Road safety audit response report

F1 Project details

Table F.1 Project details

Report title:	RSA Stage 1 – Blackmoorfoot Road
Date:	30/07/2024
Document reference and revision:	Ghost Island Main Access RSA 1 Rev 1
Prepared by:	Meraki Alliance
On behalf of:	Kirklees Council (KC)

Table F.2 Authorisation sheet

Project:	RSA Stage 1 – Proposed Development: Blackmoorfoot Road, Huddersfield – (Ghost Island Main Access)
Report title:	Stage 1 – Road Safety Audit Response Report
Prepared by:	
Name:	Robert Davey
Position:	Assistant Engineer
Signed:	
Organisation:	Andrew Moseley Associates
Date:	30/07/24
Approved by:	
Name:	
Position:	
Signed:	
Organisation:	
Date:	

F2 Introduction

The scheme submitted for Audit is the proposed upgraded access for a residential development, on land to the north of Blackmoorfoot Road. This designer's response report relates to Stage 1 of the RSA by Meraki Alliance (Ghost Island Main Access RSA 1 Rev 1).

A copy of the Stage 1 Road Safety Audit is attached at **Appendix A**.

This response report has been compiled by Robert Davey of Andrew Moseley Associates, who are the Transport Planners submitting the Transport Assessment and Travel Plan as part of the planning application.

F3 Key personnel

Table F.3 Key personnel

Overseeing Organisation:	Kirklees Council
RSA team:	Meraki Alliance - Jonathan Birkett and Gillian Kidd
Design organisation:	Andrew Moseley Associates – Robert Davey

F4 Road safety audit decision log

Table F.4 Road safety audit decision log

RSA PROBLEM	RSA RECOMMENDATION	DESIGN ORGANISATION RESPONSE	OVERSEEING ORGANISATION RESPONSE	AGREED RSA ACTION
1-1: It is proposed to widen the existing carriageway and install a ghost island priority junction into the residential development. The Audit Team were concerned that in many cases any existing markings remain visible after the works have been undertaken. This will result in confusing road layouts and will result in late lane change and heavy breaking increasing the risk of collisions.	It is proposed to widen the existing carriageway and install a ghost island priority junction into the residential development. The Audit Team were concerned that in many cases any existing markings remain visible after the works have been undertaken. This will result in confusing road layouts and will result in late lane change and heavy breaking increasing the risk of collisions.	This will be addressed at the detailed design stage.		

RSA PROBLEM	RSA RECOMMENDATION	DESIGN ORGANISATION RESPONSE	OVERSEEING ORGANISATION RESPONSE	AGREED RSA ACTION
The Audit Team were concerned that vehicles may overtake through the ghost island junction resulting in an increased risk of collisions with right turners.	It is recommended that a system of double white lines is considered through the junction	Double white lines added, details are provided in AMA Drawing Number: *22224-D-100-2.2*, attached at **Appendix B**.		
Details of the swept paths of vehicles, are not provided on the drawings. Inappropriate carriageway widths and junction radii can result in vehicles failing to safely negotiate the new junction arrangements increasing the risk of vehicle collisions and pedestrian-vehicle collisions.	Provide swept path movements at the new site access junctions.	Swept path analysis added, details are provided in AMA Drawing Number: *22224-D-101-2.2*, attached at **Appendix C**.		
As part of the RSA the Audit Team were concerned that vehicles may well overtake through the ghost island junction. Visibility is good along Blackmoorfoot Road. Overtaking vehicles will increase the risk of head on and shunt type collisions.	Introduce physical islands within the hatching to protect right turning vehicles.	There is no space unfortunately for this, but due to the frequency of movements, this will become a well-known area and rear-shunts will be decreased via driver knowledge.		
The right turn lane is approximately 27.5m long. There is no additional length for queuing vehicles. This could lead to nose to tail shunts if several vehicles use the lane to queue at the same time.	Provide details of how the right turn is complaint with current standards or provide traffic modelling that shows that 27.5m is of sufficient length to accommodate traffic associated with the development.	Agreed on site with KC that this is appropriate.		

RSA PROBLEM	RSA RECOMMENDATION	DESIGN ORGANISATION RESPONSE	OVERSEEING ORGANISATION RESPONSE	AGREED RSA ACTION
A new priority junction will be constructed as part of the development with new footways. The drawing shows an inset uncontrolled crossing which is away from the desire line for pedestrians walking along Blackmoorfoot Road. Uncontrolled crossings away from desire lines will increase both the risk of trips and falls as well as pedestrian/vehicle collisions.	Provide an inline uncontrolled crossing of the site access, due to the width of the access it maybe necessary to also consider a 2m wide pedestrian refuge.	This has been considered, but it is not possible to facilitate it on the desire line		

F5 Design Organisation and Overseeing Organisation statements

Table F.5 Design organisation statement

On behalf of the design organisation I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**	
Name:	Robert Davey
Signed	
Position:	Assistant Engineer
Organisation:	Andrew Moseley Associates
Date:	30/07/24

