



Road Safety Audit Stage 2 Addendum Report

Highway Improvement Scheme
South Wokingham Distributor Road (SWDR)
Western Gateway Phase 2

January 2022

Waterman Infrastructure & Environment Limited

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
1	19 January 2022	Darren Gotch	Gill Wharton	Andy McDonald Director 

Comments

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1. Introduction

- 1.1. This report results from a Stage 2 Road Safety Audit carried out on the proposed roundabout improvement works at the junction of Finchampstead Road and Molly Millars Lane, Wokingham. The works relate to the South Wokingham urban extension that is to deliver approximately 2,500 new homes.
- 1.2. The Road Safety Audit was undertaken at the request of the Overseeing Organisation, Wokingham Borough Council. The Design Organisation is Tony Gee and Partners LLP, 140 High Street, Esher, Surrey, KT10 9QJ.
- 1.3. The Road Safety Audit Team membership was as follows:
 - Darren Gotch - Audit Team Leader, Waterman Infrastructure & Environment Ltd.
 - Umer Farooq - Audit Team Member, Waterman Infrastructure & Environment Ltd.
- 1.4. The Audit comprised of an examination of the information provided by Tony Gee LLP as shown in **Appendix A**.
- 1.5. This Road Safety Audit Addendum Report has been produced following on from the original Stage 2 Road Safety Audit undertaken in August 2021. This Addendum report focuses on the addition of 3 new ADS signs only, namely ADS01, ADS02 and ADS03 and does not review any other elements of the drawings provided. It should be noted that no further site visit has been undertaken to review the additional information provided and this addendum has been undertaken as a desktop study review only at the request of Wokingham Borough Council.
- 1.6. The Audit Team members visited the site together on Tuesday 10 August 2021, between 17:00 and 18:00 hrs. During the site visit the weather was fine and the road and footway surfaces were dry.
- 1.7. The terms of reference of the Audit are as described in GG 119 of the Design Manual for Roads and Bridges.
- 1.8. The Audit Team are fully independent from the Design Team and have had no prior involvement in the scheme.
- 1.9. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.
- 1.10. All problems and recommendations are referenced to the design and the locations have been indicated on the drawings supplied with the brief, and are attached at **Appendix B**.
- 1.11. The Design Team should, in addition to providing the requested information, prepare a response to each problem highlighted in this report.

2. General

- 2.1. The project consists of the realignment and widening of the existing carriageway along Finchampstead Road and Molly Millars Lane including the construction of a new offline roundabout to replace the existing mini roundabout demolition of 81 and 83/85 Finchampstead Road, also provide the signalised and uncontrolled crossing facilities.
- 2.2. The South Wokingham Distributor Road (SWDR) will provide access to a development of 2500 new homes, new primary schools, and local shopping and community facilities. The new distributor road is proposed to extend in an easterly direction from Finchampstead Road, along the southern side of the Reading to Waterloo Line, to London Road.
- 2.3. The Audit Team have been notified of the following Departure from Standard.
 - Stopping sight distance at the toucan crossing on the southern arm of the proposed roundabout which is below standard (43m).

Collision Data

- 2.4. No recorded collision data has been provided to the Audit Team

Proposals

- 2.5. The scheme includes, but is not limited to, the following.
 - Realignment of Molly Millars Lane and Finchampstead Road to suit a new roundabout
 - Pedestrian / cycle facilities
 - Traffic signs, road markings, traffic signals, lighting and road restraint systems
 - Traffic Signals
 - Landscaping and Ecology

3. Matters Arising from the Previous Stage 2 Audit

Problem at Location A

Location: Uncontrolled pedestrian crossing point on Molly Millars Lane.

Summary: Pedestrian and vehicle conflict at uncontrolled crossing point.

- 3.1. The design proposes to provide an uncontrolled pedestrian crossing point on the exit from the proposed roundabout on Molly Millars Lane. In addition, it is proposed to introduce a toucan crossing facility on each of the arms, linking the various shared footways.
- 3.2. The Audit Team are concerned that when vehicles are exiting the roundabout onto Molly Millars Lane the driver will be looking to the right to ensure they can safely enter onto the roundabout and then having to negotiate a pedestrian walking into the carriageway, which they may not expect after just having to driver through a Toucan Crossing facility and having to brake sharply. This could lead to either a conflict between the vehicle and the pedestrian, or a rear end shunt type collision when having to stop suddenly.

Recommendation

- 3.3. It is recommended remove the uncontrolled pedestrian crossing point and guide pedestrians to use the Toucan Crossing facilities at the location.

