turned right into the path of a cyclist,
- 30/01/2012 An eastbound pedestrian crossed road into path of a taxi, it is noted the pedestrian was wearing earphones and did not look properly, and;
- 01/03/2012 A car pulled out onto roundabout into the path of a cyclist.

These four collisions are at different locations on the roundabout, which may indicate a reduced lighting provision at the junction.

- In the post implementation period, the collisions involving pedal cycles can be summarised as follows:

- 17/08/2011 A light goods vehicle collided with a cyclist whilst both were turning left,
- 17/10/2011 A car failed to give way and pulled into the path of a cyclist on the roundabout,
- 09/11/2011 A car turned right into the path of a cyclist,
- 01/03/2012 A car pulled into the roundabout into the path of a cyclist, and;
- 19/04/2012 A car failed to give way and entered roundabout into the path of a cyclist.

It can be seen above that there may be an emerging trend of vehicles failing to give way to cyclists on the roundabout.

It can be seen from the data that collisions involving pedestrians and collisions in dark conditions have both increased in the post implementation period. Additionally, collisions involving pedal cyclists and collisions in wet conditions have both decreased in the post implementation period but remain higher than the comparative average.

It is recommended that the street lighting provision is assessed and the site is investigated to identify any site specific measures that may contribute to the above average rate in cycle collisions at the roundabout. It is also recommended that the situation is monitored and is re-assessed when three years of collision data post implementation is available.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Assess the street lighting

It is the view of the Audit Team that the street lighting at the junction is satisfactory.

Investigate cycle infrastructure at the roundabout

There is no cycle infrastructure at the roundabout and its the view of the Audit Team that additional measures for cyclists would be beneficial.

3.4 Millbank (between Atterbury Street and Lambeth Bridge Rbt) (Link 21-44)

3.4.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.4.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to January 2009	0	2	4	6
March 2009 to January 2010	0	1	3	4
March 2010 to January 2011	0	0	1	1
Total Collisions	0	3	8	11
Average Annual Collision Rate	0.00	1.00	2.67	3.67

Collision data for the 12 month period following completion of the scheme

Table 3.4.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	5	5
Total Collisions	0	0	5	5
Average Annual Collision Rate	0.00	0.00	5.00	5.00

Collision totals and percentages for the main collision types

Table 3.4.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	1.00	0.67	2.67	1.00	1.33	0.67
Percentage of total	27	27	18	64	27	57	18
Annual average collisions post works	0.00	0.00	3.00	3.00	0.00	1.00	1.00
Percentage of total	0	0	60	60	0	20	20
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.4.2 Collision Summary

In the 36 months prior to the scheme's construction there were 11 personal injury collisions (3.67 per year on average) compared to five collisions in the 12 months post implementation (5.00 per year). It is noted that in the three years prior to the scheme's construction there were six collisions in the first year, therefore the collision rate post implementation is consistent with the first year's pre-implementation data. It is difficult to draw any conclusion from the collision data as there may have been an intervention to account for the decreasing trend pre-implementation.

It can be seen that collisions involving pedal cycles, powered two-wheelers and right turning manoeuvres have increased in the post implementation period.

- The post implementation collisions involving a pedal cycle can be summarised as follows:

22/09/2011 At the junction with Thorney Street, a powered two-wheeler turned left across the path of a cyclist,

13/12/2011 At the junction with Thorney Street, a taxi moved out to overtake a cyclist into the path of another cyclist, and;

22/05/2012 79m south of Thorney Street, a taxi turned right across the path of a cyclist.

Analysis of the pedal cycle collisions does not appear to constitute a trend for this user group.

- The post implementation collisions involving a powered two-wheeler can be summarised as follows:

22/09/2011 At the junction with Thorney Street, a powered two-wheeler turned left across the path of a cyclist,

25/04/2012 At the junction with Thorney Street, a taxi performed a 'U' turn into the path of a powered two-wheeler, and;

06/05/2012 When approaching the speed camera calibration markings a powered two-wheeler broke hard and lost control.

Analysis of the powered two-wheeler collisions does not appear to constitute a trend for this user group.

- The increase in collision rate involving a right turning manoeuvre (0.67 to one collision) is not deemed relevant at this time.
- It is noted that three of the five collisions occurred at the junction of Millbank and Thorney Street. The collisions occurring at this location can be summarised as follows:

22/09/2011 At the junction with Thorney Street, a powered two-wheeler turned left across the path of a cyclist,

13/12/2011 At the junction with Thorney Street, a taxi moved out to overtake a cyclist into the path of another cyclist, and;

25/04/2012 At the junction with Thorney Street, a taxi performed a 'U' turn into the path of a powered two-wheeler.

Analysis of the collisions that occurred at the junction with Thorney Street has shown that although they are geographically similar, no trend in collisions has occurred at this location.

There are no recommendations currently considered necessary along this link, and the situation is monitored and re-assessed when three years of collision data post implementation is available.

3.5 Millbank junction with Atterbury Street (Node 21)

3.5.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.5.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to January 2009	0	0	1	1
March 2009 to January 2010	0	1	3	4
March 2010 to January 2011	0	0	2	2
Total Collisions	0	1	6	7
Average Annual Collision Rate	0.00	0.33	2.00	2.33

Collision data for the 12 month period following completion of the scheme

Table 3.5.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.5.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.33	1.33	0.67	0.67	1.00	0.00
Percentage of total	14	14	57	29	29	43	0
Annual average collisions post works	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Percentage of total	0	0	100	0	0	0	100
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.5.2 Collision Summary

In the 36 months prior to the scheme's construction there were seven personal injury collisions (2.33 per year on average) compared to one collision in the 12 months post implementation (1.00 per year). This represents a reduction in collision rate at the junction.

- The increase in collision rate involving a right turning manoeuvre (nil to one collision) is not deemed relevant at this time.

There are no recommendations currently considered necessary along this link, and the situation is monitored and re-assessed when three years of collision data post implementation is available.

3.6 Millbank (between Atterbury Street and Vauxhall Bridge) (Link 13-21)

3.6.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.6.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to January 2009	0	1	1	2
March 2009 to January 2010	0	0	0	0
March 2010 to January 2011	0	0	0	0
Total Collisions	0	1	1	2
Average Annual Collision Rate	0.00	0.33	0.33	0.67

Collision data for the 12 month period following completion of the scheme

Table 3.6.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	1	0	1	2
Total Collisions	1	0	1	2
Average Annual Collision Rate	1.00	0.00	1.00	2.00

Collision totals and percentages for the main collision types

Table 3.6.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.33	0.33	0.33	0.33	0.33	0.00
Percentage of total	50	50	50	50	50	50	0
Annual average collisions post works	1.00	0.00	0.00	2.00	1.00	1.00	0.00
Percentage of total	50	0	0	100	50	50	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.6.2 Collision Summary

In the 36 months prior to the scheme's construction there were two personal injury collisions (0.67 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). It is noted that in the three years prior to the scheme's construction there were two collisions in the first year and none on the remaining two years. The collision rate post implementation is therefore consistent with the first year's pre-implementation data. It is difficult to draw any conclusion from the collision data as there may have been an intervention to account for the decreasing trend pre-implementation.

- It can be seen that collisions involving death or serious injury, powered two-wheelers, dark conditions and non-dry conditions have increased in the post implementation period.
- The increase in collision rate involving death or serious injury, dark conditions and wet conditions (0.33 to one collision) are not deemed relevant at this time.

Both the collisions in the post implementation period involved a powered two-wheeler, compared to one pre-construction. The two powered two-wheeler collisions can be summarised as follows:



- 18/11/2011 50m south west of Atterbury Street, a powered two-wheeler lost control and collided with a kerb, and;
- 18/01/2012 40m north-east of Ponsonby Place, a powered two-wheeler lost control in wet weather and fell.

It is recommended that the carriageway condition and surface water drainage is assessed to identify any site specific measures that may contribute to both the loss of control type collisions along the link. It is also recommended that the situation is monitored and is re-assessed when three years of post implementation collision data is available.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the carriageway condition and surface water drainage

It is the view of the Audit Team that the carriageway condition and surface water drainage are satisfactory.

3.7 Vauxhall Bridge junction with Millbank (Node 13)

3.7.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.7.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	2	7	9
March 2009 to February 2010	0	1	8	9
March 2010 to February 2011	0	0	6	6
Total Collisions	0	3	21	24
Average Annual Collision Rate	0.00	1.00	7.00	8.00

Collision data for the 12 month period following completion of the scheme

Table 3.7.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	6	6
Total Collisions	0	0	6	6
Average Annual Collision Rate	0.00	0.00	6.00	6.00

Collision totals and percentages for the main collision types

Table 3.7.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	0.67	5.00	1.67	2.67	0.33	1.00
Percentage of total	13	8	63	21	33	4	13
Annual average collisions post works	0.00	1.00	3.00	2.00	2.00	0.00	0.00
Percentage of total	0	17	50	33	33	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.7.2 Collision Summary

In the 36 months prior to the scheme's construction there were 24 personal injury collisions (8.00 per year on average) compared to six collisions in the 12 months post implementation (6.00 per year). This represents a reduction in collision rate at the junction.

- It can be seen that collisions involving pedestrians and powered two-wheelers have increased in the post implementation period.
- The increase in collision rate involving pedestrians (0.67 to one collision) is not deemed relevant at this time.
- The two collisions involving powered two-wheelers can be summarised as follows:
 - 15/07/2011 A pedestrian crossed the road in front of a southeast bound powered two-wheeler, and;
 - 05/04/2011 A cyclist disobeyed the automatic traffic signals and collided with a powered two-wheeler within the junction.

Analysis of the powered two-wheeler collisions does not appear to constitute a trend for this user group.



Comparison between the two data-sets shows a reduction in collision rate involving cyclists, dropping from 5.00 per year on average to 3.00 per year post implementation. The collision rate involving pedal cycles remains uncharacteristically high when compared to the comparative average.

- The collisions involving pedal cycles can be summarised as follows:

- 21/02/2012 A car turning left from Vauxhall Bridge onto Grosvenor Road turned across the path of a cyclist travelling ahead,
- 12/03/2012 A light goods vehicle turning left from Vauxhall Bridge onto Grosvenor Road turned across the path of a cyclist travelling ahead, and;
- 05/04/2011 A cyclist disobeyed the automatic traffic signals and collided with a powered two-wheeler within the junction.

Analysis of the cycle collisions shows that an emerging trend may exist for vehicles turning left across the path of cyclists, commonly referred to as a 'left-hook' type conflict.

It is recommended that the geometry and layout of the junction is investigated and the junction is monitored and re-assessed when three years of post implementation collision data exists.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the geometry and layout of the junction

It is the view of the Audit Team that the layout of the geometry could be improved to remove the potential for 'left-hook' type conflicts.

