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Highways, Transportation & Safety Consulting

Barnsley West Link Road Highway Improvements

Road Safety Audit: Stage 1

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Road Safety Audit: Stage 1

Report Produced for:	Strata Sterling Barnsley West Ltd
Report Produced by:	Jonathan Birkett
Report Dated:	19 May 2021
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Road Safety Audit Team Leader:	Jonathan Birkett

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1 Introduction

1.1 General

This report has been prepared in response to a request to undertake a Stage 1 Road Safety Audit (i.e., carried out prior to detailed), by Phil McGrath of Barnsley MBC on behalf of Strata Sterling Barnsley West Limited. The scheme submitted for Audit is the proposed new development and associated highway works known as Barnsley West. This Road Safety Audit is restricted to the internal link road. A separate RSA Stages 1 and 2 has been completed on the northern and southern roundabouts, which connect to the local road network.

The scheme includes a number of affected existing roads.

- Barugh Green Road eastbound 30/40mph,
- Barugh Green Road westbound 40mph,
- Cannon Way 30 mph.
- Higham Common Road 30mph

The scope of the highway works being undertaken in this Stage 1 RSA includes:

- The complete link road between the Higham Common and Barugh Green roundabouts.

The audit comprised an examination of documents forming the Audit Brief and an examination of the site.

The items raised in the RSA are outlined within Section 2 of this report, together with recommendations for alterations or improvements to the proposals with the aim of improving highway safety and aiding accident prevention.

1.2 Documents Forming the Brief

The documents were made available to the Road Safety Audit Team by P Irwin (Fore Consulting), on the instructions of Phil McGrath BMBC on behalf of Strata Sterling Barnsley West Limited. The total documents forming the Audit Brief are listed in Appendix 1:

Generally, the Brief comprised:

- Brief.

- Drawings

1.3 Collision Traffic and Speed Data

Collision data was not available as part of the brief. Therefore, the Audit Team looked at the data held on the “Crashmap” website. Examination of the data shows that there have been no collisions within close proximity of the proposed Higham Common Road or Barugh Green Road roundabouts.

Traffic count data was made available by Fore Consulting.

Speed data was not available.

1.4 Details of Site Visit

A site inspection was undertaken on Friday 14th May 2021 between 16:30 and 17:45. The RSA team arrived separately on site to ensure that social distancing was observed as part of the Coronavirus Pandemic and guidance provided by Public Health England. The Audit Team spent 75 minutes on site understanding the proposed works and their interaction with the local road network.

During the daylight visit the weather was fine, sunny and the carriageway was wet. No incidents were noted during the site visit.

1.5 RSA Team and Format

It was considered that the information provided was sufficient for the purpose of carrying out the Road Safety Audit Stage 1 requested.

The Road Safety Audit Team membership approved by Phil McGrath of BMBC was:

JONATHAN BIRKETT IENG MICE FIHE MSORSA

Holder of Certificate of Competency

Road Safety Audit Team Leader

GILLIAN KIDD BSC (HONS) MIHE

Road Safety Audit Team Member

The Road Safety Audit comprised an examination of the documents and drawings supplied to the Road Safety Audit Team (referenced in Appendix 1 of this report). No member of the Road Safety Audit Team has had any previous input to the design of the scheme.

The Terms of Reference are as described in the Highways England Design Manual for Roads and Bridges document GG119 ‘Road Safety Audit’. The scheme has been examined and this report compiled only with regard to safety implications to road users of the scheme as presented. It has not been verified for compliance with any

other Standards or criteria. However, in order 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 for information only. However, any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

Furthermore, any recommendations included within this report should not be regarded as being prescriptive design solution to the problem raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, as stipulated in GG119, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which should be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

It is the Project Sponsor's responsibility to ensure that all problems raised by the Road Safety Audit Team are given due consideration.

In the event of a collision and any resulting legal action, Meraki Alliance Ltd would have to defend its actions on the basis that it took such care, as in all circumstances was reasonably required, to ensure that the highway was not dangerous to road users. It is important therefore that recommendations contained in the report are acted upon wherever possible.

1.6 Departures or Relaxations from Standards

No Departures from Standard have been notified to the RSA Team associated with the proposed Link Road.

2 Items Raised at this Stage 1 Road Safety Audit

This section details the findings of this Stage 1 Road Safety Audit. All locations of identified problems are illustrated on the plan included at **Appendix 2**.

