PROJECT CENTRE

Road Safety Audit Combined Stage 1/2

Alroy Road / Endymion Road, Cycling Facilities Improvement Scheme

London Borough of Haringey

October 2014







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Report Reference	Issue	Description	Originator	Checked	Authorised
1000002012 - RSA	01	Final	Bryan Shawyer 12/10/14	Martin Morris 12/10/14	Tim Mantle 13/10/14

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1. INTRODUCTION

- 1.1 This report details the results of a Combined Stage 1/2 Road Safety Audit carried out on a proposed cycling facilities improvement scheme at the mini-roundabout junction at Alroy Road with Endymion Road, London. The Audit was undertaken in response to a written request by the Design Team (London Borough of Haringey) and was carried out in October 2014.
- 1.2 The Audit Team:-
 - Bryan Shawyer, B.Eng (Hons), MSc, MCIHT (Team Leader)
 - Martin Morris, PGD, MCIHT (Team Member)
- 1.3 The Client Organisation:-
 - London Borough of Haringey

The Client Officer:-

- Gary Smith Senior Traffic Engineer (London Borough of Haringey)
- 1.4 The Design Team:-
 - Sustainable Transport, London Borough of Haringey, 2nd Floor, River Park House, 225 High Road, Wood Green, London, N22 8HQ
- 1.5 The Audit was undertaken in accordance with procedures laid out in the Design Manual for Roads and Bridges - HD 19/03 for Road Safety Audits. The Audit comprised an examination of the drawing and documents, and a visit to the site.
- 1.6 The Audit comprised an examination of the drawing and documents provided by the Design Team as listed in Appendix A of this report. The site visit was carried out between 12:00 and 13:00 during daylight hours on Saturday 11th October 2014; the weather was fine and the road surface was dry.
- 1.7 The Auditors have examined and reported only on the road safety implications of the proposed scheme as presented. They have not examined or verified the compliance of the scheme to any other criteria. The drawing provided was deemed acceptable for the purpose of the Audit.
- 1.8 The auditors were not informed of any Departures from Standards in this design.
- 1.9 All comments and recommendations are referenced to the A3 location plans in Appendix B of this report.





2. COMBINED STAGE 1/2 ROAD SAFETY AUDIT

2.1 General

2.1.1 **PROBLEM:**

Location A: Raised table - Drawing 003.

Summary: Inappropriate speed could lead to pedestrian accidents.

Detail: No construction details, including Polished Stone Values (PSV), of the raised table have been provided for assessment. Although, it is recognised that traffic speeds are likely to be lower, due the presence of the raised table, there will still be turning movements at this junction and as such it is likely that there will be a number of vehicle conflicts. If the surface course has a low PSV value then there is a risk of rear end shunt or side impact accidents.

RECOMMENDATION:

That the surface course of the raised table should have a PSV that is appropriate for the traffic speeds.

2.1.2 **PROBLEM:**

Location B: Raised table - Drawing 003.

Summary: Inappropriate drainage could compromise road safety.

Detail: The proposals indicate that 6 gullies have been allowed to drain the carriageway; however, their positions are unknown. Insufficient drainage facilities at the base of the ramps and at the tapered buildout could lead to ponding, which would be detrimental to road safety and could lead to loss of control accidents.

RECOMMENDATION:

That care is taken to ensure that ponding does not occur, either by assessment of the carriageway profile (vertical and horizontal) or by drainage provision.

2.1.3 **PROBLEM:**

Location C: Mini-roundabout - Drawing 003.

Summary: Insufficient details could compromise road safety.



Detail: No construction details have been supplied for the splitter islands at the junction or the tapered buildout on the southwest bound approach to the junction. Inappropriate construction could compromise road safety.

RECOMMENDATION:

That the construction details of the splitter islands should be provided for assessment.

2.2 Local Alignment

2.2.1 No comment.

2.3 Junctions

2.3.1 PROBLEM:

Location D: Mini-roundabout - Drawing 003.

Summary: Location of traffic island could compromise road safety.

Detail: No swept paths at the junction have been provided for assessment and there is concern that vehicles, whilst negotiating a path around the traffic islands, may strike the kerb or overrun the footway, which could lead to loss of control or pedestrian accidents.

RECOMMENDATION:

That swept paths should be checked to ensure that all expected vehicle movements can be safely accommodated.

2.3.2 **PROBLEM:**

Location E: Mini-roundabout - Drawing 003.

Summary: Tapered buildout could compromise road safety.

Detail: No swept paths at the junction have been provided for assessment and the tapered build out will push southwest bound traffic further into the centre of the carriageway. In addition, it is proposed to have a traffic island on the southbound approach to the junction, which will restrict turning movements. During the site visit is was noted that under current conditions traffic turning left out of Alroy Road invariably over ran the parking bay on the northeastern side of the carriageway. There is concern that traffic turning left out of Alroy



Road may have head on collisions with waiting traffic; strike the kerb or overrun the footway, which could lead to loss of control or pedestrian accidents; or hit a parked vehicle.

RECOMMENDATION:

That swept paths should be checked to ensure that all expected vehicle movements can be safely accommodated and that the length of the parking bay on the northeastern side of the carriageway should be reduced.

2.4 Non-Motorised User Provision

2.4.1 **PROBLEM:**

Location F: Uncontrolled crossing on Endymion Road - Drawing 003.

Summary: Inappropriate gaps for pedestrians could compromise road safety.

Detail: During the site visit it was observed that traffic flows were constantly high on all arms of the junction, and that suitable gaps for pedestrians, particularly on Endymion Road were very infrequent. It is recognised that the introduction of a raised table will reduce traffic speed and that drivers approaching the junction may give way to pedestrians; however, there is concern that drivers exiting the junction will not be expecting pedestrian movements, which could lead to pedestrian or rear end shunt accidents.

