

Cycle Superhighways Route 8 Upgrade

Chelsea Bridge / Grosvenor Road

Stage 1 Road Safety Audit

Ref: 2199/VAR/A3212/TLRN/2015

Prepared for:

Sponsorship, TfL Road Space Management Directorate (RSM)

By:

Road Safety Audit, TfL Asset Management Directorate

Prepared by: [REDACTED] Audit Team Leader

Checked by: [REDACTED] Audit Team Member

Approved by: [REDACTED]

Version	Status	Date
A	Audit report issued to Client	27/01/2015



1.0 INTRODUCTION

1.1 Commission

- 1.1.1 This report results from a Stage 1 Road Safety Audit carried out on the Cycle Superhighways Route 8 Upgrade, Chelsea Bridge / Grosvenor Road proposals.
- 1.1.2 The Audit was undertaken by TfL Road Safety Audit in accordance with the Audit Brief issued by the Client Organisation on 7^h January 2015. It took place at the Palestra offices of TfL on 13th January 2015 and comprised an examination of the documents provided as listed in Appendix A, plus a visit to the site of the proposed scheme.
- 1.1.3 The visit to the site of the proposed scheme was made on 13^h January 2015. During the site visit the weather was raining and the existing road surface was wet.

1.2 Terms of Reference

- 1.2.1 The Terms of Reference of this Audit are as described in TfL Procedure SQA-0170 dated May 2014. 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 feels 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 proposals; hence they will not be raised in Section 3 of this report as they fall outside the remit of Road Safety Audit in general as specified in the procedure SQA-0170 dated May 2014. 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 4 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 In accordance with TfL Procedure SQA-0170 dated May 2014, this Audit has a maximum shelf life of 2 years. If the scheme does not progress to the next stage in its development within this period, then the scheme should be re-audited.
- 1.2.5 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.
- 1.2.6 It is the responsibility of the Design Organisation to complete the Designer's response section of this Audit report. Where applicable and necessary it is the responsibility of the Client Organisation to complete the Client comment section of this Audit report. Signatures from both the Design Organisation and Client Organisation must be added within Section 5 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 contact details: [REDACTED] Sponsorship, TfL RSM

1.3.2 Design Organisation

Design contact details: [REDACTED] – Outcomes Design Engineering, TfL

1.3.3 Audit Team

Audit Team Leader: [REDACTED] – TfL Road Safety Audit

Audit Team Member: [REDACTED] TfL Road Safety Audit

Audit Team Observer: None present

1.3.4 Other Specialist Advisors

Specialist Advisor Details: None present

1.4 Purpose of the Scheme

1.4.1 Cycle Superhighway Route 8 (CS8) runs from Wandsworth to Westminster and was completed and launched on 19th July 2011. It comprises a series of infrastructure interventions to assist cyclists such as Advanced Stop Lines (ASL's), blue surfacing, carriageway renewals, signage, modified junctions and roadside safety mirrors.

The proposal would enhance facilities for cyclists travelling on or joining CS8.

A two stage right turn for cyclists travelling from Chelsea Bridge into Grosvenor Road eastbound is proposed to provide a more comfortable means of making this manoeuvre for cyclists who do not wish to turn right in one stage. No early start would be provided for cyclists here; proposed signal staging would remain as existing.

Other main elements of the proposal are:

Convert lane 1 of Chelsea Embankment eastbound to left-turn only;

Re-position median island, cut back northern footway and re-locate cycle hire docking station on Grosvenor Road, to provide 2.0m mandatory cycle lanes here.

Provide 7.5m ASLs on 3 of 4 arms

Provide 1.9m advisory cycle lane on Chelsea Bridge Road northbound. *

*Taken directly from the Audit Brief.

1.5 Special Considerations

1.5.1 The Audit Team has no special considerations to raise.

2.0 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

Previous Road Safety Audits have been undertaken on Cycle Superhighways Route 8, the most recent and therefore relevant of these is the Stage 4a RSA (ref-1821.08/VAR/VAR/TLRN/2013). An extract from that report which summarises the issues raised relevant to this junction is detailed below:-

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.