3.8 Grosvenor Road (Vauxhall Bridge to Claverton Street) (Link 6-13)

3.8.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.8.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	7	7
March 2009 to February 2010	0	2	2	4
March 2010 to February 2011	0	0	5	5
Total Collisions	0	2	14	16
Average Annual Collision Rate	0.00	0.67	4.67	5.33

Collision data for the 12 month period following completion of the scheme

Table 3.8.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	1	8	9
Total Collisions	0	1	8	9
Average Annual Collision Rate	0.00	1.00	8.00	9.00

Collision totals and percentages for the main collision types

Table 3.8.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	0.33	1.67	1.67	1.00	1.00	0.67
Percentage of total	13	6	31	31	19	19	13
Annual average collisions post works	1.00	0.00	5.00	3.00	1.00	1.00	3.00
Percentage of total	11	0	56	33	11	11	33
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

*1 – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*2 – Shading indicates where a post construction collision rate is higher than the comparative average.

3.8.2 Collision Summary

In the 36 months prior to the scheme's construction there were 16 personal injury collisions (5.33 per year on average) compared to nine collisions in the 12 months post implementation (9.00 per year). This represents an increase in annual collision rate at the junction in the post implementation period.

It can be seen that collisions involving death or serious injury, pedal cycles, powered two-wheelers and right turning manoeuvres have increased in the post implementation period.

The increase in collision rate involving death or serious injury (0.67 to one collision) is not deemed relevant at this time.

- The five post implementation collisions involving a pedal cycle can be summarised as follows:

15/06/2011 At the junction with St Georges Square, a car turned left across the path of a cyclist,

19/11/2011 At the junction with Dolphin Square, a car turned left across the path of a cyclist,

- 29/11/2011 At the junction with St Georges Square, a car turned left across the path of a cyclists,
- 12/03/2012 At the junction with St Georges Square, a car pulled over into the cycle superhighway lane in the path of a cyclist who was noted as 'travelling at speed'
- 31/05/2012 At the entrance to the petrol station east of Dolphin Square, a taxi turned right into the path of a cyclist.

It can be seen above that a trend may exist, both in terms of location (St Georges Square junction) and collision type (left turn across a cyclist).

- The three post implementation collisions involving a powered two-wheeler can be summarised as follows:

- 30/06/2011 At the entrance to the petrol station east of Dolphin Square, a car turned right across the path of a powered two-wheeler,
- 05/09/2011 A powered two-wheeler broke sharply to avoid a collision and lost control,
- 17/05/2012 At the entrance to the petrol station east of Dolphin Square, a taxi turned right across the path of a powered two-wheeler,

It can be seen above that a trend may exist, both in terms of location (entrance to petrol station) and collision type (right turn across a powered two-wheeler).

- The three collisions that involved a right turning manoeuvre can be summarised as follows:

- 30/06/2011 At the entrance to the petrol station east of Dolphin Square, a car turned right across the path of a powered two-wheeler,
- 17/05/2012 At the entrance to the petrol station east of Dolphin Square, a taxi turned right across the path of a powered two-wheeler, and;
- 31/05/2012 At the entrance to the petrol station east of Dolphin Square, a taxi turned right into the path of a cyclist.

It can be seen above that a trend may exist regarding right turn manoeuvres into the petrol station east of Dolphin Square.

In addition to the trends identified above, a further trend involving a left turning manoeuvre may exist. Collisions involving a left turning manoeuvre can be summarised as follows:

- The three collisions that involved a left turning manoeuvre can be summarised as follows:

- 15/06/2011 At the junction with St Georges Square, a car turned left across the path of a cyclist,
- 19/11/2011 At the junction with Dolphin Square, a car turned left across the path of a cyclist,
- 29/11/2011 At the junction with St Georges Square, a car turned left across the path of a cyclist,

It can be seen above that a trend may exist, both in terms of location (St Georges Square junction) and collision type (left turn across a cyclist).



- Analysis of the geographical location of the collisions has identified the following:
 - Three collisions post implementation occurred at the junction with St George's Square,
 - Two collisions post implementation occurred at the junction with Dolphin Square,
 - Three collisions post implementation occurred at the junction with the petrol station east of Dolphin Square.

It is recommended that the layout of the carriageway is investigated, particularly in the vicinity of St Georges Square, Dolphin Square and the entrance to the petrol station. In addition it is recommended that the link is monitored and re-assessed when three years of collision data exists.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway is satisfactory at this time. The road has recently been through the Better Junctions process and significant changes to the highway have been made.

3.9 Grosvenor Road junction with Claverton Street (Node 6)

3.9.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.9.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	1	1
March 2009 to February 2010	0	1	1	2
March 2010 to February 2011	0	0	2	2
Total Collisions	0	1	4	5
Average Annual Collision Rate	0.00	0.33	1.33	1.67

Collision data for the 12 month period following completion of the scheme

Table 3.9.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.9.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.33	1.00	0.33	0.67	0.33	0.33
Percentage of total	20	20	60	20	40	20	20
Annual average collisions post works	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Percentage of total	0	100	0	0	0	100	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

*1 – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*2 – Shading indicates where a post construction collision rate is higher than the comparative average.

3.9.2 Collision Summary

In the 36 months prior to the scheme's construction there were five personal injury collisions (1.67 per year on average) compared to a single collision in the 12 months post implementation (1.00 per year).

Due to the low number of collisions that have occurred at the junction, and the subsequent reduction in collision rate, a comparison between the two collision rates is not deemed relevant at this time. It is therefore recommended that no action is taken at the junction and the node is monitored and assessed again when three years post implementation collision data is available.

3.10 Grosvenor Road (Claverton Street to Lupus Street) (Link 3-6)

3.10.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.10.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	1	3	4
March 2009 to February 2010	0	0	0	0
March 2010 to February 2011	0	0	3	3
Total Collisions	0	1	6	7
Average Annual Collision Rate	0.00	0.33	2.00	2.33

Collision data for the 12 month period following completion of the scheme

Table 3.10.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.10.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.00	0.00	1.67	0.67	0.67	0.00
Percentage of total	14	0	0	71	29	29	0
Annual average collisions post works	0.00	0.00	2.00	1.00	1.00	0.00	0.00
Percentage of total	0	0	100	50	50	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

*¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.10.2 Collision Summary

In the 36 months prior to the scheme's construction there were seven personal injury collisions (2.33 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year).

It can be seen that collisions involving pedal cycles and in dark conditions have increased in the post implementation period.

- In the post implementation period both the collisions involved a pedal cycle and can be summarised as follows:

16/06/2011 100m west of Claverton Street, a cyclist lost control and was hit by a second cyclist travelling in the same direction, and;

23/11/2011 50m west of Claverton Street, a cyclists on a Cycle Hire bike swerved causing a powered two-wheeler to also swerve into the path of a car in the opposing direction.

It can be seen above that the two cycle collisions are not comparable in terms of collision location or collision type. It would appear that no trend exists specifically involving cyclists.



- The increase in collision rate in dark conditions (0.67 to one collision) is not deemed relevant at this time.

There are no recommendations currently considered necessary along this link, and the situation is monitored and re-assessed when three years of post implementation collision data is available.

3.11 Grosvenor Road junction with Lupus Street (Node 3)

3.11.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.11.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	1	1	2
March 2009 to February 2010	0	1	2	3
March 2010 to February 2011	0	1	1	2
Total Collisions	0	3	4	7
Average Annual Collision Rate	0.00	1.00	1.33	2.33

Collision data for the 12 month period following completion of the scheme

Table 3.11.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.11.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	0.00	1.00	0.67	1.00	0.67	0.00
Percentage of total	43	0	43	29	43	29	0
Annual average collisions post works	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Percentage of total	0	0	0	50	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.11.2 Collision Summary

In the 36 months prior to the scheme's construction there were seven personal injury collisions (2.33 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). This represents a decrease in the collision rate at the junction. Due to the low number of collisions that have occurred at the junction, and subsequent reduction in collision rate, a comparison between the two collision rates is not deemed relevant at this time. It is therefore recommended that the junction is monitored and re-assessed when three years post implementation collision data is available.

3.12 Grosvenor Road (Lupus Street to Chelsea Bridge) (Link 3-721)

3.12.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.12.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	0	0
March 2009 to February 2010	0	0	2	2
March 2010 to February 2011	0	0	0	0
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	0.67	0.67

Collision data for the 12 month period following completion of the scheme

Table 3.12.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.12.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.33	0.00	0.00	0.00
Percentage of total	0	0	0	50	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Percentage of total	0	0	0	0	100	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.12.2 Collision Summary

In the 36 months prior to the scheme's construction there were two personal injury collisions (0.67 per year) compared to a single collision in the 12 months post implementation (1.00 per year). This represents an increase in the collision rate at the junction. Due to the low number of collisions that have occurred along the link, a comparison between the two collision rates is not deemed relevant at this time. It is therefore recommended that the junction is monitored and re-assessed when three years post implementation collision data is available.

3.13 Chelsea Bridge junction with Grosvenor Road (Node 721)

3.13.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.13.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	2	5	7
March 2009 to February 2010	0	2	1	3
March 2010 to February 2011	0	1	4	5
Total Collisions	0	5	10	15
Average Annual Collision Rate	0.00	1.67	3.33	5.00

Collision data for the 12 month period following completion of the scheme

Table 3.13.2 – post construction collisions	Fatal	Serious	Slight	Total
May 2011 to April 2012	0	2	5	7
Total Collisions	0	2	5	7
Average Annual Collision Rate	0.00	2.00	5.00	7.00

Collision totals and percentages for the main collision types

Table 3.13.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.66	0.00	1.33	2.66	1.66	1.33	2.00
Percentage of total	33	0	27	53	33	27	40
Annual average collisions post works	2.00	0.00	5.00	0.00	2.00	1.00	3.00
Percentage of total	29	0	71	0	29	14	43
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.13.2 Collision Summary

In the 36 months prior to the scheme's construction there were fifteen personal injury collisions (5.00 per year on average) compared to seven collisions in the 12 months post implementation (7.00 per year). This represents an increase in the collision rate at the junction.

It can be seen that collisions involving death or serious injury, pedal cycles, dark conditions and right turning manoeuvres have all increased in the post implementation period.

- The collisions involving death or serious injury can be summarised as follows:
16/11/2011 A passenger of a taxi opened door in the path of a cyclist, and;
01/12/2011 A pedal cycle turned right into the path of a southbound car.

The two collisions are not comparable in terms of collision location or collision type. It would appear that no trend exists for collisions resulting in death or serious injury.



- The collisions involving pedal cycles can be summarised as follows:
 - 16/11/2011 A northbound cyclist is hit by passenger of taxi opening door (nearside),
 - 01/12/2011 A right turning cyclist collided with southbound car within the junction,
 - 20/01/2012 A southbound cyclist collided with right turning car,
 - 15/03/2012 A northwest bound cyclist disobeyed ATS and collided with eastbound car, and;
 - 25/04/2012 A cyclist changed lanes to the right and collided with northwest bound car.

Analysis of the cycle collisions shows that no trend exists in terms of collision type or collision location specifically involving cyclists.

- The collisions occurring in dark conditions can be summarised as follows:
 - 16/11/2011 A passenger of a taxi opened door in the path of a cyclist, and;
 - 20/01/2012 A southbound cyclist collided with right turning car

It can be seen that the two collisions are not comparable in terms of collision location or collision type. It would appear that no trend exists for collisions occurring in dark conditions.