RECOMMENDATION:

That the raised table should be extended and that a controlled crossing, type dependent on traffic flows, speeds and pedestrian movements, should be introduced on Endymion Road. Alternatively, that additional speed reducing features should be introduced on Endymion Road to provide suitable gaps for pedestrians.

2.4.2 PROBLEM:

Location G: Uncontrolled crossing on Endymion Road - Drawing 003.

Summary: Insufficient visibility could increase risk of colliosn.

Detail: On the southern side of the carriageway of Endymion Road, the visibility to the left at the proposed uncontrolled crossing is restricted by fencing and the left hand bend. In addition, traffic approaching the junction from the southwest approaches at an inappropriate speed and often crossed the centre line during the site visit. Restricted visibility and inappropriate speeds could lead to pedestrian or rear end shunt accidents.



RECOMMENDATION:

That the height of the fencing should be reduced; centre hatching should be introduced on the northeast bound approach to the junction; and that the problem should be read in conjunction with item 2.4.1.

2.4.3 **PROBLEM:**

Location H & I: Uncontrolled crossings - Drawing 003.

Summary: Inappropriate kerb height could lead to pedestrian trips.

Detail: No details on dropped kerbs or the slope gradients have been provided for assessment. Dropped kerbs that are not flush or within a 6mm tolerance, could lead to pedestrian trip accidents; further excessive slopes, greater than 2.5%, are difficult to negotiate for many manual wheelchair users.

RECOMMENDATION:

That the dropped kerbs should be flush with a 6mm tolerance.

2.5 Road Signs, Carriageway Markings and Lighting

2.5.1 **PROBLEM:**

Location J: Northeast approach bound to the junction - Drawing 003.

Summary: Inappropriate signage could compromise road safety.

Detail: On the northeast bound approach to the mini-roundabout junction there is an advanced direction sign, indicating a priority junction with the northeast bound movement having priority (see figure 1 below), where a 'Roundabout Ahead' sign immediately follows; however, this sign is very faded and in poor condition. There is concern that traffic on this approach could be misled and this could lead to side impact or rear end shunt accidents.





Figure 1: Inappropriate signage in advance of the mini-roundabout junction.

RECOMMENDATION:

That both signs should be replaced with appropriate signage.

2.5.2 **PROBLEM:**

Location K: Mini-roundabout junction - Drawing 003.

Summary: Insufficient signage could compromise road safety.

Detail: Currently, there is no 'Mini-roundabout' signage on the northeast bound approach to the junction, nor is such a sign proposed as part of the works. Traffic on this approach is insufficiently warned that right turning traffic has priority at the junction, which could lead to side impact accidents, particularly during conditions of poor visibility when the road marking may be less visible.

RECOMMENDATION:

That a 'Mini-roundabout' sign to diagram 611.1 should be installed at the junction for northeast bound traffic.



2.5.3 **PROBLEM:**

Location L: Mini-roundabout junction - Drawing 003.

Summary: Inappropriate parking restrictions could compromise road safety.

Detail: Currently, there is limited waiting available at the junction, which could lead to inappropriate parking, which could compromise road safety.

RECOMMENDATION:

That at 'At Any Time' waiting restrictions should be installed at the junction.



3. ISSUES IDENTIFIED DURING THE ROAD SAFETY AUDIT OUTSIDE THE TERMS OF REFERENCE

- 3.1 Any issues that the Audit Team wishes to bring to the attention of the Client Officer which are not covered by the road safety implications of this audit have been included in the following section. These issues could include maintenance items, operational issues or poor existing provision. It should be understood however; that in raising these issues, the Audit Team do not warrant that a full review of the existing highway environment has been undertaken beyond the scope of the audit.
- 3.2 The current 'Mini-roundabout' signs to diagram, 611.1 are incorrectly rotated and do not comply to Traffic Signs Manual, Chapter 3. It is suggested that the signs should be correctly rotated in accordance Chapter 3.



4. AUDIT TEAM STATEMENT

The audit has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme. The problems identified have been noted in this report together with suggestions for safety improvements, which we recommend should be studied for implementation.

No member of the safety audit team has been involved with the design of the measures

Bryan Shawyer, B.Eng (Hons), MSc, MCIHT Team Leader Signed:.....B Shawyer / M Morris..

eam Leader

Date:12/10/2014.....

Martin Morris, PGD, MCIHT Team Member



5. QUALITY

It is the policy of Project Centre to supply Services that meet or exceed our clients' expectations of Quality and Service. To this end, the Company's Quality Management System (QMS) has been structured to encompass all aspects of the Company's activities including such areas as Sales, Design and Client Service.

By adopting our QMS on all aspects of the Company, Project Centre aims to achieve the following objectives:

- Ensure a clear understanding of customer requirements;
- Ensure projects are completed to programme and within budget;
- Improve productivity by having consistent procedures;
- Increase flexibility of staff and systems through the adoption of a common approach to staff appraisal and training;
- Continually improve the standard of service we provide internally and externally;
- Achieve continuous and appropriate improvement in all aspects of the company;

Our Quality Management Manual is supported by detailed operational documentation. These relate to codes of practice, technical specifications, work instructions, Key Performance Indicators, and other relevant documentation to form a working set of documents governing the required work practices throughout the Company.

All employees are trained to understand and discharge their individual responsibilities to ensure the effective operation of the Quality Management System.







APPENDIX A - SCHEDULE OF DOCUMENTS EXAMINED





SCHEDULE OF DOCUMENTS EXAMINED

(Documents Forming the Audit Brief)

Drawings:

Title	Number	
Consultation Drawing,	003	
Junction of Alroy / Endymion Road, Option3		

Other documents: -

N/A





APPENDIX B - LOCATION DRAWING















Memberships