During the most recent site visit these road markings appeared to be in a good condition. Therefore this issue will not be raised again in this Audit report.

3.0 ITEMS RAISED AT THIS STAGE 1 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.

3.1 CYCLE FACILITIES

3.1.1 PROBLEM

Location: A – Chelsea Bridge Road northbound right turn into Grosvenor Road

Summary: Proposed cycle lane may result in increased collisions between right turning cyclists and motorists continuing ahead.

The proposals include a cycle lane which utilises advisory cycle lane markings for both sides of the cycle lane which effectively guides cyclists, across the path of northbound vehicles. A false sense of security may be instilled to less experienced cyclists who may not appreciate that the road markings do not represent that cyclists have priority over vehicles continuing ahead and that right turning cyclists must continue to give way to northbound vehicles. An increased potential for right turning cyclists to collide with vehicles continuing northbound may result.

RECOMMENDATION

It may be beneficial to alter the layout of the proposed road markings to clarify that the facility is for directional guidance rather than anything that could be perceived as an implied priority. This may include making the 'cycle lane' less continuous and making the optional right turn waiting / reservoir area a more obvious option.

Design Organisation Response	Accepted / Part Accepted / Rejected
[Leave blank for Design Organisation's Response]	
Client Organisation Comments	
[Leave blank for Client Organisation's Comments]	

3.1.2 PROBLEM

Location: B – Chelsea Bridge Road northbound right turn into Grosvenor Road

Summary: Traffic signal locations may not be immediately visible to cyclists

The proposals require cyclists to adopt a carriageway position away from the normal primary stop-line to utilise the two stage right turn. Encouraging cyclists to adopt this position results in them being located in front of the primary traffic signals and therefore relying on the secondary signal to decide when to progress.

The location of the secondary traffic signal may lead to cyclists failing to appreciate when it is safe to cross, with an exacerbated potential for conflict as a result. This is particularly the case if the secondary traffic signal is obscured or not operational.

RECOMMENDATION

Ensure the traffic signals are located in a position where they can be intuitively seen by cyclists.

Design Organisation Response	Accepted / Part Accepted / Rejected
[Leave blank for Design Organisation's Response]	
Client Organisation Comments	
[Leave blank for Client Organisation's Comments]	

3.1.3 PROBLEM

Location: C – Grosvenor Road eastbound, east of Chelsea Bridge Road

Summary: Right turners may encroach into cycle lane and 'squeeze' cyclists.

The proposed layout may result in larger vehicles encroaching across the cycle lane as they turn right from Chelsea Bridge Road into Grosvenor Road. The alterations to the median island combined with the proposed advisory cycle lane effectively results in a reduction to a single general traffic lane of approximately 3.2m in width as users enter Grosvenor Road. These alterations may result in drivers, particularly those in larger vehicles encroaching across the advisory cycle lane with an increased potential for collisions with any cyclists in this area who may not expect such manoeuvres.

RECOMMENDATION

Swept path analysis should be undertaken which also takes into consideration that not all larger vehicles will 'swing out' to the left before making the right turn into Grosvenor Road. The results from the swept path analysis should guide any alterations which may be required to the layout to deter over-running of the cycle lane.

Design Organisation Response	Accepted / Part Accepted / Rejected
[Leave blank for Design Organisation's Response]	
Client Organisation Comments	
[Leave blank for Client Organisation's Comments]	

3.2 GENERAL

3.2.1 PROBLEM

Location: D – Chelsea Embankment eastbound approach to Chelsea Bridge Road

Summary: Proposed lane widths may result in side swipe type collisions.