- The collisions involving a right turning manoeuvre can be summarised as follows:
 - 12/08/2011 A right turning light goods vehicle failed to give way to a eastbound car within the junction,
 - 01/12/2011 A pedal cycle turned right into the path of a southbound car.
 - 20/01/2012 A southbound cyclist collided with right turning car,

Analysis of the cycle collisions shows that a trend may exist for right turning vehicles failing to give way to opposing vehicles within the junction.

It is recommended that the layout of the carriageway is investigated, particularly to determine if the layout exacerbates a potential for right turning vehicles to turn injudiciously. In addition it is recommended that the link is monitored and re-assessed when three years of collision data exists.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the junction is satisfactory at this time. The junction could benefit from the road markings being refreshed.

3.14 Chelsea Bridge (Grosvenor Road to Borough Boundary) (Link 721-774)

3.14.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.14.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	2	1	3
March 2009 to February 2010	0	0	0	0
March 2010 to February 2011	0	0	2	2
Total Collisions	0	2	3	5
Average Annual Collision Rate	0.00	0.67	1.00	1.67

Collision data for the 12 month period following completion of the scheme

Table 3.14.2 – post construction collisions	Fatal	Serious	Slight	Total
May 2011 to April 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	0.00	2.00

Collision totals and percentages for the main collision types

Table 3.14.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	0.33	1.00	0.67	0.00	0.00	0.00
Percentage of total	40	20	60	40	0	0	0
Annual average collisions post works	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Percentage of total	0	0	50	50	50	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.14.2 Collision Summary

In the 36 months prior to the scheme's construction there were five personal injury collisions (1.67 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). This represents a marginal increase in collision rate along the link in the post implementation period.

Due to the low number of collisions that have occurred at the junction, a comparison between the two collision rates is not deemed relevant at this time. It is therefore recommended that no action is taken along the route and the link is monitored and assessed again when three years post implementation collision data is available.

3.15 Chelsea Bridge Borough Boundary (Node 774)

3.15.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.15.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	0	0
March 2009 to February 2010	0	0	0	0
March 2010 to February 2011	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision data for the 12 month period following completion of the scheme

Table 3.15.2 – post construction collisions	Fatal	Serious	Slight	Total
May 2011 to April 2012	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.15.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

*1 – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*2 – Shading indicates where a post construction collision rate is higher than the comparative average.

3.15.2 Collision Summary

There were no collisions in either the pre or post implementation periods. It is therefore recommended that no action is taken at the junction and the node is monitored and assessed again when three years post implementation collision data is available.

3.16 Queenstown Road (Borough Boundary to Queens Circus) (Link 224-774)

3.16.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.16.1 – pre construction collisions	Fatal	Serious	Slight	Total
May 2008 to April 2009	0	2	4	6
May 2009 to April 2010	0	2	3	5
May 2010 to April 2011	0	2	14	16
Total Collisions	0	6	21	27
Average Annual Collision Rate	0.00	2.00	7.00	9.00

Collision data for the 12 month period following completion of the scheme

Table 3.16.2 – post construction collisions	Fatal	Serious	Slight	Total
July 2011 to June 2012	0	0	5	5
Total Collisions	0	0	5	5
Average Annual Collision Rate	0.00	0.00	5.00	5.00

Collision totals and percentages for the main collision types

Table 3.16.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	2.00	1.00	3.33	2.67	3.33	2.00	2.33
Percentage of total	22	11	37	30	37	22	26
Annual average collisions post works	0.00	0.00	3.00	1.00	2.00	1.00	3.00
Percentage of total	0	0	60	20	40	20	60
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.16.2 Collision Summary

In the 36 months prior to the scheme's construction there were twenty seven personal injury collisions (9.00 per year on average) compared to five collisions in the 12 months post implementation (5.00 per year). This represents a reduction in collision rate along this link in the post implementation period.

Collisions involving death or serious injury, pedestrians, pedal cycles, powered two-wheelers, darkness and wet conditions have all reduced in the post implementation period. Conversely there has been an increase in collisions involving a right turn manoeuvre (2.33 to 3.00 collisions per year).

- The collisions involving a right turning manoeuvre can be summarised as follows:

20/09/2011 A car turned right into the garage across stationary traffic and collided with a pedal cycle filtering on the nearside,

15/03/2012 At the junction with Carriageway Drive North, a car turned right onto the main carriageway through static traffic and collided with a powered two-wheeler filtering on the offside, and;

26/04/2012 A car turned right into the garage across the path of a pedal cycle.



It can be seen that a trend may exist for vehicles turning right into the garage.

Despite a large reduction in the number of collisions along the link, collisions involving pedal cycles, dark conditions and right turn manoeuvres remain uncharacteristically high when compared to the comparative average.

It is recommended that the route is assessed, particularly in the proximity of the garage to ascertain whether any site specific features may contribute to the collision rate at this location. It is also recommended that the route is re-assessed when three years of collision data is available.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway could be improved by the introduction of a keep clear road marking (or other similar measure at the junction with the garage.

3.17 Queens Circus Roundabout (Node 224)

3.17.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.17.1 – pre construction collisions	Fatal	Serious	Slight	Total
May 2008 to April 2009	0	0	11	11
May 2009 to April 2010	0	0	3	3
May 2010 to April 2011	0	1	6	7
Total Collisions	0	1	20	21
Average Annual Collision Rate	0.00	0.33	6.67	7.00

Collision data for the 12 month period following completion of the scheme

Table 3.17.2 – post construction collisions	Fatal	Serious	Slight	Total
July 2011 to June 2012	0	0	3	3
Total Collisions	0	0	3	3
Average Annual Collision Rate	0.00	0.00	3.00	3.00

Collision totals and percentages for the main collision types

Table 3.17.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.00	5.00	1.00	3.67	1.33	-
Percentage of total	5	0	71	14	52	19	-
Annual average collisions post works	0.00	1.00	2.00	0.00	1.00	2.00	-
Percentage of total	0	67	67	0	33	67	-
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.17.2 Collision Summary

In the 36 months prior to the scheme's construction there were twenty one personal injury collisions (7.00 per year on average) compared to three collisions in the 12 months post implementation (3.00 per year). This represents a drop in the collision rate along the link in the post implementation period.

Collisions involving death or serious injury, pedal cycles, powered two-wheelers and darkness have all reduced in the post implementation period. Conversely there has been an increase in pedestrian collisions (nil to 1.00 collisions per year) and collisions in wet conditions (1.33 to 2.00 collisions per year).

- The increase in collision rate involving pedestrians (nil to one collision) is not deemed relevant at this time.
- The collisions occurring in wet conditions can be summarised as follows:
 - 09/02/2012 A car exiting the garage collided with a pedestrian crossing the exit to the garage, and;
 - 09/04/2012 A pedal cycle on the roundabout is hit by a car approaching from the left.



Analysis of the collision data has not identified any trend in collisions involving wet conditions.

It is recommended that no action is taken at the junction and the roundabout is monitored and assessed again when three years post implementation collision data is available.

3.18 Prince of Wales Drive (Queens Circus to Macduff Road) (Link 213-224)

3.18.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.18.1 – pre construction collisions	Fatal	Serious	Slight	Total
November 2007 to October 2008	0	0	1	1
November 2008 to October 2009	0	0	0	0
November 2009 to October 2010	0	0	1	1
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	0.67	0.67

Collision data for the 12 month period following completion of the scheme

Table 3.18.2 – post construction collisions	Fatal	Serious	Slight	Total
July 2011 to June 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.18.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.33	0.33	0.00	0.33
Percentage of total	0	0	0	50	50	0	50
Annual average collisions post works	0.00	0.00	0.00	1.00	0.00	1.00	0.00
Percentage of total	0	0	0	100	0	100	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

*1 – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*2 – Shading indicates where a post construction collision rate is higher than the comparative average.

3.18.2 Collision Summary

In the 36 months prior to the scheme's construction there were two personal injury collisions (0.67 per year on average) compared to one collision in the 12 months post implementation (1.00 per year). Due to the low number of collisions that have occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken along the route and the link is monitored and assessed again when three years post implementation collision data is available.

3.19 Macduff Road (Prince of Wales Drive to Battersea Park Road) (Area)

3.19.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.19.1 – pre construction collisions	Fatal	Serious	Slight	Total
November 2007 to October 2008	0	0	0	0
November 2008 to October 2009	0	0	0	0
November 2009 to October 2010	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision data for the 12 month period following completion of the scheme

Table 3.19.2 – post construction collisions	Fatal	Serious	Slight	Total
July 2011 to June 2012	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.19.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

*¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.19.2 Collision Summary

There were no collisions along Macduff Road in either the before or after construction periods. It is therefore recommended that no action is taken along the route and the link is monitored and assessed again when three years post implementation collision data is available.

3.20 Battersea Park Road (Macduff Rd to Albert Bridge Rd) (Link 202-214)

3.20.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.20.1 – pre construction collisions	Fatal	Serious	Slight	Total
February 2008 to January 2009	0	1	12	13
February 2009 to January 2010	0	1	4	5
February 2010 to January 2011	0	1	10	11
Total Collisions	0	3	26	29
Average Annual Collision Rate	0.00	1.00	8.67	9.67

Collision data for the 12 month period following completion of the scheme

Table 3.20.2 – post construction collisions	Fatal	Serious	Slight	Total
April 2011 to March 2012	0	1	13	14
Total Collisions	0	1	13	14
Average Annual Collision Rate	0.00	1.00	13.00	14.00

Collision totals and percentages for the main collision types

Table 3.20.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	0.33	2.67	4.67	4.67	4.33	2.00
Percentage of total	10	3	28	48	48	45	21
Annual average collisions post works	1.00	2.00	4.00	6.00	2.00	4.00	6.00
Percentage of total	7	14	29	43	14	29	43
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.20.2 Collision Summary

In the 36 months prior to the scheme's construction there were 29 personal injury collisions (9.67 per year on average) compared to 14 in the 12 months post implementation. This represents an increase in the collision rate along the link.

Collisions involving pedestrians, pedal cycles, powered two-wheelers and right turning manoeuvres have all increased in the post implementation period.

- Collisions involving pedestrians in the post implementation period can be summarised as follows:

14/11/2011 25m east of Forfar Road, a right turning car clipped an intoxicated pedestrian when entering a private car park, and;

20/07/2011 At the junction with Culvert Road, a child pedestrian ran across the road in front of a car.

Analysis of the collision data has not identified any trends in collisions involving a pedestrian.

- The four collisions involving a pedal cycle can be summarised as follows:
 - 01/04/2011 At the junction with Forfar Road, a light goods vehicle turned right across the path of a pedal cycle,
 - 29/03/2012 At the junction with Beechmore Road, a pedal cycle turned right into the path of a car also turning right from an alternative direction,
 - 03/09/2011 30m north-east of the junction with Culvert Road, a car pulling into a parking space collides with a pedal cycle travelling ahead, and;
 - 20/02/2012 At the junction with Culvert Road, a light goods vehicle turned left across the path of a cyclist.