Table F.6 Overseeing Organisation statement

On behalf of the Overseeing Organisation I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and** **2) the agreed RSA actions will be progressed.**	
Name:	
Signed:	
Position:	
Organisation:	
Date:	

meraki alliance
Highways, Transportation & Safety Consulting

Proposed Development: Blackmoorfoot Road, Huddersfield - (Ghost Island Main Access)

Road Safety Audit: Stage 1

Kirklees Council
Kirkgate Buildings
Huddersfield
HD1 1BY

Jonathan Birkett
Meraki Alliance Ltd
Riverview Court
Castle Gate
Wetherby
LS22 6LE

meraki alliance
Highways, Transportation & Safety Consulting

Proposed Development: Blackmoorfoot Road, Huddersfield - (Ghost Island Main Access)

Road Safety Audit: Stage 1

Report Produced for:	Kirklees Council
Report Produced by:	Jonathan Birkett
Report Dated:	01 July 2024
Report Reference:	MAL/BMFMJHRSA1Rev1
Road Safety Audit Team Leader:	Jonathan Birkett

meraki alliance
Highways, Transportation & Safety Consulting

Proposed Development: Blackmoorfoot Road, Huddersfield - (Ghost Island Main Access)

Road Safety Audit: Stage 1

Contents Amendment Record

This report has been issued & amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Draft Report	18 June 2024	JB
1	0	FINAL REPORT	19 June 2024	JB/GK
1	1	FINAL REPORT	01 July 2024	JB/GK

Report Circulation Record

This report has been circulated, as follows:

Person	Organisation	No. of Copies	Date
	Kirklees Council		
George Maclean	AMA	Electronic	01 July 2024
G Kidd	Meraki Alliance Ltd	Electronic	01 July 2024

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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 (RSA), (i.e., carried out prior to detailed design), by George Maclean of Andrew Moseley Associates on behalf of the Highway Authority, Kirklees Council.

The scheme submitted for Audit is the main site access junction Blackmoorfoot Road, Huddersfield.

This Road Safety Audit covers the following aspects of the works.

Proposed ghost island junction on Blackmoorfoot Road.

Overseeing Organisation

Kirklees Council.

Client

Millers and Vistry West Yorkshire.

Designers

AMA.

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

1.2 Documents Forming the Brief

The documents were made available to the Road Safety Audit Team by George Maclean (AMA), on the behalf of Kirklees Council. The total documents forming the Audit Brief are listed in Appendix 1:

Generally, the Brief comprised:

- Drawing.

1.3 Collision Traffic and Speed Data

Collision data was not available as part of the Brief. Therefore, the Audit Team examined the DfT data held on the “Crashmap” website. A plan of the most recent 5 years of data 2018-2022 is provided in Figure 1 below.

Examination of the data indicates that a single, slight in severity collision has occurred at the existing Felks Stile Road/Blackmoorfoot Road priority junction.

Figure 1: CrashMap Data 2018 -2022

Traffic count data was not available.

Speed data was not available.

1.4 Details of Site Visit

A site inspection was undertaken on 13 June 2024 between 05:30 and 06:45. The Audit Team spent 75 minutes on site understanding the proposed works and their interaction with the local road network.

During the site visit the weather was fine and the road surface was damp.

No incidents were noted whilst on site.

1.5 Road Safety Audit 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 was:

JONATHAN BIRKETT IENG MICE FIHE

Holder of Certificate of Competency

Road Safety Audit Team Leader

G 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 National Highways 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 or Relaxations from Standard were submitted to the Road Safety Audit Team.

1.7 Issues Raised in Previous Road Safety Audit(s)

No other RSA have been undertaken.

1.8 Items Identified Outside the Scope of the Road Safety Audit

No items identified.

1.9 Elements not Provided as Part of this Stage 1 Road Safety Audit

All relevant information provided.

2 Items Raised at Stage 1 Road Safety Audit

This section details the findings of this Stage 1 Road Safety Audit. All locations of identified problems are illustrated within Appendix 2.

2.1 Road Safety Audit - Problems (Main Ghost Island Priority Junction)

PROBLEM	**1-1**
Location:	Site access junction.
Summary:	Ghosting of road markings will result in an increased risk of collisions.
It is proposed to widen the existing carriageway and install a ghost island priority junction into the residential development. The Audit Team were concerned that in many cases any existing markings remain visible after the works have been undertaken. This will result in confusing road layouts and will result in late lane change and heavy breaking increasing the risk of collisions.	
RECOMMENDATION	
It is recommended that the carriageway is resurfaced to remove the risk of “ghosting” of existing marking.	

PROBLEM	**1-2**
Location:	Ghost island junction.
Summary:	Overtaking vehicles will increase the risk of collisions.
The Audit Team were concerned that vehicles may overtake through the ghost island junction resulting in an increased risk of collisions with right turners.	
RECOMMENDATION	
It is recommended that a system of double white lines is considered through the junction.	

