Proposed Warehouse Development Cooper Bridge, Mirfield

Stage 1 Road Safety Audit

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Report Title:	Proposed Warehouse Development Cooper Bridge, Mirfield
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On behalf of:	Kirklees Council

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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 following prior to detailed design), by Adam Darwin of Kirklees Council and Andrew Dmoch of Calderdale Council.

The scheme submitted for Audit is the proposed construction of a warehouse development near Cooper Bridge with accesses to/from A644 Huddersfield Road and an entry only located on the A62 Cooper Bridge Road.

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

- New left in left out junction onto A644 Huddersfield Road,
- Left in only junction located to the southwest of Cooper Bridge roundabout/signalised junction on the A62 Cooper Bridge Road,
- NMU improvements in the form of uncontrolled/controlled crossings and shared use routes,
- Resurfacing and road markings,
- Street lighting and signing.

Highway Authority: Kirklees Council and Calderdale Council.

Client: John Cotton Group Ltd.

Designers: Hydrock Fore.

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 National Highways Design Manual for Roads and Bridges document GG 119 '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.

1.2 Road Safety Audit Team

The Road Safety Audit Team membership approved was:

Audit Team Leader: **JONATHAN BIRKETT** IENG, MICE, FIHE, MSORSA
Holder of HE RSA Certificate of Competency

Audit Team Member: **G KIDD** BSC (HONS), MIHE, MCIHT

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

1.3 Documents Forming the Brief

The documents were made available to the Road Safety Audit Team by Adam Darwin of Kirklees Council and Andrew Dmoch of Calderdale Council. The total documents forming the Audit Brief are listed in Appendix 2:

Generally, the Brief comprised:

- Drawings.
- Collision data.
- Traffic data.

1.4 Collision Traffic and Speed Data

Collision data was provided as part of the brief. The data covered the most recent five years of collision data available up to 27 October 2024, an extract of the collision locations is provided below.

There have been four collisions reported, three slight and one serious in severity. Three collisions all slight occurred at the Coooper Bridge signalised roundabout and one at the Huddersfield Road/Leeds Road signalised junction.

Traffic count data: was provided as part of the brief.

Traffic speed data: was not available.

1.5 Departures or Relaxations from Standards

Cooper Bridge Road Access:

Forward visibility requirements approaching the proposed access are identified based on observed 85th percentile speed data, allowing for a reaction time of 2 seconds and deceleration rate of 0.375g.

The width of the carriageway and corner radii tapers on the proposed access road to the development have been identified as a balanced solution to minimise crossing distances for pedestrians and cyclists using the proposed crossing of the access road, while accommodating the swept path of relevant design vehicles that are anticipated to be accessing the development (specifically, articulated HGVs).

The centreline radius of the bend on the access road beyond the access junction (at approx. 22m) is less than the desirable minimum of 35m set out in Kirklees Council's highway design guidance. A speed limit of 20mph is proposed on the access road (and within the wider site) to mitigate this.

Huddersfield Road Access:

A visibility splay of 2.4m x 90m from the proposed access, to suit a design speed of 70kph (consistent with the posted speed limit of 40mph, and 'one step below desirable minimum' SSD) in accordance with Table 2.10 of CD109 is achievable when taken to the edge of the westbound cycle lane on Huddersfield Road (rather than the nearside kerb line), as a reasonable proxy for the position of oncoming westbound vehicles in practice. Notwithstanding this, a visibility splay of 2.4m x 71m from the proposed access is achievable when taken to the nearside kerb line, which is considered to be adequate to accommodate the likely approach speeds of cyclists, which would be substantially below the 70kph design speed.

The width of the carriageway on the minor road approach and exit is less than specified in Table 5.10 of CD123 but are identified as a balanced solution to minimise crossing distances for pedestrians and cyclists using the proposed crossing of the access road, while accommodating the swept path of relevant design vehicles that are anticipated to be accessing the development (specifically, articulated HGVs).

A pedestrian visibility splay of 1m x 17m can be achieved at the crossing of the access road for pedestrians looking east to Huddersfield Road, In accordance with Manual for Streets guidance, this is suitable for vehicles (including cyclists) turning from

Huddersfield Road into the development at a speed of 15mph, which is considered realistic for traffic conditions in practice.

1.6 Previous Road Safety Audits

No previous RSA have taken place.

1.7 Information Not Included at this Stage 1

All information has been provided.

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

1.8 Details of Site Visit

A site inspection was undertaken on the afternoon of 12th March 2025 between 14:00hrs and 15:15hrs. The surrounding road network was busy. Two cyclists were observed using the route between Huddersfield Road

The weather was cold and fine; all surfaces were damp, and no incidents were identified whilst on site.