It can be seen above that the four cycle collisions are not comparable in terms of collision location or collision type. It would appear therefore that no collision trend exists specifically involving cyclists.

- The six collisions involving a powered two-wheeler can be summarised as follows:
 - 26/03/2012 At the junction with Macduff Road, a light goods vehicle turned right across the path of a powered two-wheeler travelling ahead,
 - 09/11/2011 At the junction with Alexandra Avenue, the foot of a stationary powered two-wheeler rider is run over in traffic,
 - 07/03/2012 At the junction with Alexandra Avenue, a powered two-wheeler is shunted by another powered two-wheeler travelling in the same direction,
 - 16/12/2011 At the junction with Parkside Street, a taxi performs a 'U' turn manoeuvre in the path of a powered two-wheeler,
 - 16/11/2011 At the junction with Culvert Road, a minibus turned right into the path of a powered two-wheeler following being signalled by an oncoming car, and;
 - 14/12/2011 At the junction with Culvert Road, a left turning light goods vehicle collided with a powered two-wheeler filtering on the nearside.

It can be seen above that the six powered two-wheeler collisions are not comparable in terms of collision location nor collision type. Whilst a number of the collisions occurred at the same location, the individual collisions show no comparable elements with regard to turning manoeuvre or direction. It would appear therefore that no trend exists specifically involving powered two-wheelers.

- The six collisions that involved a right turning manoeuvre can be summarised as follows:
 - 26/03/2012 At the junction with Macduff Road, a light goods vehicle turned right across the path of a powered two-wheeler travelling ahead,
 - 14/11/2011 25m east of the junction with Forfar Road, a car turned right into a private car park clipping an intoxicated pedestrian in the footway,
 - 01/04/2011 At the junction with Forfar Road, a light goods vehicle turned right across the path of a pedal cycle,
 - 25/05/2011 At the junction with Parkside Street, a car turning right is shunted by another car travelling ahead,

- 29/03/2012 At the junction with Beechmore Road, a pedal cycle turned right into the path of a car also turning right from an alternative direction, and;
- 16/11/2011 At the junction with Culvert Road, a minibus turned right into the path of a powered two-wheeler after being signalled by an oncoming car.

It can be seen above that the six collisions involving a right turning manoeuvre are not comparable in terms of collision location. It would appear therefore that no trend exists specifically involving a right turn manoeuvre.

- Analysis of the geographical location of the collisions has identified the following:
 - Two collisions post implementation occurred at the junction with Alexandra Avenue,
 - Two collisions post implementation occurred at the junction with Parkside Street,
 - Five collisions post implementation occurred at the junction with Culvert Road.

All other collisions are not comparable in terms of graphical location.

Individual collision analysis of the trends identified above has shown the following:

- The two collisions that occurred at the junction with Alexandra Avenue can be summarised as follows:

09/11/2011 The foot of a powered two-wheeler rider is run over in traffic, and;

07/03/2012 A powered two-wheeler rider is shunted by another powered two-wheeler rider travelling in the same direction.

It would appear therefore that no trend exists specifically involving collisions at the junction with Alexandra Avenue.

- The two collisions that occurred at the junction with Parkside Street can be summarised as follows:

25/05/2011 A car turning right is shunted by another car travelling ahead, and;

16/12/2011 A taxi did a 'U' turn into the path of a powered two-wheeler.

It would appear therefore that no trend exists specifically involving collisions at the junction with Parkside Street.

- The five collisions that occurred at the junction with Culvert Road can be summarised as follows:

27/08/2011 A bus collided with a car undertaking on the nearside,

20/07/2011 A pedestrian ran into the road in the path of a car,

16/11/2011 A minibus turned right into the path of a powered two-wheeler following being signalled by an oncoming car, and;

14/12/2011 A left turning light goods vehicle collided with a powered two-wheeler filtering on the nearside.

20/02/2012 A light goods vehicle turned left across the path of a cyclist.

The only similarity with regard to manoeuvre are the two collisions involving a vehicle turning left into Culvert Road from Battersea Park Road. This may be regarded as an emerging trend in collisions at this location.



It is recommended that the route is assessed, particularly in the vicinity of Culvert Road to determine any site specific elements that may have contributed to the collision rate along the link. It is also recommended that the route is re-assessed when three year post implementation collision data is available.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway at this location is clear.

3.21 Battersea Park Road junction with Albert Bridge Road (Node 202)

3.21.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.21.1 – pre construction collisions	Fatal	Serious	Slight	Total
February 2008 to January 2009	0	0	0	0
February 2009 to January 2010	0	0	0	0
February 2010 to January 2011	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	0.33	0.33

Collision data for the 12 month period following completion of the scheme

Table 3.21.2 – post construction collisions	Fatal	Serious	Slight	Total
April 2011 to March 2012	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.21.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.33	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	100	0	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.21.2 Collision Summary

In the 36 months prior to the scheme's construction there was one personal injury collision (0.33 per year on average) compared to none in the 12 months post implementation. This represents a decrease in the collision rate at the junction.

Given the number of collisions at the junction the slight decrease in collision rate is not considered noteworthy at this time. It is therefore recommended that no action is taken along the route and the link is monitored and assessed again when three years post implementation collision data is available.

3.22 Battersea Park Road (Albert Bridge Rd to Latchmere Rd) (Link 201-202)

3.22.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.22.1 – pre construction collisions	Fatal	Serious	Slight	Total
February 2008 to January 2009	0	0	0	0
February 2009 to January 2010	0	0	3	3
February 2010 to January 2011	0	0	1	1
Total Collisions	0	0	4	4
Average Annual Collision Rate	0.00	0.00	1.33	1.33

Collision data for the 12 month period following completion of the scheme

Table 3.22.2 – post construction collisions	Fatal	Serious	Slight	Total
April 2011 to March 2012	0	1	4	5
Total Collisions	0	1	4	5
Average Annual Collision Rate	0.00	1.00	4.00	5.00

Collision totals and percentages for the main collision types

Table 3.22.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	1.00	0.00	0.67	0.67	0.00	0.00
Percentage of total	0	75	0	50	50	0	0
Annual average collisions post works	1.00	1.00	1.00	5.00	2.00	0.00	3.00
Percentage of total	20	20	20	100	40	0	60
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.22.2 Collision Summary

In the 36 months prior to the scheme's construction there were four personal injury collisions (1.33 per year on average) compared to five collisions in the 12 months post implementation (5.00 per year). This represents an increase in collision rate along the link post implementation of the scheme.

It can be seen that collisions involving death or serious injury, pedal cycles, powered two-wheelers, dark conditions and right turning manoeuvres have all increased in the post implementation period.

The increase in collisions involving death or serious injury and collisions involving pedal cycles (both nil to 1.00 collisions per year) are not deemed relevant at this time.

- The five collisions involving a powered two-wheeler can be summarised as follows:
 - 02/04/2011 At the junction with Latchmere Street, a car turned right through static traffic and collided with a filtering powered two-wheeler,
 - 20/05/2011 At the junction with Latchmere Street, a pedal cycle turns right from lane 1 into path of a powered two-wheeler in lane 2,



- 07/10/2011 At the junction with Latchmere Street, a car turns right into path of an oncoming powered two-wheeler,
- 09/12/2011 65m south-west of Albert Bridge Road, a car 'U' turns in front of a powered two-wheeler, and;
- 07/02/2012 25m east of Latchmere Road, a pedestrian crosses road through static traffic and collides with a powered two-wheeler filtering.

Analysis of the collision data has identified a possible trend in right turning collisions at the junction with Latchmere Street.

The two collisions involving dark conditions and a right turning manoeuvre are both contained in the same data-set above.

It is recommended that the layout of the junction with Latchmere Road is investigated to determine any site specific elements that may have contributed to the collision rate along the link. It is also recommended that the route is re-assessed when three years post implementation collision data is available.

In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway could be improved by the introduction of a 'keep clear' road marking or other similar measure.

3.23 Battersea Park Road junction with Latchmere Road (Node 201)

3.23.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.23.1 – pre construction collisions	Fatal	Serious	Slight	Total
April 2008 to March 2009	0	0	2	2
April 2009 to March 2010	0	1	4	5
April 2010 to March 2011	0	0	5	5
Total Collisions	0	1	11	12
Average Annual Collision Rate	0.00	0.33	3.67	4.00

Collision data for the 12 month period following completion of the scheme

Table 3.23.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	2	3	5
Total Collisions	0	2	3	5
Average Annual Collision Rate	0.00	2.00	3.00	5.00

Collision totals and percentages for the main collision types

Table 3.23.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	2.00	0.33	2.00	1.33	0.00	0.33
Percentage of total	8	50	8	50	33	0	8
Annual average collisions post works	2.00	2.00	0.00	2.00	1.00	0.00	0.00
Percentage of total	40	40	0	40	20	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.23.2 Collision Summary

In the 36 months prior to the scheme's construction there were 12 personal injury collisions (4.00 per year on average) compared to five in the 12 months post implementation. This represents an increase in the collision rate at the junction.

Analysis of the collision data has identified that collisions resulting in death or serious injury have increased in the post implementation period.

- The collisions involving death or serious injury in the post implementation period can be summarised as follows:

22/06/2011 A powered two-wheeler rides into the rear of another powered two-wheeler, and;

03/02/2012 A northbound pedestrian is clipped by a car whilst crossing the road.

These two collisions do not appear to share similar characteristics other than their location. This is not regarded to constitute an emerging trend at this location.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.24 Battersea Park Road (Latchmere Road to Falcon Road) (Link 192-201)

3.24.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.24.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	1	5	6
January 2009 to December 2009	0	0	9	9
January 2010 to December 2010	0	2	10	12
Total Collisions	0	3	24	27
Average Annual Collision Rate	0.00	1.00	8.00	9.00

Collision data for the 12 month period following completion of the scheme

Table 3.24.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	2	13	15
Total Collisions	0	2	13	15
Average Annual Collision Rate	0.00	2.00	13.00	15.00

Collision totals and percentages for the main collision types

Table 3.24.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	2.33	3.00	4.00	2.33	2.67	2.67
Percentage of total	11	26	33	44	26	30	30
Annual average collisions post works	2.00	3.00	3.00	7.00	5.00	5.00	7.00
Percentage of total	13	20	20	47	33	33	47
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.24.2 Collision Summary

In the 36 months prior to the scheme's construction there were 27 personal injury collisions (9.00 per year on average) compared to 15 collisions in the 12 months post implementation (15.00 per year). This demonstrates an increase in collision rate along the link in the post implementation period.

Analysis of the collision data has identified that collisions involving death or serious injury, pedestrians, pedal cycles, powered two-wheelers, in dark conditions, in wet conditions and involving a right turning manoeuvre all demonstrate increases in the post implementation period.

- The collisions involving death or serious injury can be summarised as follows:

14/11/2011 At the junction with Frere Street, a pedestrian standing on the pavement is hit by a passing bus, and;

01/07/2012 At the junction with Stanmer Street, a car pulled out into the path of a powered two-wheeler.

There does not appear to be a trend in collisions involving death or serious injury.