PROBLEM		1-3
Location:	Ghost island junction.	
Summary:	Details of vehicle tracked movements are not provided on the drawings. Inappropriate carriageway widths and turning radii can result in increased vehicle collisions as well as pedestrian-vehicle collisions.	
Details of the swept paths of vehicles, are not provided on the drawings. Inappropriate carriageway widths and junction radii can result in vehicles failing to safely negotiate the new junction arrangements increasing the risk of vehicle collisions and pedestrian-vehicle collisions.		
RECOMMENDATION		
Provide swept path movements at the new site access junctions.		

PROBLEM		1-4
Location:	Ghost island junction.	
Summary:	Overtaking vehicles will increase the risk of head on and shunt type collisions.	
As part of the RSA the Audit Team were concerned that vehicles may well overtake through the ghost island junction. Visibility is good along Blackmoorfoot Road. Overtaking vehicles will increase the risk of head on and shunt type collisions.		
RECOMMENDATION		
Introduce physical islands within the hatching to protect right turning vehicles.		

PROBLEM		1-5
Location:	Ghost island right turn.	
Summary:	Sub-standard right turn lanes will increase the risk of shunt type collisions.	
The right turn lane is approximately 27.5m long. There is no additional length for queuing vehicles. This could lead to nose to tail shunts if several vehicles use the lane to queue at the same time.		
RECOMMENDATION		
Provide details of how the right turn is complaint with current standards or provide traffic modelling that shows that 27.5m is of sufficient length to accommodate traffic associated with the development.		

PROBLEM		1-6
Location:	Site access junction	
Summary:	Uncontrolled crossings away from desire lines will increase both the risk of trips and falls as well as pedestrian/vehicle collisions.	
A new priority junction will be constructed as part of the development with new footways. The drawing shows an inset uncontrolled crossing which is away from the desire line for pedestrians walking along Blackmoorfoot Road. Uncontrolled crossings away from desire lines will increase both the risk of trips and falls as well as pedestrian/vehicle collisions.		
RECOMMENDATION		
Provide an inline uncontrolled crossing of the site access, due to the width of the access it maybe necessary to also consider a 2m wide pedestrian refuge.		

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:	01 JULY 2024
ROAD SAFETY AUDIT TEAM MEMBER	
NAME:	GILLIAN KIDD
SIGNED:	
POSITION:	AUDIT TEAM MEMBER
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	01 JULY 2024

Appendix 1 – Audited Documents and Drawings

AMA/22224/D/100 - 2.2 P0 Section 278 Works GA

Appendix 2 – Problem Location Plan

NOTES

GENERAL

1. All dimensions are in metres unless noted otherwise
2. DO NOT SCALE THIS DRAWING - If in doubt ask
3. All dimensions & levels to be checked by the Contractor prior to commencement of work, any discrepancy shall be reported immediately to the Engineer.
4. Underground services are present in the area. Contractor is to confirm the precise line and depth of any services prior to the commencement of any excavation works.
5. All work shall be carried out in accordance with Local Authority, Statutory Authority, Health & Safety requirements and regulations.
6. The drawings shall be read in accordance with all other contract documents relevant at that time of issue and during the period of the contract.
7. The Contractor must ensure the overall stability of the works is adequate at all stages of the construction.
8. All chamber covers, valve boxes etc., situated within the works to be raised/lowered to match proposed levels where necessary.
9. All setting out shall be agreed on site with the overseeing organisation.
10. All works are to be in accordance with the North Yorkshire Council design guide for Highways & Transport and the Specification for Highway Works.

KEY

- Site boundary
- Adopted Highway boundary
- Existing carriageway
- New carriageway construction
- Existing footway construction
- New footway construction
- Area of verge / landscaping

REV	DESCRIPTION	DATE	BY
P01	Updated in accordance with RSA comments	30.07.24	RID
P0	Preliminary - Initial Issue	-	RID

ANDREW MOSELEY ASSOCIATES

Project: Blackmoorfoot Road, Huddersfield

Client: Millers and Vistry West Yorkshire

Drawing: Seciton 278 Works General Arrangement

Drawn By:	Date:	
RID	22/05/2024	
Checked: GDM	Scale: 1:250	A1
Drawing No.: AMA/22224/D/100 - 2.2		Rev.: P0

NOTES

GENERAL

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10. All works are to be in accordance with the North Yorkshire Council design guide for Highways & Transport and the Specification for Highway Works.

Vehicle Profile

Phoenix 2-25W (with Volvo FM12 chassis)

Overall Length	11.125m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.250m

REV	DESCRIPTION	DATE	BY
P0	Preliminary - Initial Issue	-	RID

ANDREW MOSELEY ASSOCIATES

Project:
Blackmoorfoot Road, Huddersfield

Client:
Millers and Vistry West Yorkshire

Drawing:
Seciton 278 Works
Swept path analysis

Drawn By: RID	Date: 30/07/2024	
Checked: GDM	Scale: 1:250	A1
Drawing No. AMA/22224/D/101 - 2.2		Rev. P0