1.9 Items Outside the Scope of the Road Safety Audit

No items were identified outside the scope of the RSA.

1.10 Disclaimer

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 GG 119, 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.

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 Road Safety Audit - Problems

PROBLEM	**1-1**
Location:	Huddersfield Road Access.
Summary:	Sub-standard visibility at uncontrolled crossings will increase the risk of pedestrian/vehicle collisions.
It is proposed to construct a new access onto Huddersfield Road, as part of these works an uncontrolled crossing will be provided. The details provided within the brief indicate that a maximum visibility splay of 1m x 17m can be achieved on the eastern crossing point. CD 143 Table E/5.2 states that the minimum measurement for a set-back (X distance) must be no less than 1.5m and the Y distance must be based on the speed of approaching vehicles. It is accepted that speeds will be low for HGV's turning into the site, but cars may well turn in at higher speeds resulting in an increased risk of pedestrian/vehicle collisions.	
RECOMMENDATION	
It is recommended that a minimum of 1.5m x 22m is provided which complies with DMRB set back distances and a stopping sight distances for approach speeds of vehicles of 20mph (MfS).	

PROBLEM	**1-2**
Location:	Huddersfield Road Access.
Summary:	A lack of signing and road markings will increase the risk of drivers failing to comply with the new junction layouts increasing the risk of collisions.
It is proposed to construct a new access onto Huddersfield Road, it is noted that no signing or lining enforcing the need to turn left have been provided at this stage of the design process. A lack of signing and road markings will increase the risk of drivers failing to comply with the new junction layouts increasing the risk of collisions.	
RECOMMENDATION	
It is recommended that suitable road markings in the form of a "Left Arrow" and "Left Turn" wording is provided. In addition, the introduction of signing on the central island in the form of a mandatory "Left Turn" sign should also be considered.	

PROBLEM	**1-3**
Location:	Leeds Road.
Summary:	Sub-standard central pedestrian refuges will increase the risk of pedestrian/vehicle collisions.
It is proposed to construct a new uncontrolled crossing over Leeds Road with a new central pedestrian refuge. It is noted that this refuge is narrow and as such a pedestrian with a push chair or with young children may not be able to be fully accommodated within the narrow refuge and as such will increase the risk of being struck by a passing vehicle increasing the risk of injury.	
RECOMMENDATION	
It is recommended that a minimum of 2m wide pedestrian refuge is provided.	

PROBLEM	**1-4**
Location:	Huddersfield Road.
Summary:	Inappropriate skidding resistance can increase the risk of pedestrian/vehicle and vehicle/vehicle collisions.
No information has been provided on the existing carriageway condition and there is no clear indication if carriageway resurfacing will be undertaken as part of the new controlled crossings over Huddersfield Road. Any approach to a signalised stop line where heavy braking takes place requires a minimum PSV of 68+ and this should be laid for a distance based on the surveyed approach speeds. A lack of suitable skidding resistance on the approach to the junction can result in an increased risk of pedestrian/vehicle as well as shunt type collisions.	
RECOMMENDATION	
Based on the surveyed approach speeds provide a suitable length of surfacing material that achieves a minimum PSV of at least 68+.	

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:	DIRECTOR
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	25 MARCH 2025
ROAD SAFETY AUDIT TEAM MEMBER	
NAME:	GILLIAN KIDD
SIGNED:	
POSITION:	AUDIT TEAM MEMBER
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	25 MARCH 2025

Appendix 2 - Audited Documents

2025-02-14_3633_Traffic Signal Staging

2025-02-14_3633_TRANSYT Model Capacity Assessment_v1.0

2025-03-06_3633_Stage 1 RSA Brief_v1.2

2172-2001-P3 Site Plan

3633-100-P-001-G GENERAL ARRANGEMENT

3633-100-P-002-G ENGINEERING LAYOUT

3633-100-P-003-F SWEPT PATH ANALYSIS

3633-100-P-010-E GENERAL ARRANGEMENT

3633-100-P-011-D ENGINEERING LAYOUT

3633-100-P-012-D SWEPT PATH ANALYSIS

3633-SK-1001

15029 - Mirfield - ATC Survey Results - Site 1 Huddersfield Road (1)

15029 - Mirfield - Radar Survey Results - Site 2 Cooper Bridge Road (1)

A62 John Cotton RSA1 PIC Plot 5yrs to 27-10-2024

A62 John Cotton RSA1 STATS19 5yrs to 27-10-2024

Option C - T junction - Rev.4

Appendix 3 - Problem Location Plan