



meraki alliance

Highways, Transportation & Safety Consulting

Mold Road, Gwersyllt, Wrexham - Proposed Residential Development S278

Stage 2 Road Safety Audit

Mold Road, Gwersyllt, Wrexham - Proposed Residential Development S278

Stage 2 Road Safety Audit

Report Title:	Mold Road, Gwersyllt, Wrexham - Proposed Residential Development S278
Report Produced for:	Wrexham County Borough Council
Report Dated:	17 August 2026
Document Reference & Revision:	MAL/MRGW278RSA2 Rev0
Report Produced by:	Meraki Alliance, Watkin Avenue, Old Colwyn, Conwy LL29 9NN Jonathan Birkett 07966296302
On behalf of:	SCP

Contents Amendment Record

This report has been issued & amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Draft Report	13 August 2026	JB
1	0	FINAL REPORT	17 August 2026	JB/NC

Report Circulation Record

This report has been circulated, as follows:

Person	Organisation	No. of Copies	Date
E Martin-Moral	SCP	Electronic	17 August 2026
N Cook	Meraki Alliance Ltd	Electronic	17 August 2026

Contents

1	Introduction	2
1.1	<i>General</i>	2
1.2	<i>Road Safety Audit Team</i>	3
1.3	<i>Personal Injury Collision Data</i>	3
1.4	<i>Departures or Relaxations from Standards</i>	4
1.5	<i>Details of Site Visit</i>	4
1.6	<i>Items Outside the Scope of the Road Safety Audit</i>	4
1.7	<i>Disclaimer</i>	4
2	Items Raised at the Stage 1 Road Safety Audit	5
2.1	<i>Table 1: Items Previously Raised at the Stage 1 Audit July 2025</i>	5
3	Items Raised at the Stage 2 Road Safety Audit	7
3.1	<i>Road Safety Audit - Problems</i>	7
4	Audit Team Statement	14
Appendix 1 – Audited Documents		15
Appendix 2 – Problem Location Plan		16

1 Introduction

1.1 General

This report has been prepared in response to a request to undertake a Stage 2 Road Safety Audit (RSA) (i.e. completion of detailed design), by Eduardo Martin-Moral of SCP on behalf of Wrexham County Borough Council. The scheme submitted for Audit is associated with a proposed residential development located off Mold Road, Gwersyllt, Wrexham.

The development is located on land to the east of Mold Road and is situated in the northwestern suburbs of the city approximately 3km from Wrexham city centre. It borders the nearby villages of Llay, Cefn-y-Bedd, Brynteg, and Pentre Broughton.

The development is proposed on the east side of Mold Road to the north of Stansty Chain Road, to the south of St Giles Park and the west of a railway line. At this location, the A541 Mold Road is two way single lane dual carriageway and forms part of a junction with Stansty Chain Road to the east and Old Mold Road to the west. It is a priority controlled junction with a central reserve provided throughout on Mold Road. Vehicle restraint system (VRS) present to the south and north of the junction which terminates at the gap in the centre which allows vehicle movements at the junction.

Mold Road is currently subject to a 50mph speed limit and is street lit within the central reserve. There is a shared use footway and cycleway provided along the eastern side of Mold Road with a cycle lane which crosses via a dedicated lane through the central reserve. No non-motorised user facilities are provided on the west side of the carriageway. The S278 works included with this RSA Stage 2 include:

- A limited movements priority access junction on the east side of Mold Road with amendments to existing VRS
- An uncontrolled crossing of Mold Old Road
- Two signalised crossings parallel crossings of Mold Road and on parallel crossing on Stansty Chain Road
- Relocation of the 40mph speed limit to a point south of the junction including gateway feature (carriageway roundels, dragon's teeth and red surfacing) Signing and lining, including the refreshing of bus stop clearway markings on Old Mold Road

The documents submitted for consideration as part of the audit, were made available to the Road Safety Audit Team by Eduardo Martin-Moral of SCP The documents forming this RSA are listed in **Appendix 1**.

The audit comprised an examination of documents and an examination of the site.