2.1 RSA Problems Link Road

PROBLEM		1
Location:	New link road.	
Summary:	Inappropriate drainage may lead to ponding water resulting in loss of control type collisions.	
<p>A new link road with two new roundabouts is proposed, as part of the works the link road will connect into two new roundabout, one at Higham Common Road to the west and Barugh Green Road to the east, thus changes to the exiting carriageway will be made and therefore drainage will need to be altered to reflect this.</p> <p>Ponding water can result in an increased risk of loss of control type collisions and at certain times of year and standing water will freeze resulting in sheets of ice. Vehicles manoeuvring in the turning could lose control resulting in an increased risk of collisions.</p>		
RECOMMENDATION		
Provide appropriate drainage at all locations where new carriageway are proposed.		
PROBLEM		2
Location:	Crossing points and shared routes.	
Summary:	A lack of signing could result in an increased risk of pedestrian/cycle collisions.	
<p>Numerous uncontrolled crossing points and shared facilities are proposed along the link road and at the two roundabouts.</p> <p>Where pedestrians and cyclists are using shared and single use facilities, it is recommended that signing is provided to adequately inform pedestrians and cyclists of the status of the routes. Inadequate signing could lead to an increased risk of pedestrian/cycle collisions.</p>		
RECOMMENDATION		

Provide suitable signing informing pedestrians that they are entering the shared cycle/footway facility.

PROBLEM		3
Location:	Link road	
Summary:	Inappropriate levels of lighting can lead to an increased collision risk.	
<p>The drawings provided do not clearly show if any street lighting is proposed along the link road. The scheme will include significant changes with carriageway widening and new layouts. This may result in the carriageway and NMU crossing points being in shadow leading to possible conflicts during the hours of darkness.</p>		
RECOMMENDATION		
Ensure that suitable lighting provision is provided		

PROBLEM		4
Location:	Link road	
Summary:	Lack of advanced signing on the link road can cause drivers to become confused resulting in an increased risk of lane change and shunt type collisions.	
<p>No advanced signing has been shown on the drawings. Without suitable signing drivers will become confused resulting in an increased risk of sudden lane changes and shunt type collisions.</p>		
RECOMMENDATION		
Provide advanced directional signing on all approaches to the roundabout.		

PROBLEM		5
Location:	All splitter islands	
Summary:	Lack of suitable signing on the splitter islands can increase the risk of vehicle loss of control as well as NMU/vehicle collisions.	



<p>Pedestrian splitter islands are proposed at the two new link road roundabouts and at four locations along the link road. The drawings do not show any “Keep Left” bollards which should be located on the islands. A lack of suitable signing on the islands could lead to vehicle loss of control and NMU/vehicle collisions.</p>
<p>RECOMMENDATION</p>
<p>Provide suitable signing on all the pedestrian splitter islands.</p>

PROBLEM		6
Location:	Link Road.	
Summary:	Unprotected embankments will increase the risk of NMU injuries.	
<p>The drawing provided shows that in a number of locations embankments are proposed at the rear of the new shared facilities running along the Link Road. Unprotected embankments will increase the risk of NMUs falling down the embankments increasing the risk of injury.</p>		
RECOMMENDATION		
Provide appropriate fencing between the shared facilities and embankments.		

PROBLEM		7
Location:	Link Road.	
Summary:	A lack of suitable cycle crossing facilities could increase the risk of cycle/vehicle collisions.	
<p>The drawings of the link road and associated roundabouts show a significant number of uncontrolled crossing. All these crossings are shown as pedestrian crossings. It is likely that these will be used by cyclists as well. The Audit Team were concerned that from the drawings provided the pedestrian refuge islands do not look wide enough to accommodate a cyclist safely.</p> <p>CD195 Paragraph E/4.5 and E/4.6 indicate that the crossing width/refuge width should be the same width as the shared facility which is 3m. In addition, the total depth of the refuge must also be of sufficient depth to accommodate a cyclist safely and is set at 3m.</p> <p>A lack of suitable cycle crossing facilities could increase the risk of cycle/vehicle collisions</p>		

RECOMMENDATION
Provide refuge islands that can safely accommodate all pedestrian and cycle users.