The proposals within the Chelsea Embankment approach to this junction result in the nearside eastbound lane becoming 2.5m which although similar to existing is considered insufficient, particularly when abutted by lane two (2.8m) and lane three (3.0m). The Audit Team is concerned that the proposed lane widths within lane 1 and 2 may result in poor lane discipline particularly with larger vehicles and may result in an increased potential for side swipe type collisions.

RECOMMENDATION

It may be beneficial to re-distribute the lane width to still allow cyclists to assert primary position but also provide adequate lane widths for the expected vehicle types, volume and turning movements.

Design Organisation Response	Accepted / Part Accepted / Rejected
[Leave blank for Design Organisation's Response]	
Client Organisation Comments	
[Leave blank for Client Organisation's Comments]	

3.2.2 PROBLEM

Location: E – Grosvenor Road westbound through junction with Chelsea Embankment

Summary: Proposed westbound alignment may lead to increased collisions.

The proposed alterations to the median islands may result in increased collisions as westbound users in the offside lane encounter the sudden deviation in the alignment as they enter Chelsea Embankment. The combination of the eastern island being re-positioned further north, the crest encountered in the centre of the junction and the slight left hand curve to the westbound lateral alignment, may result in vehicles in the offside lane striking the western median island or taking evasive action to avoid it. The proposed layout may therefore result in increased collisions with the island or side swipe or shunt type collisions as users take evasive action to avoid the island.

RECOMMENDATION

Ensure that the revised alignment does not result in increased potential for kerb strikes or evasive actions. This may include but is not limited to altering the southern kerb alignments of the median islands from Grosvenor Road to Chelsea Embankment.

Design Organisation Response	Accepted / Part Accepted / Rejected
[Leave blank for Design Organisation's Response]	
Client Organisation Comments	
[Leave blank for Client Organisation's Comments]	

End of list of problems identified and recommendations offered in this Stage 1 Road Safety Audit

4.0 ISSUES IDENTIFIED DURING THE STAGE 1 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 warrants that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.

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

5.0 SIGNATURES AND SIGN-OFF

5.1 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 in accordance with TfL Procedure SQA-0170 dated May 2014, 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] MCIHT, MSoRSA Signed:
Position: Principal Road Safety Auditor Date: 27/01/2015
Organisation: Transport for London, Road Safety Audit
Asset Management Directorate
Address: 8th Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ
Contact: [REDACTED]

AUDIT TEAM MEMBER:

Name: [REDACTED] Signed:
BSc. (Hons), CMILT, MCIHT, MSoRSA
Position: Principal Road Safety Auditor Date: 27/01/2015
Organisation: Transport for London, Road Safety Audit
Asset Management Directorate
Address: 8th Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ
Contact: [REDACTED]

5.2 DESIGN TEAM STATEMENT

In accordance with SQA-0170 dated May 2014, I certify that I have reviewed the items raised in this Stage 1 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 Client Organisations endorsement of my proposals.

Name:

Position:

Organisation:

Signed:

Dated:

5.3 CLIENT ORGANISATION STATEMENT

I accept these proposals by the Design Organisation.

Name:

Position:

Organisation:

Signed:

Dated:

5.4 SECONDARY CLIENT ORGANISATION STATEMENT (where appropriate)

I accept these proposals by the Design Organisation.

Name:

Position:

Organisation:

Signed:

Dated:

APPENDIX A

Documents Forming the Audit Brief

DRAWING NUMBER

ODE-ST-PPJ441C-CS8U2-ID-01
Rev A

DRAWING TITLE

RB Kensington & Chelsea & WCC Cycle
Superhighway Route 8 Upgrade Chelsea Bridge /
Grosvenor Road Concept Design

DOCUMENTS

- Safety Audit Brief
- Site Location Plan
- Traffic signal details
- TfL signal safety checklist
- Departures from standard
- Previous Road Safety Audits
- Previous Designer Responses
- Collision data
- Collision plot
- Traffic flow / modelling data
- Pedestrian flow / modelling data
- Speed survey data
- Other documents

DETAILS (where appropriate)

APPENDIX B

Problem Locations