Overseeing Organisation: Wrexham County Borough Council

Client: Castle Green

Design Organisation: SCP

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: **Naomi Cook MSc FCIHT**
Holder of HE RSA Certificate of Competency

1.3 Personal Injury Collision Data

The Audit Team examined *Crashmap* for the most recent five-year period of personal injury collision (PIC) data (2019-2023), as shown in **Figure 1** overleaf.

The data shows that there have been seven collisions on the surrounding roads resulting in one fatal, one serious and five slight in severity. Of these seven collisions three are located within the area affected by the proposed works. The fatal involved a cyclist at the junction with Old Mold Road.



Figure 1: Collision data

1.4 Departures or Relaxations from Standards

No Departures or Relaxations from Standard were submitted to the Road Safety Audit Team.

1.5 Details of Site Visit

A site visit was undertaken on the afternoon of Tuesday 10 August 2026 between 14:00 hrs and 14:45 hrs. Whilst on site the weather was fine; the road surface was dry, and no incidents were noted. No pedestrians or cyclists were observed. Traffic flows were light and free flowing.

1.6 Items Outside the Scope of the Road Safety Audit

No issues identified outside the scope of the RSA.

1.7 Disclaimer

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, 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.

2 Items Raised at the Stage 1 Road Safety Audit

A Stage 1 Road Safety Audit was carried out in July 2025 and have been revisited as part of this Stage 2 RSA. These are summarised in **Table 1**:

2.1 **Table 1: Items Previously Raised at the Stage 1 Audit July 2025**

Problem as raised at previous RSA1 – Apr 2025	Summary	Status of Problem at Stage 2 RSA
1-1	Obstructed footways and lack of uncontrolled crossings that meet the required DfT standards will increase the risk of injuries to non-motorised users Recommendation - all obstructions are removed from the proposed footway and that the existing crossing over Old Mold Road is brought up to current standards with the introduction of tactile paving.	Resolved Designer's Response - The layout has been amended and the crossing brought up to current standards.
1-2	A lack of clear separation between the new footway and carriageway will increase the risk of vehicles striking pedestrians on the new footway increasing the risk of injury. Recommendation - that as a minimum at least 500mm is provided between the edge of the footway and the carriageway to create an area of separation.	Unresolved Carried forward to Section 3 of this RSA 2. See Problem 2-5
1-3	A lack of NMU crossing points at the site access will increase the risk of NMU/vehicle collisions Recommendation - that a suitable shared use crossing is provided over the site access	Resolved Designer's response: The layout has been amended and a suitable crossing of the site access has been provided
1-4	A lack of edging kerbs and pedestrian guard railing will increase the risk of injury to visually impaired pedestrians Recommendation - Consider at detailed design how the visually impaired will be accommodated along the new footpath and how they will be guided between the uncontrolled crossings.	Unresolved Designer's response – Although the crossings have been upgraded to signal controlled crossings there is still an issue of how visually impaired pedestrians will be guided across the islands.



Problem as raised at previous RSA1 – Apr 2025	Summary	Status of Problem at Stage 2 RSA
		Carried forward to Section 3 of this RSA Stage 2. See Problem 2-5

3 Items Raised at the Stage 2 Road Safety Audit

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

3.1 Road Safety Audit - Problems

PROBLEM		2-1
Location:	General to the scheme	
Summary:	Increase in collisions during darkness or low light conditions	
Mold Road is currently street lit. Details of alterations to the street lighting were not provided as part of the RSA information. Some of the existing lighting will be affected by the proposed works. A proposed junction and new controlled crossings introduce areas of potential conflict, which if not lit sufficiently during the hours of darkness or low light conditions, could result in an increase in collisions associated with vehicle movements during the hours of darkness. There is also a risk of cyclists and pedestrians being unseen by drivers, as they approach or use the crossing over the site access and the new crossings over Mold Road. Resulting in an increase in collisions.		
RECOMMENDATION		
Review the street lighting in the vicinity of the proposed junction and controlled crossings over Mold Road to ensure sufficient lighting levels are achieved. Provide additional lighting as required.		