- The collisions involving pedestrians can be summarised as follows:
 - 10/11/2011 30m south of Battersea Bridge Road a pedal cycle collides with a pedestrian stepping out in front of a stationary bus,
 - 11/11/2011 At the junction with Frere Street, a pedestrian waiting to cross the road is hit by a passing bus, and;
 - 14/11/2011 At the junction with Frere Street, a pedestrian standing on the pavement is hit by a passing bus,

It can be seen that all three collisions occurred in close proximity and over a four day period. It is plausible therefore that a site condition at that time may have contributed to these collisions, although this is almost impossible to ascertain.

- The collisions involving pedal cycles can be summarised as follows:
 - 03/11/2011 At the junction with Bullen Street, a car clipped a pedal cycle whilst overtaking,
 - 10/11/2011 30m south of Battersea Bridge Road, a pedal cycle collides with a pedestrian stepping out in front of a stationary bus, and;
 - 03/07/2012 At the junction with Inworth Street, a car turned right across the path of a cyclist.

There does not appear to be a trend in collisions involving pedal cycles.

- The collisions involving powered two-wheelers can be summarised as follows:
 - 03/11/2011 At the junction with Bullen Street, a car turned right across the path of a powered two-wheeler,
 - 18/11/2011 At the junction with Bullen Street, a light goods vehicle turned right across the path of a powered two-wheeler,
 - 24/11/2011 At the junction with Frere Street, a car turned right into the path of a powered two-wheeler,
 - 12/05/2012 At the junction with Stanmer Street, a car turned right across the path of a powered two-wheeler,
 - 15/06/2012 At the junction with Stanmer Street, a car turned right across the path of a powered two-wheeler,
 - 01/07/2012 At the junction with Stanmer Street, a car pulled out into the path of a powered two-wheeler, and;
 - 04/07/2012 At the junction with Simpson Street, a powered two-wheeler rode into the rear of a car.

It would appear that a trend exists in right turning collisions with powered two-wheelers at the junctions with Bullen Street and Stanmer Street.

- The collisions occurring in dark conditions can be summarised as follows:
 - 03/11/2011 At the junction with Bullen Street, a car turned right across the path of a powered two-wheeler,
 - 11/11/2011 At the junction with Frere Street, a pedestrian waiting to cross the road is hit by a passing bus,
 - 24/11/2011 At the junction with Frere Street, a car turned right into the path of a powered two-wheeler,

- 31/12/2011 At the junction with Balfern Street, a car overtaking a bus collided head-on with another car, and;
- 05/01/2012 At the junction with Cabul Street, a car drove into the rear of another car.

There may be an emerging trend for collisions occurring in dark conditions at the junction with Frere Street.

- The collisions occurring in wet conditions can be summarised as follows:

03/11/2011 At the junction with Bullen Street, a car turned right across the path of a powered two-wheeler,

03/11/2011 At the junction with Bullen Street, a car clipped a pedal cycle whilst overtaking,

14/11/2011 At the junction with Frere Street, a pedestrian standing on the pavement is hit by a passing bus,

31/12/2011 At the junction with Balfern Street, a car overtaking a bus collided head-on with another car, and;

03/07/2012 At the junction with Inworth Street, a car turned right across the path of a cyclist.

There may be an emerging trend for collisions occurring in wet conditions at the junction with Bullen Street.

- The collisions involving a right turn manoeuvre can be summarised as follows:

03/11/2011 At the junction with Bullen Street, a car turned right across the path of a powered two-wheeler,

18/11/2011 At the junction with Bullen Street, a light goods vehicle turned right across the path of a powered two-wheeler,

24/11/2011 At the junction with Frere Street, a car turned right into the path of a powered two-wheeler,

12/05/2012 At the junction with Stanmer Street, a car turned right across the path of a powered two-wheeler,

15/06/2012 At the junction with Stanmer Street, a car turned right across the path of a powered two-wheeler,

01/07/2012 At the junction with Stanmer Street, a car pulled out into the path of a powered two-wheeler, and;

03/07/2012 At the junction with Inworth Street, a car turned right across the path of a cyclist.

It would appear that a trend exists in right turning collisions at the junctions with Bullen Street and Stanmer Street.

It is recommended that the route is assessed particularly to ascertain whether site specific measures have contributed to the collision rate at the junctions with Bullen Street, Frere Street and Stanmer Street. It is also recommended that the route is re-assessed when three years post implementation collision data is available.



In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway could be improved by the introduction of a 'keep clear' road marking or other similar measure.

3.25 Battersea Park Road junction with Falcon Road (Node 192)

3.25.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.25.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	0	6	6
January 2009 to December 2009	0	2	4	6
January 2010 to December 2010	0	0	3	3
Total Collisions	0	2	13	15
Average Annual Collision Rate	0.00	0.67	4.33	5.00

Collision data for the 12 month period following completion of the scheme

Table 3.25.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.25.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	1.33	0.67	1.00	1.67	0.67	1.67
Percentage of total	13	27	13	20	33	13	33
Annual average collisions post works	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Percentage of total	0	50	0	0	50	50	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.25.2 Collision Summary

In the 36 months prior to the scheme's construction there were 15 personal injury collisions (5.00 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). This represents a reduction in collision rate at the junction in the post implementation period.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.26 Battersea Park Road (Falcon Road to Lombard Road) (Link 191-192)

3.26.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.26.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	0	1	1
January 2009 to December 2009	0	0	1	1
January 2010 to December 2010	0	0	1	1
Total Collisions	0	0	3	3
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision data for the 12 month period following completion of the scheme

Table 3.26.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	1	1	2
Total Collisions	0	1	1	2
Average Annual Collision Rate	0.00	1.00	1.00	2.00

Collision totals and percentages for the main collision types

Table 3.26.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.33	0.33	0.67	0.33	0.33	0.00
Percentage of total	0	33	33	67	33	33	0
Annual average collisions post works	1.00	2.00	0.00	1.00	1.00	0.00	0.00
Percentage of total	50	100	0	50	50	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.26.2 Collision Summary

In the 36 months prior to the scheme's construction there were three personal injury collisions (1.00 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year).

Analysis of the collision data has identified that collisions involving death or serious injury, pedestrians, powered two-wheelers and in dark conditions have increased in the post implementation period.

The increase in collision rate involving death or serious injury (nil to 1.00 collisions), powered two-wheelers (0.67 to 1.00 collisions, and dark conditions (0.33 to 1.00 collisions) are not deemed relevant at this time.

- The post implementation collisions involving pedestrians can be summarised as:
 - 02/09/2011 80m west of Falcon Road, a pedestrian walked into the path of a car, and;
 - 24/02/1012 50m northeast of Lombard Road, a pedestrian on the crossing is hit by a motorcycle which failed to stop.

There does not appear to be a collision trend involving pedestrians.



It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.27 Battersea Park Road junction with Lombard Road (Node 191)

3.27.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.27.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	1	1	2
January 2009 to December 2009	0	0	2	2
January 2010 to December 2010	0	1	1	2
Total Collisions	0	2	4	6
Average Annual Collision Rate	0.00	0.67	1.33	2.00

Collision data for the 12 month period following completion of the scheme

Table 3.27.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.27.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	0.00	0.00	1.00	0.67	1.00	1.67
Percentage of total	33	0	0	50	33	50	83
Annual average collisions post works	0.00	0.00	1.00	0.00	1.00	0.00	2.00
Percentage of total	0	0	50	0	50	0	100
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.27.2 Collision Summary

In the 36 months prior to the scheme's construction there were six personal injury collisions (2.00 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year).

The collision rate at the junction has remained consistent at 2.00 collisions per year on average.

The increase in post implementation collisions involving pedal cycles (nil to 1.0 collisions) is not deemed relevant at this time.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.28 York Road (Lombard Road to Plough Road) (Link 188-191)

3.28.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.28.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	0	1	1
January 2009 to December 2009	0	0	2	2
January 2010 to December 2010	0	0	2	2
Total Collisions	0	0	5	5
Average Annual Collision Rate	0.00	0.00	1.67	1.67

Collision data for the 12 month period following completion of the scheme

Table 3.28.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.28.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.33	0.67	0.67	0.67	0.33
Percentage of total	0	0	20	40	40	40	20
Annual average collisions post works	0.00	0.00	1.00	1.00	0.00	1.00	0.00
Percentage of total	0	0	50	50	0	50	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.28.2 Collision Summary

In the 36 months prior to the scheme's construction there were five personal injury collisions (1.67 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). Due to the low number of collisions that have occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

The increase in collision rate involving a pedal cycles (0.33 to one collision), powered two-wheelers (0.67 to one collisions), and collisions in wet conditions (0.67 to one collision), are not deemed relevant at this time

It is recommended that no action is taken along the route and the link should be monitored and re-assessed when three years post implementation collision data is available.

3.29 York Road junction with Plough Road (Node 188)

3.29.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.29.1 – pre construction collisions	Fatal	Serious	Slight	Total
April 2008 to March 2009	1	0	1	2
April 2009 to March 2010	0	0	2	2
April 2010 to March 2011	0	2	1	3
Total Collisions	1	2	4	7
Average Annual Collision Rate	0.33	0.67	1.33	2.33

Collision data for the 12 month period following completion of the scheme

Table 3.29.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	1	1	2
Total Collisions	0	1	1	2
Average Annual Collision Rate	0.00	1.00	1.00	2.00

Collision totals and percentages for the main collision types

Table 3.29.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	1.00	0.67	1.00	1.00	1.00	0.33	0.67
Percentage of total	43	29	43	43	43	14	29
Annual average collisions post works	1.00	0.00	1.00	1.00	0.00	0.00	0.00
Percentage of total	50	0	50	50	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.29.2 Collision Summary

In the 36 months prior to the scheme's construction there were seven personal injury collisions (2.33 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). Due to the low number of collisions, and subsequent reduction in collision rate that has occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

The number of collisions involving death or serious injury, pedal cycles and powered two-wheelers has remained consistent at one per year.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.30 York Road (Plough Rd to Wandsworth Bridge Rbt) (Link 179-188)

3.30.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.30.1 – pre construction collisions	Fatal	Serious	Slight	Total
January 2008 to December 2008	0	1	9	10
January 2009 to December 2009	0	2	12	14
January 2010 to December 2010	0	3	14	17
Total Collisions	0	6	35	41
Average Annual Collision Rate	0.00	2.00	11.67	13.67

Collision data for the 12 month period following completion of the scheme

Table 3.30.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	1	7	8
Total Collisions	0	1	7	8
Average Annual Collision Rate	0.00	1.00	7.00	8.00

Collision totals and percentages for the main collision types

Table 3.30.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	2.33	3.00	7.67	3.00	1.00	6.33
Percentage of total	5	17	22	56	22	7	46
Annual average collisions post works	1.00	1.00	2.00	6.00	3.00	2.00	4.00
Percentage of total	13	13	25	75	38	25	50
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.30.2 Collision Summary

In the 36 months prior to the scheme's construction there were 41 personal injury collisions (13.67 per year on average) compared to eight collisions in the 12 months post implementation (8.00 per year). This represents a reduction in collision rate along the link in the post implementation period.