Problem at Location B

Location: Vehicular access for property no. 92 at eastern arm of proposed roundabout

Summary: Pedestrian and vehicle conflict.

- 3.4. The design proposes to construct a new refuge island at the eastern arm of roundabout opposite property no.92. The swept path analysis drawings provided to the Audit Team doesn't show any tracking information at this location.
- 3.5. The Audit Team are concerned that vehicles exiting from the crossover will not have sufficient room without mounting the footway at the location and coming into conflict with pedestrians.

Recommendation:

- 3.6. It is recommended that the design is such that vehicles can safely access the crossover without mounting the footway.

4. Matters Arising from this Stage 2 Audit Addendum

Problem at Location C

Location: ADS03 on Finchampstead Road.

Summary: Restricted sign visibility could lead to vehicle collisions.

- 4.1. Sign ADS03 is proposed to be located on Finchampstead Road on the southbound approach to the proposed roundabout. The sign is located in an area of overgrown vegetation and behind further vegetation on the approach. This vegetation could restrict forward visibility to the sign for drivers which could lead to late braking on the approach to the roundabout resulting in rear end shunt collisions.

Recommendation

- 4.2. It is recommended that the vegetation should be cleared and maintained on the approach to and around the proposed sign to ensure visibility is achieved at all times.

Problem at Location D

Location: ADS02 on Molly Millars Lane.

Summary: Restricted sign visibility could lead to vehicle collisions.

- 4.3. Sign ADS02 is proposed to be located on Molly Millars Lane to the southeast of the proposed maintenance layby. It is unclear what size vehicles would be using the proposed layby and whether when a vehicle is parked here, visibility will be restricted to the sign for eastbound vehicles. This could lead to vehicles braking heavily on the approach to the roundabout resulting in rear end shunt collisions or side impact collisions as a result of vehicles changing lane at the last minute.

Recommendation

- 4.4. It is recommended that the visibility of the sign should be checked with a high sided vehicle parked in the proposed layby.

Problem not Location Specific

Summary: Sign location could lead to side impact or rear end shunt collisions.

- 4.5. Two of the proposed ADS signs, ADS01 and ADS02 are located within close proximity of the roundabout. For vehicles approaching the roundabout, the sign locations may not give drivers enough time to position themselves in the correct lanes or provide other road users with the correct indication of their intended direction of travel. This could result in side impact collisions if drivers attempt to change lanes suddenly at the last minute.
- 4.6. In addition to this, there could be an increase in the likelihood of drivers braking at the last minute to take in the information provided to them on the signs which could lead to rear end shunt collisions.

Recommendation:

- 4.7. It is recommended that the signs should be relocated further back from the roundabout or additional directional signs provided on the approach.

5. **Audit Team Statement**

We certify that this audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER:

Darren Gotch

Team Leader – Waterman Infrastructure & Environment Ltd

Signed:



Date: January 2022

AUDIT TEAM MEMBER:

Umer Farooq

Team Member – Waterman Infrastructure & Environment Ltd

Signed



Date: January 2022

APPENDICES

A. List of Drawings/Documents

Documents from This Stage 2 RSA Addendum

Document Number	Document Title
WMHP-TG-WG2-DR-HI-1201 P06	TRAFFIC SIGNS PLAN
WMHP-TG-WG2-SH-HS-1201 P03	CDM Review
WMHP-TG-WG2-SP-HI-1201-P04	SPECIFICATION TRAFFIC SIGNS