**END OF PROBLEMS IDENTIFIED AND RECOMMENDATIONS PRESENTED IN THIS
STAGE 1 ROAD SAFETY AUDIT**



3 Audit Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG119	
ROAD SAFETY AUDIT TEAM LEADER	
NAME:	JONATHAN BIRKETT
SIGNED:	
POSITION:	AUDIT TEAM LEADER
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	17 MAY 2021
ROAD SAFETY AUDIT TEAM LEADER	
NAME:	GILLIAN KIDD
SIGNED:	
POSITION:	AUDIT TEAM MEMBER
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	17 MAY 2021



Appendix 1 – Audited Drawings

9014-A3-100-P-001-B KEY PLAN
9014-A3-100-P-002-B GENERAL ARRANGEMENT SH 1 OF 3
9014-A3-100-P-003-B GENERAL ARRANGEMENT SH 2 OF 3
9014-A3-100-P-004-B GENERAL ARRANGEMENT SH 3 OF 3
9014-A3-100-P-008 ENGINEERING LAYOUT SH 1 OF 3
9014-A3-100-P-009 ENGINEERING LAYOUT SH 2 OF 3
9014-A3-100-P-010 ENGINEERING LAYOUT SH 3 OF 3
9014-A3-100-P-011 SWEPT PATH ANALYSIS
9014-A3-100-P-020 CONTOUR PLAN SH 1 OF 3
9014-A3-100-P-021 CONTOUR PLAN SH 2 OF 3
9014-A3-100-P-022 CONTOUR PLAN SH 3 OF 3
9014-A3-100-P-030 ALIGNMENTS AND CROSS SECTIONS ARRANGEMENT SH 1 OF 3
9014-A3-100-P-031 ALIGNMENTS AND CROSS SECTIONS ARRANGEMENT SH 2 OF 3
9014-A3-100-P-032 ALIGNMENTS AND CROSS SECTIONS ARRANGEMENT SH 3 OF 3
9014-A3-100-P-100 LONGITUDINAL PROFILES SH 1 OF 5
9014-A3-100-P-101 LONGITUDINAL PROFILES SH 2 OF 5
9014-A3-100-P-102 LONGITUDINAL PROFILES SH 3 OF 5
9014-A3-100-P-103 LONGITUDINAL PROFILES SH 4 OF 5
9014-A3-100-P-104 LONGITUDINAL PROFILES SH 5 OF 5
9014-A3-100-P-200 CROSS SECTIONS SH 1 OF 13
9014-A3-100-P-201 CROSS SECTIONS SH 2 OF 13
9014-A3-100-P-202 CROSS SECTIONS SH 3 OF 13
9014-A3-100-P-203 CROSS SECTIONS SH 4 OF 13
9014-A3-100-P-204 CROSS SECTIONS SH 5 OF 13
9014-A3-100-P-205 CROSS SECTIONS SH 6 OF 13
9014-A3-100-P-206 CROSS SECTIONS SH 7 OF 13
9014-A3-100-P-207 CROSS SECTIONS SH 8 OF 13
9014-A3-100-P-208 CROSS SECTIONS SH 9 OF 13
9014-A3-100-P-209 CROSS SECTIONS SH 10 OF 13
9014-A3-100-P-210 CROSS SECTIONS SH 11 OF 13
9014-A3-100-P-211 CROSS SECTIONS SH 12 OF 13
9014-A3-100-P-212 CROSS SECTIONS SH 13 OF 13
9014-A3-700-P-001 CONSTRUCTION AREAS SH 1 OF 3
9014-A3-700-P-002 CONSTRUCTION AREAS SH 2 OF 3
9014-A3-700-P-003 CONSTRUCTION AREAS SH 3 OF 3
9014-A3-1100-P-001 KERBING LAYOUT SH 1 OF 3
9014-A3-1100-P-002 KERBING LAYOUT SH 2 OF 3
9014-A3-1100-P-003 KERBING LAYOUT SH 3 OF 3
9014-A3-1200-P-001 ROAD MARKINGS SH 1 OF 3
9014-A3-1200-P-002 ROAD MARKINGS SH 2 OF 3
9014-A3-1200-P-003 ROAD MARKINGS SH 3 OF 3
9014-A3-SD-P-002 STANDARD DETAILS ROAD CONSTRUCTION

Appendix 2 – Problem Location Plans