Collisions involving pedestrians, pedal cycles, powered two-wheelers and right turn manoeuvres have all reduced in the post implementation period. Conversely there has been an increase in collision severity (0.67 to one collision) although this is not deemed relevant at this time due to the low number of collisions of this type.

Despite a large reduction in the number of collisions along the link, collisions involving powered two-wheelers and right turning manoeuvres remains uncharacteristically high when compared to the comparative average.

It is recommended that the link is investigated to determine any site specific elements that may contribute to the uncharacteristically high percentage of powered two-wheelers and right turning manoeuvre collisions. It is also recommended that the link is re-assessed when three years post implementation collision data is available.

3.31 Wandsworth Bridge Roundabout (Node 179)

3.31.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.31.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	5	5
March 2009 to February 2010	0	2	10	12
March 2010 to February 2011	0	0	10	10
Total Collisions	0	2	25	27
Average Annual Collision Rate	0.00	0.67	8.33	9.00

Collision data for the 12 month period following completion of the scheme

Table 3.31.2 – post construction collisions	Fatal	Serious	Slight	Total
May 2011 to April 2012	0	1	9	10
Total Collisions	0	1	9	10
Average Annual Collision Rate	0.00	1.00	9.00	10.00

Collision totals and percentages for the main collision types

Table 3.31.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	0.33	2.00	3.67	2.33	1.67	-
Percentage of total	7	4	22	41	26	15	-
Annual average collisions post works	1.00	1.00	2.00	3.00	2.00	0.00	-
Percentage of total	10	10	10	30	20	0	-
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.31.2 Collision Summary

In the 36 months prior to the scheme's construction there were 27 personal injury collisions (9.00 per year on average) compared to 10 collisions in the 12 months post implementation (10.00 per year). It is noted that the number of collisions in the after period is less than the collision rate in the last two years pre-construction. The two collision rates are therefore regarded as broadly comparable.

The number of collisions involving pedal cycles has remained consistent at 2.00 per year on average, whilst collisions involving powered two-wheelers, in dark conditions and in wet conditions have all reduced.

The post implementation collision rate involving death or serious injury (0.67 to 1.00 collisions) and pedestrians (0.33 to 1.00 collisions) is not deemed relevant at this time.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.32 Swandon Way (Wandsworth Bridge Rbt to Old York Rd) (Link 173-179)

3.32.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.32.1 – pre construction collisions	Fatal	Serious	Slight	Total
June 2008 to May 2009	0	0	0	0
June 2009 to May 2010	0	0	0	0
June 2010 to May 2011	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	0.33	0.33

Collision data for the 12 month period following completion of the scheme

Table 3.32.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.32.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.32.2 Collision Summary

There have been no collisions in the post implementation period. Due to the low number of collisions that have occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken along the route and the link should be monitored and re-assessed when three years post implementation collision data is available.

3.33 Old York Road (not classified on ACCSTATS as a link)

3.33.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.33.1 – pre construction collisions	Fatal	Serious	Slight	Total
June 2008 to May 2009	0	0	0	0
June 2009 to May 2010	0	0	2	2
June 2010 to May 2011	0	0	0	0
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	0.67	0.67

Collision data for the 12 month period following completion of the scheme

Table 3.33.2 – post construction collisions	Fatal	Serious	Slight	Total
August 2011 to July 2012	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.33.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.33	0.00	0.67	0.00	0.33	0.00
Percentage of total	0	50	0	100	0	50	0
Annual average collisions post works	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Percentage of total	0	0	50	0	50	0	50
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.33.2 Collision Summary

In the 36 months prior to the scheme's construction there were two personal injury collisions (0.67 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year).

- The two collisions can be summarised as follows:

26/11/11 Bus passenger presses emergency release of bus and falls upon exiting, and;

27/07/12 A car turned right without looking and collided with a passing electric cycle.

There does not appear to be a trend in collisions along the route.

It is recommended that no action is taken along the route and the link should be monitored and re-assessed when three years post implementation collision data is available.

3.34 Old York Road junction with Swandon Way (Node 661)

3.34.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.34.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	2	2
March 2009 to February 2010	0	0	0	0
March 2010 to February 2011	0	1	2	3
Total Collisions	0	1	4	5
Average Annual Collision Rate	0.00	0.33	1.33	1.67

Collision data for the 12 month period following completion of the scheme

Table 3.34.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.34.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.33	0.00	0.00	1.00	1.00	0.33	0.67
Percentage of total	20	0	0	60	60	20	40
Annual average collisions post works	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Percentage of total	0	0	0	0	100	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.34.2 Collision Summary

In the 36 months prior to the scheme's construction there were five personal injury collisions (1.67 per year on average) compared to one collision in the 12 months post implementation (1.00 per year). Due to the low number of collisions, and subsequent reduction in collision rate that has occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.35 Barchard Street (not classified on ACCSTATS as a link)

3.35.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.35.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	0	0
March 2009 to February 2010	0	0	0	0
March 2010 to February 2011	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision data for the 12 month period following completion of the scheme

Table 3.35.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.35.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

*¹ – A bold type indicates that a post construction collision rate is higher than pre construction rate.

*² – Shading indicates where a post construction collision rate is higher than the comparative average.

3.35.2 Collision Summary

There have been no collisions in the pre or post implementation periods.

It is recommended that no action is taken along the route and the link should be monitored and re-assessed when three years post implementation collision data is available.

3.36 Fairfield Street (Old York Road to Barchard Street) (Link 155-661)

3.36.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.36.1 – pre construction collisions	Fatal	Serious	Slight	Total
March 2008 to February 2009	0	0	0	0
March 2009 to February 2010	0	0	1	1
March 2010 to February 2011	0	0	0	0
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	0.33	0.33

Collision data for the 12 month period following completion of the scheme

Table 3.36.2 – post construction collisions	Fatal	Serious	Slight	Total
June 2011 to May 2012	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.36.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.33	0.00	0.00	0.00	0.00
Percentage of total	0	0	100	0	0	0	0
Annual average collisions post works	0.00	0.00	0.00	1.00	0.00	0.00	1.00
Percentage of total	0	0	0	100	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.36.2 Collision Summary

In the 36 months prior to the scheme's construction there was one personal injury collision (0.33 per year on average) compared to one collision in the 12 months post implementation (1.00 per year). Due to the low number of collisions that have occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken along the link and the route should be monitored and re-assessed when three years post implementation collision data is available.

3.37 Armoury Way to Swandon Road (Link 159-661)

3.37.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.37.1 – pre construction collisions	Fatal	Serious	Slight	Total
September 2007 to August 2008	0	0	1	1
September 2008 to August 2009	0	0	0	0
September 2009 to August 2010	0	0	0	0
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	0.33	0.33

Collision data for the 12 month period following completion of the scheme

Table 3.37.2 – post construction collisions	Fatal	Serious	Slight	Total
December 2010 to November 2011	0	0	2	2
Total Collisions	0	0	2	2
Average Annual Collision Rate	0.00	0.00	2.00	2.00

Collision totals and percentages for the main collision types

Table 3.37.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Percentage of total	0	0	0	0	0	0	100
Annual average collisions post works	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	100	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.37.2 Collision Summary

In the 36 months prior to the scheme's construction there was one personal injury collision (0.33 per year on average) compared to two collisions in the 12 months post implementation (2.00 per year). This demonstrates an increase in collision rate along the link in the post implementation period.

Analysis of the collisions has identified that collisions involving pedal cycles has increased from none pre-construction to two post implementation.

- The collisions involving pedal cycles can be summarised as follows:

08/05/2011 40m northeast of the junction with Ram Street, a car changing lanes from 2 to 1 collides with a pedal cycle changing lanes from 1 to 2.

25/05/2011 40m northeast of the junction with Ram Street, a towing trailer passed too close to a pedal cycle causing rider to fall.

There may be an emerging trend in cycle collisions at this location.

It is recommended that the location is investigated to determine any site specific elements that may have contributed to the increase in collision rate at this location and re-assessed when three years post implementation collision data is available..



In summary of the items raised in Section 5 of this report, the above recommendations and subsequent suggested actions can be summarised as follows:

Investigate the layout of the carriageway

It is the view of the Audit Team that the layout of the carriageway is satisfactory.

3.38 Armoury Way junction with Ram Street (Node 159)

3.38.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.38.1 – pre construction collisions	Fatal	Serious	Slight	Total
September 2007 to August 2008	0	0	1	1
September 2008 to August 2009	0	0	1	1
September 2009 to August 2010	0	0	2	2
Total Collisions	0	0	4	4
Average Annual Collision Rate	0.00	0.00	1.33	1.33

Collision data for the 12 month period following completion of the scheme

Table 3.38.2 – post construction collisions	Fatal	Serious	Slight	Total
December 2010 to November 2011	0	0	1	1
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	1.00	1.00

Collision totals and percentages for the main collision types

Table 3.38.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.67	0.00	0.00	0.00	0.33
Percentage of total	0	0	50	0	0	0	25
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.38.2 Collision Summary

In the 36 months prior to the scheme's construction there were four personal injury collisions (1.67 per year on average) compared to one collision in the 12 months post implementation (1.00 per year). Due to the low number of collisions, and subsequent reduction in collision rate that has occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.

3.39 Ram Street (Armoury Way to Wandsworth High Street) (Link 158-159)

3.39.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.39.1 – pre construction collisions	Fatal	Serious	Slight	Total
September 2007 to August 2008	0	0	1	1
September 2008 to August 2009	0	0	0	0
September 2009 to August 2010	0	0	0	0
Total Collisions	0	0	1	1
Average Annual Collision Rate	0.00	0.00	0.33	0.33

Collision data for the 12 month period following completion of the scheme

Table 3.39.2 – post construction collisions	Fatal	Serious	Slight	Total
December 2010 to November 2011	0	0	0	0
Total Collisions	0	0	0	0
Average Annual Collision Rate	0.00	0.00	0.00	0.00

Collision totals and percentages for the main collision types

Table 3.39.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.00	0.00	0.33	0.00	0.00	0.33	0.00
Percentage of total	0	0	100	0	0	100	0
Annual average collisions post works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of total	0	0	0	0	0	0	0
Comparative % (LOCR 13, T2.1.34)	14.0	23.9	22.2	25.8	29.7	18.7	22.3

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.39.2 Collision Summary

There have been no collisions in the post implementation period. Due to the low number of collisions, and subsequent reduction in collision rate that has occurred along the link, a comparison between the two collision rates is not deemed relevant at this time.

It is recommended that no action is taken along the link and the route should be monitored and re-assessed when three years post implementation collision data is available.