Documents from Original Stage 2 RSA

Document Number	Document Title
WMHP-TG-WG2-CA-LI-1301	LIGHTING DESIGN CALCULATIONS
WMHP-TG-WG2-CA-SP-1301	SPECIFICATION APPENDICES 1300 SERIES- ROAD LIGHTING, COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS
WMHP-TG-WG2-CA-DD-0501	SPECIFICATION APPENDICES-MICRO DRAINAGE RESULTS
WMHP-TG-WG2-SP-HI-1205	SPECIFICATION APPENDIX 12/5
WMHP-TG-WG2-SP-HI-1101	SPECIFICATION APPENDICES-KERB, FOOTWAY AND PAVED AREAS
WMHP-TG-WG2-SP-HI-0702	SPECIFICATION APPENDICES PAVEMENTS
WMHP-TG-WG2-SP-HI-1201	SPECIFICATION APPENDICES TRAFFIC SIGNS
WMHP-TG-WG2-SP-GE-0601	SPECIFICATION APPENDICES-0600 SERIES EARTHWORKS
WMHP-TG-WG2-SP-GE-0201	SPECIFICATION APPENDICES-SITE CLEARANCE
WMHP-TG-WG2-SP-HI-0301	SPECIFICATION APPENDICES FENCING
WMHP-TG-WG2-SP-DD-0501	SPECIFICATION APPENDICES DRAINAGE AND SERVICES DUCTS
WMHP-TG-WG2-SH-HS-0701	DESIGNERS CDM REVIEW
WMHP-TG-WG2-SH-HS-1301	DESIGNERS CDM REVIEW
WMHP-TG-WG2-SH-HS-0601	DESIGNERS CDM REVIEW
WMHP-TG-WG2-SH-HS-1203	MOLLY MILLARS LANE TOUCAN CROSSING TIMING SCHEDULE
WMHP-TG-WG2-SH-HS-1201	FINCHAMPSTEAD ROAD SOUTH PEDESTRIANS CROSSING TIMING SCHEDULE
WMHP-TG-WG2-SH-HS-1201	FINCHAMPSTEAD ROAD NORTH PEDESTRIANS CROSSING TIMING SCHEDULE
WMHP-TG-WG2-SH-DD-0501	SPECIFICATION APPENDICES DRAINAGE SCHEDULE

Document Number	Document Title
WMHP-TG-WG2-DR-HI-1101	ROUNDAABOUT ENHANCEMENT KERB AND FOOTWAYS AND PAVED AREAS PLAN
WMHP-TG-WG2-DR-HI-0152	ROUNDAABOUT ENHANCEMENT ALIGNMENT SCHEME LAYOUT
WMHP-TG-WG2-DR-HI-0102	ALIGNMENT PROFILE
WMHP-TG-WG2-DR-HI-0101	ALIGNMENT PLAN
WMHP-TG-WG2-DR-HI-0602	EARTH WORKS CROSS SECTIONS
WMHP-TG-WG2-DR-0511	DRAINAGE DETAILS
WMHP-TG-WG2-DR-DD-0501	DRAINAGE PLAN
WMHP-TG-WG2-DR-LI-1311	LIGHTING DETAILS
WMHP-TG-WG2-DR-LI-1301	LIGHTING PLAN
WMHP-TG-WG2-DR-HI-1236	DUCTING LAYOUT
WMHP-TG-WG2-DR-HI-1235	SIGNALS LAYOUT
WMHP-TG-WG2-DR-HI-1234	DUCTING LAYOUT
WMHP-TG-WG2-DR-HI-1233	SIGNALS LAYOUT
WMHP-TG-WG2-DR-HI-1232	DUCTING LAYOUT
WMHP-TG-WG2-DR-HI-1231	SIGNALS LAYOUT
WMHP-TG-WG2-DR-HI-1201	TRAFFIC SIGNS PLAN
WMHP-TG-WG2-DR-HI-1221	ROAD MARKING PLAN
WMHP-TG-WG2-DR-HI-1211	TRAFFIC SIGNS DETAILS
WMHP-TG-WG2-DR-HI-1111	KERB FOOTWAY PAVED AREA DETAILS
WMHP-TG-WG2-DR-HI-0702	CARRIAGEWAY PAVEMENT
WMHP-TG-WG2-DR-HI-1112	KERB FOOTWAY PAVED AREA DETAILS
WMHP-TG-WG2-DR-HI-0711	PAVEMENT DETAILS
WMHP-TG-WG2-DR-HI-0701	PAVEMENTN PLAN
WMHP-TG-WG2-DR-HI-0301	FENCING PLAN
WMHP-TG-WG2-DR-HI-0201	SITE CLEARANCE PLAN
WMHP-TG-WG2-DR-HI-0131	ALIGNMENT ISOPACHYTE PLAN
WMHP-TG-WG2-DR-HI-0124	ALIGNMENT TYPICAL CROSS SECTION

Document Number	Document Title
WMHP-TG-WG2-DR-HI-0115	SWEPYH PATHS
WMHP-TG-WG2-DR-HI-0121	CROSS SECTIONS
WMHP-TG-WG2-DR-HI-0114	SWEPTH PATH
WMHP-TG-WG2-DR-HI-0108	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0113	SWEPTH PATH
WMHP-TG-WG2-DR-HI-0112	SWEPTH PATH
WMHP-TG-WG2-DR-HI-0111	SWEPTH PATH
WMHP-TG-WG2-DR-HI-0110	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0109	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0107	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0105	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0106	VISIBILITY ANALYSIS
WMHP-TG-WG2-DR-HI-0104	ALIGNMENT PROFILE
WMHP-TG-WG2-DR-HI-0103	ALIGNMENT PROFILE

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