3.40 Wandsworth High Street junction with Ram Street (Node 158)

3.40.1 Collision Overview

Collision data for the 36 month period prior to the commencement of the scheme

Table 3.40.1 – pre construction collisions	Fatal	Serious	Slight	Total
September 2007 to August 2008	0	1	6	7
September 2008 to August 2009	0	0	3	3
September 2009 to August 2010	0	1	1	2
Total Collisions	0	2	10	12
Average Annual Collision Rate	0.00	0.67	3.33	4.00

Collision data for the 12 month period following completion of the scheme

Table 3.40.2 – post construction collisions	Fatal	Serious	Slight	Total
December 2010 to November 2011	0	1	2	3
Total Collisions	0	1	2	3
Average Annual Collision Rate	0.00	1.00	2.00	3.00

Collision totals and percentages for the main collision types

Table 3.40.3 – Collision totals and %	KSI	PED	PC	P2W	DARK	WET	RT
Annual average collisions pre works	0.67	0.33	1.33	0.67	0.67	0.00	0.00
Percentage of total	17	8	33	17	17	0	0
Annual average collisions post works	1.00	2.00	0.00	1.00	0.00	1.00	0.00
Percentage of total	33	66	0	33	0	33	0
Comparative % (LOCR 13, T2.1.34)	14.5	23.7	20.9	23.8	33.3	17.8	21.5

^{*1} – A bold type indicates that a post construction collision rate is higher than pre construction rate.

^{*2} – Shading indicates where a post construction collision rate is higher than the comparative average.

3.40.2 Collision Summary

In the 36 months prior to the scheme's construction there were 12 personal injury collisions (4.00 per year on average) compared to three collisions in the 12 months post implementation (3.00 per year). Whilst the overall collision rate at the junction has reduced, collisions involving a pedestrian have increased in the after construction period.

- The collisions involving pedestrians can be summarised as follows:

05/12/2010 A pedestrian running for a bus falls and has hand run over by bus,

14/09/2011 An intoxicated pedestrian stumbles into road and is hit by a lorry.

There does not appear to be a trend in pedestrian collisions post implementation.

The increase in post implementation collisions involving death or serious injury (0.67 to 1.00 collisions), powered two-wheelers (0.67 to 1.00 collisions) and wet conditions (nil to 1.00 collisions), are not deemed relevant at this time.

It is recommended that no action is taken at the junction and the node should be monitored and re-assessed when three years post implementation collision data is available.



4 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

The proposals were subject to a Stage 1, Stage 1/2 and Stage 2 Road Safety Audits, depending on construction package. The contents of these Audits are regarded as superseded by the completion of the Stage 3 Audits detailed below.

Stage 3 Road Safety Audits were undertaken on each of the construction packages by TfL Roads Directorate the winter of 2011 and spring 2012 (ref 1478/CSH XXX&XXX/2011). Due to the size and number of items raised, reference to the original Audits should be made.

5 ITEMS RAISED AT THIS STAGE 4a ROAD SAFETY AUDIT

This section should be read in conjunction with Paragraphs 1.2.1, 1.2.2 and 1.2.3 of this report.

5.1 Lambeth Bridge Roundabout (Node 44)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

The street lighting and carriageway condition appear satisfactory at this location. The Audit Team noted that no CSH measures were implemented at the roundabout as part of the project, however, the roundabout could benefit from additional cycle infrastructure to assist cyclist to negotiate this busy roundabout.

5.2 Millbank (between Atterbury Street and Lambeth Bridge Rbt) (Link 21-44)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.3 Millbank junction with Atterbury Street (Node 21)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.4 Millbank (between Atterbury Street and Vauxhall Bridge) (Link 13-21)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

The carriageway condition and surface water drainage appear satisfactory at this location.

5.5 Vauxhall Bridge junction with Millbank (Node 13)

5.5.1 PROBLEM

Location: A – Vauxhall Bridge junction with Millbank (Node 13)

Summary: Carriageway layout poses a hazard to cyclists.

The Vauxhall Bridge approach layout encourages cyclists to adopt a position to the nearside when travelling ahead onto Vauxhall Bridge Road (northbound). This layout exposes cyclists to the 'left-hook' type conflict with vehicles wishing to turn left.

RECOMMENDATION

Modify the junction arrangement to cater for cyclists wishing to travel ahead, without the need to cross left turning vehicles. This may involve providing measures to encourage cyclists travelling ahead to utilise lane 2, together with dedicating the nearside lane to left turning only vehicles.

Client Officer / Senior Client Officer Comments

Improved provision for cyclists on the northbound approach to the junction from Vauxhall Bridge is currently being considered within the scope of the Cycle Superhighway Route 5 (CS5) project – the alignment of which will run north-south through the junction. Interactions between cyclists and vehicles will be considered as part of the CS5 design.

5.6 Grosvenor Road (Vauxhall Bridge to Claverton Street) (Link 6-13)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

It is the view of the Audit Team that the CSH layout at this location is clear and obvious; therefore, a potential cause for conflict may be a reduced visibility between turning vehicles and filtering powered two-wheelers and cyclists with an associated speed differential. It is noted that the area where the collisions occurred has recently been through the Better Junctions process and the carriageway layout has changed accordingly. It is not possible to assess whether this change has alleviated the potential for conflict at this location. Therefore, it is recommended that the route is monitored and re-assessed when three years post implementation collision data is available.

5.7 Grosvenor Road junction with Claverton Street (Node 6)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.8 Grosvenor Road (Claverton Street to Lupus Street) (Link 3-6)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.9 Grosvenor Road junction with Lupus Street (Node 3)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.10 Grosvenor Road (Lupus Street to Chelsea Bridge) (Link 3-721)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.11 Chelsea Bridge junction with Grosvenor Road (Node 721)

It is noted that five of the collisions occurred within the centre of the junction when one vehicle was performing a turning manoeuvre. The layout of the junction is such that the centre of the junction is on the crest of a hill from most approaches, therefore, the road marking layout may not be immediately obvious. The layout of the junction appears to operate effectively, albeit close to capacity at times. The Audit Team have not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

It is however recommended that maintenance of the road markings is undertaken as the existing provision is significantly faded.

5.12 Chelsea Bridge (Grosvenor Road to Borough Boundary) (Link 721-774)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.13 Chelsea Bridge Borough Boundary (Node 774)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.14 Queenstown Road (Borough Boundary to Queens Circus) (Link 224-774)

The Audit Team note that whilst the overall powered two-wheeler and pedal cycle collisions have reduced, the rate remains uncharacteristically high.

5.14.1 PROBLEM

Location: B – Queenstown Road junction with petrol station.

Summary: Carriageway layout poses a hazard to road users.

The Audit Team are concerned that the road layout poses a hazard to road users, particularly powered two-wheelers and cyclists. Collision analysis has identified a collision problem between right turning vehicles and these modes, a contributing factor of which may have been reduced inter-visibility when filtering.

RECOMMENDATION

Modify the junction arrangement to increase the inter-visibility between filtering vehicles and opposing vehicles. This may require the provision of a 'keep clear' road marking or other similar measure.

Client Officer / Senior Client Officer Comments

The right turn issue identified by the Auditors relating to the petrol station entrance on Queenstown Road will be considered as part of a general review of CS8 under the planned Cycle Superhighways 'upgrades' project.

5.15 Queens Circus Roundabout (Node 224)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.16 Prince of Wales Drive (Queens Circus to Macduff Road) (Link 213-224)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.17 Macduff Road (Prince of Wales Drive to Battersea Park Road)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.18 Battersea Park Road (Macduff Rd to Albert Bridge Rd) (Link 202-214)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

It is the view of the Audit Team that the carriageway layout at this location is clear.

5.19 Battersea Park Road junction with Albert Bridge Road (Node 202)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.20 Battersea Park Road (Albert Bridge Rd to Latchmere Rd) (Link 201-202)

5.20.1 PROBLEM

Location: C – Battersea Park Road junction with Latchmere Street

Summary: Carriageway layout poses a hazard to road users.

The Audit Team are concerned that the road layout poses a hazard to road users, particularly powered two-wheelers and cyclists. Collision analysis has identified a collision problem between right turning vehicles and these modes, a contributing factor of which may have been reduced inter-visibility when filtering.

RECOMMENDATION

Modify the junction arrangement to increase the inter-visibility between filtering vehicles and opposing vehicles. This may require the provision of a 'keep clear' road marking or other similar measure.

Client Officer / Senior Client Officer Comments

The right turn issue identified by the Auditors will be considered as part of a general review of CS8 under the planned Cycle Superhighways 'upgrades' project..

5.21 Battersea Park Road junction with Latchmere Road (Node 201)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.22 Battersea Park Road (Latchmere Road to Falcon Road) (Link 192-201)

5.22.1 PROBLEM

Location: General to scheme, multiple locations along link 192-201)

Summary: Carriageway layout poses a hazard to road users.

The Audit Team are concerned that the road layout poses a hazard to road users, particularly powered two-wheelers and cyclists. Collision analysis has identified a collision problem between right turning vehicles and these modes, a contributing factor of which may have been reduced inter-visibility when filtering. This is of particular concern at the junctions of Bullen Street, Frere Street and Stanmer Street.

RECOMMENDATION

Modify the junction arrangement to increase the inter-visibility between filtering vehicles and opposing vehicles. This may require the provision of a 'keep clear' road marking or other similar measure.

Client Officer / Senior Client Officer Comments

The right turn issue identified by the Auditors will be considered as part of a general review of CS8 under the planned Cycle Superhighways 'upgrades' project.

5.23 Battersea Park Road junction with Falcon Road (Node 192)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.24 Battersea Park Road (Falcon Road to Lombard Road) (Link 191-192)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.25 Battersea Park Road junction with Lombard Road (Node 191)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.26 York Road (Lombard Road to Plough Road) (Link 188-191)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.27 York Road junction with Plough Road (Node 188)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.28 York Road (Plough Rd to Wandsworth Bridge Rbt) (Link 179-188)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures. It is recommended that a study to investigate the continued large percentage of powered two-wheeler and right turning collisions is undertaken.

5.29 Wandsworth Bridge Roundabout (Node 179)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.30 Swandon Way (Wandsworth Bridge Rbt to Old York Road) (Link 173-179)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.31 Old York Road

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.32 Old York Road junction with Swandon Way (Node 661)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.33 Barchard Street

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.34 Fairfield Street (Old York Road to Barchard Street) (Link 155-661)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.



5.35 Armoury Way to Swandon Road (Link 159-661)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

The Audit Team are of the view that the layout is not unsafe, and alternative off carriageway facilities exist for those wishing to use them.

5.36 Armoury Way junction with Ram Street (Node 159)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.37 Ram Street (Armoury Way to Wandsworth High Street) (Link 158-159)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

5.38 Wandsworth High Street junction with Ram Street (Node 158)

The Audit Team has not identified any features of the scheme that could be removed or modified in order to improve the road safety of the measures.

End of list of problems identified and recommendations offered in this Stage 4a Road Safety Audit



6 ISSUES IDENTIFIED DURING THE STAGE 4a ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

Safety issues identified during the audit and site inspection that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrant that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.

The Audit Team have no issues to raise within this section.

7 CONCLUSIONS

7.1 Overview

- 7.1.1 Along the entire length of CSH8 there were 131 collisions in the 12 month period immediately after the scheme's implementation, compared to an average annual rate of approximately 126 collisions in the three years prior to construction. This represents an increase of approximately 5 collisions (4.24%) along the route as a whole.
- 7.1.2 Analysis of collisions involving a pedal cycle has identified 48 collisions in the 12 month period immediately after the scheme's implementation, compared to an average annual rate of approximately 43 collisions in the three years prior to construction. This represents an increase of approximately 5 collisions (10.81%) along the route as a whole.
- 7.1.3 The whole of CSH8 was assessed by link and by node to determine collision performance against the collision rate prior to construction, but also compared to the comparative average for Inner London.
- 7.1.4 The whole of CSH8 comprises 38 modules (17 nodes, 18 links and 3 regions) when overlaid over TfLs collision database ACCSTATS. Of these 38 modules, 20 demonstrated a reduction in collision rate, 9 experienced an increase of 1.00 collisions or less, and 9 demonstrated an increase in excess of 1.00 collisions per year.
- 7.1.5 The nine sites that demonstrated an increase in annual collision rate in excess of 1.00 collisions per annum can be summarised as follows:
- Millbank (between Atterbury Street and Lambeth Bridge Roundabout),
 - Millbank (between Atterbury Street and Vauxhall Bridge),
 - Grosvenor Road (Vauxhall Bridge to Claverton Street),
 - Chelsea Bridge junction with Grosvenor Road,
 - Battersea Park Road (Macduff Road to Albert Bridge Road),
 - Battersea Park Road (Albert Bridge Road to Latchmere Road),
 - Battersea Park Road (Latchmere Road to Falcon Road),
 - Old York Road, and;
 - Armoury Way to Swandon Road,
- 7.1.6 Analysis of the collision data has identified a number of potential trends in collisions, namely;
- Left turning vehicles and cyclists travelling ahead at the junction of Vauxhall Bridge Road and Millbank,
 - Turning manoeuvres into the Petrol Station from Queenstown Road, and;
 - Turning manoeuvres into Latchmere Street, Bullen Street, Frere Street and Stanmer Street from Battersea Park Road.

7.2 Summary

7.2.1 It is recommended to assist in reducing the collision rate along the length of CSH8, the following measures could be introduced.

- A modified junction layout at the junction of Vauxhall Bridge Road and Millbank to dedicate the nearside lane to left turn only and encourage cyclists travelling ahead to utilise lane 2,
- Maintenance of the road markings at the junction of Chelsea Bridge and Grosvenor Road, and;
- Measures (such as a keep clear road marking) to increase the inter-visibility between filtering vehicles and opposing vehicles when turning at the following locations:
 - o Queenstown Road junction with the Petrol Station,
 - o Battersea Park Road junction with Latchmere Street,
 - o Battersea Park Road junction with Bullen Street,
 - o Battersea Park Road junction with Frere Street,
 - o Battersea Park Road junction with Stanmer Street.



8 SIGNATURES AND SIGN-OFF

8.1 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and documents listed in Appendix A. to this Safety Audit Report. The Road Safety Audit has been carried out with the sole purpose of identifying any feature that could be removed or modified in order to improve the safety of the measures. The problems identified have been noted in this report together with associated suggestions for safety improvements that we recommend should be studied for implementation.

No one on the Audit Team has been involved with the design of the measures.

AUDIT TEAM LEADER:

Name: [REDACTED] Signed: [REDACTED]
BEng (Hons), CMILT, MCIHT MSoRSA

Position: Principal Road Safety Auditor Date: 10/09/2013

Organisation: Transport for London, Road Safety Audit
Roads Directorate, Safety, Risk and Design Services

Address: 4th Floor Palestra,
197 Blackfriars Road,
London, SE1 8NJ

AUDIT TEAM MEMBER:

Name: [REDACTED] MCIHT, MSoRSA Signed: [REDACTED]

Position: Principal Road Safety Auditor Date: 10/09/2013

Organisation: Transport for London, Road Safety Audit
Roads Directorate, Safety, Risk and Design Services

Address: 4th Floor Palestra,
197 Blackfriars Road,
London, SE1 8NJ



8.2 CLIENT OFFICER STATEMENT

In accordance with SQA-0170 Issue 6, I certify that I have reviewed the items raised in this Stage 4a Safety Audit Report. I have given due consideration to each issue raised and have stated my proposed course of action for each in this report. I seek the Senior Client Officers endorsement of my proposals.

Name: [REDACTED]
Position: Programme Sponsor
Organisation: Transport for London - CDT
Signed: [REDACTED] **Dated:** 17/09/2013

8.3 SENIOR CLIENT OFFICER STATEMENT

I accept these proposals by the Client Officer.

Name: [REDACTED]
Position: Senior Programme Sponsor
Organisation: Transport for London - CDT
Signed: [REDACTED] **Dated:** 17/09/2013

APPENDIX A

Documents Forming the Audit Brief

DRAWING NUMBER

60144895/CS8/CP1
60144895/CS8/CP2
60144895/CS8/CP3
60144895/CS8/CP4
60144895/CS8/CP5
60144895/CS8/CP6
60144895/CS8/CP7
60144895/CS8/CP8
60144895/CS8/CP9
60144895/CS8/CP10
60144895/CS8/CP11
60144895/CS8/CP11a
60144895/CS8/CP12
60144895/CS8/CP13
60144895/CS8/CP14
60144895/CS8/CP15
60144895/CS8/CP17
60144895/CS8/CP20

DRAWING TITLE

Construction Package 1
Construction Package 2
Construction Package 3
Construction Package 4
Construction Package 5
Construction Package 6
Construction Package 7
Construction Package 8
Construction Package 9
Construction Package 10
Construction Package 11
Construction Package 11a
Construction Package 12
Construction Package 13
Construction Package 14
Construction Package 15
Construction Package 17
Construction Package 20

DOCUMENTS

- Safety Audit Brief
- Previous Road Safety Audits
- Previous Designer Responses
- Departures from Standards
- Traffic signal details
- Collision data
- Traffic count data
- Speed survey data
- Other documents



DETAILS (where appropriate)

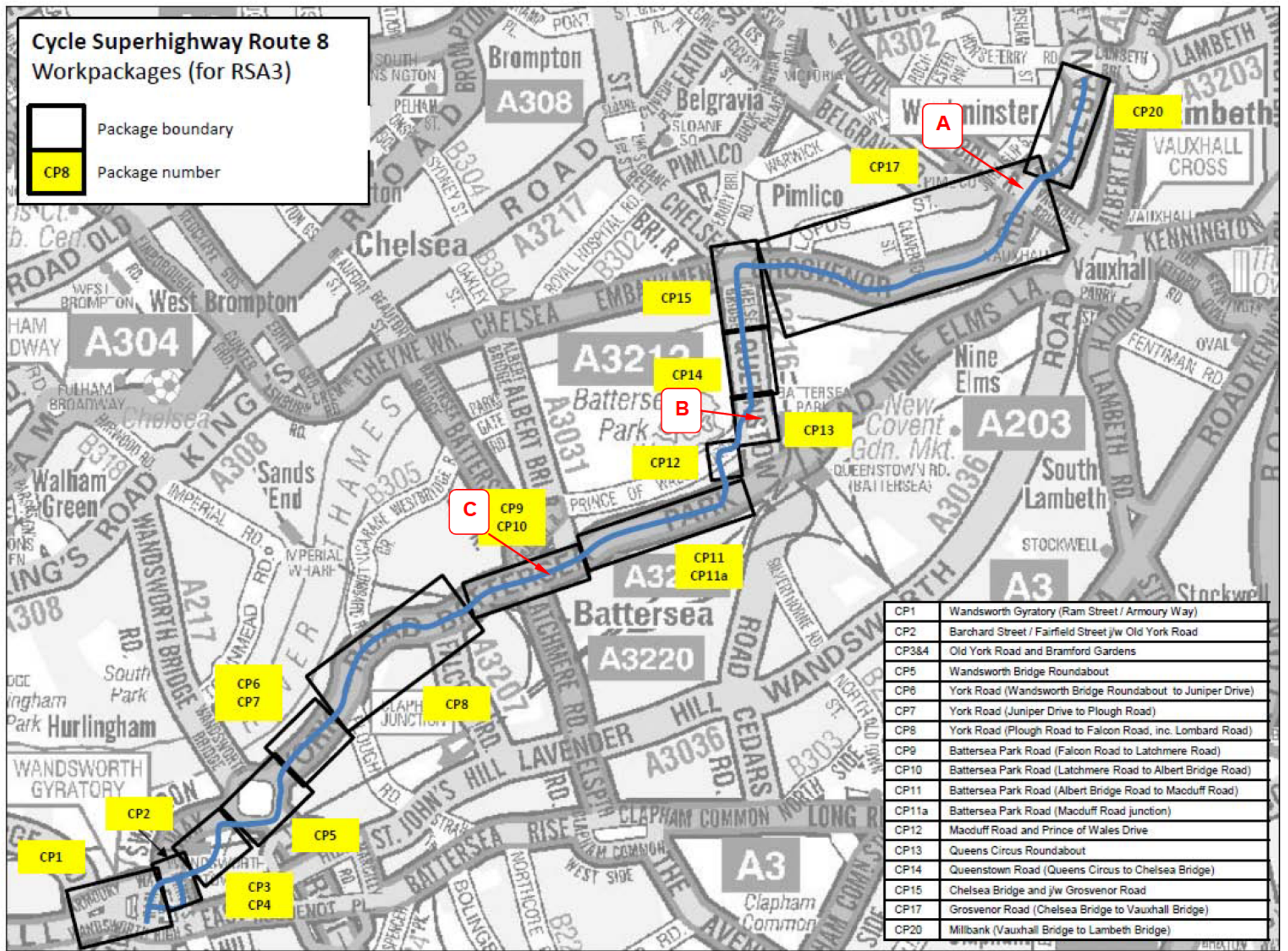


APPENDIX B

As Constructed Scheme Layout and Problem Locations

Cycle Superhighway Route 8 Workpackages (for RSA3)

-  Package boundary
-  Package number



CP1	Wandsworth Gyratory (Ram Street / Armoury Way)
CP2	Barchard Street / Fairfield Street j/w Old York Road
CP3&4	Old York Road and Bramford Gardens
CP5	Wandsworth Bridge Roundabout
CP6	York Road (Wandsworth Bridge Roundabout to Juniper Drive)
CP7	York Road (Juniper Drive to Plough Road)
CP8	York Road (Plough Road to Falcon Road, inc. Lombard Road)
CP9	Battersea Park Road (Falcon Road to Latchmere Road)
CP10	Battersea Park Road (Latchmere Road to Albert Bridge Road)
CP11	Battersea Park Road (Albert Bridge Road to Macduff Road)
CP11a	Battersea Park Road (Macduff Road junction)
CP12	Macduff Road and Prince of Wales Drive
CP13	Queens Circus Roundabout
CP14	Queenstown Road (Queens Circus to Chelsea Bridge)
CP15	Chelsea Bridge and j/w Grosvenor Road
CP17	Grosvenor Road (Chelsea Bridge to Vauxhall Bridge)
CP20	Millbank (Vauxhall Bridge to Lambeth Bridge)



APPENDIX C

Stick Diagrams and Interpreted Listings