PROBLEM		2-2
Location:	General to the scheme	
Summary:	Increase in collisions resulting from ineffective surface water drainage	
No details of any proposed highway drainage works have been provided as part of the RSA information. If surface water cannot drain effectively there is a risk of surfacing water ponding and encroaching into the wheel paths of vehicles on the internal highway network. This can result in a loss of friction and subsequent collisions resulting from aquaplaning, skidding or loss of control.		
RECOMMENDATION		
Review the highway drainage and ensure that it is sufficient to ensure effective surface water drainage in light of the additional impermeable area. Provide additional / amended highway drainage as required.		

PROBLEM		2-3
Location:	Controlled Crossings	
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 no carriageway resurfacing will be undertaken as part of the signalisation works on Mold Road and Stansty Chain Road. Any approach to a signalised stop line where heavy braking is expected to take 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 controlled crossings 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+.		

PROBLEM		2-4
Location:	General to scheme	
Summary:	Drivers could become confused if old road markings are not fully removed before the new markings are implemented	
The scheme will introduce a large number of changes to the carriageway and the associated carriageway markings. If the new carriageway markings are laid on top of the old carriageway without fully removing the old ones, drivers could become confused as to where they should be positioned with the carriageway or where they should stop or give way. This could result in drivers making inappropriate manoeuvres and/or failing to stop or give way resulting in collisions with other vehicles or pedestrians/cyclists.		
RECOMMENDATION		
Ensure the existing carriageway markings are fully removed or that the carriageway is resurfaced.		

PROBLEM		2-5
Location:	Central reservation Mold Road	
Summary:	A lack of clear separation between the new footway and carriageway will increase the risk of vehicles striking pedestrians on the new footway increasing the risk of injury	
This problem is carried forward to the RSA 2 as it has not been addressed. It is proposed to provide a footway between Old Mold Road and Stansty Chain Road following the route of the existing cycle facilities. Where the footway crosses the central reservation, it is noted that the footway and tactile paving will be very close to the right turn (central reservation crossing) for vehicles exiting Old Mold Road. A lack of clear separation between the new footway and carriageway will increase the risk of vehicles striking pedestrians on the new footway increasing the risk of injury.		
RECOMMENDATION		
It is recommended that as a minimum at least 500mm is provided between the edge of the footway and the carriageway to create an area of separation.		

PROBLEM		2-6
Location:	New site access	
Summary:	Inappropriate carriageway widths and turning radii can result in increased vehicle collisions as well as pedestrian/vehicle collisions	
Vehicle tracking details were not submitted as part of the RSA information. It is important that all vehicles which are expected to use the access, can safely negotiate the junction. If vehicles cannot safely turn into or out of the access without overrunning the kerbed areas around the junction mouth, there is a risk conflicts between vehicles using the access, and on-going maintenance issues.		
RECOMMENDATION		
Ensure that all vehicles that are expected to turn into and out of the access, can do so safely without impacting on other junction users.		

PROBLEM		2-7
Location:	Route of new footway	
Summary:	A lack of edging kerbs and pedestrian guard railing will increase the risk of injury to visually impaired pedestrians	
This problem is carried forward to the RSA 2 as it has not been addressed. New footway is to be created across Mold Road. It is unclear how visually impaired pedestrians will be accommodated over the various islands as there is limited guidance, particularly for visually impaired users, to ensure that the various crossing points can be safely located and that the 90-degree bends currently proposed can be negotiated by cyclists. A lack of edging kerbs and pedestrian guard railing will increase the risk of injury to visually impaired pedestrians.		
RECOMMENDATION		
Consider how the visually impaired will be accommodated along the new footpath and how they will be guided between the controlled crossings by considering the introduction of pedestrian guardrail at various key locations around the junction. Also ensure that the layout is compliant with LTN 1/20		

PROBLEM		2-8
Location:	Site access and diverge to Stansty Chain Road	
Summary:	Closely located junctions can increase the risk of drivers failing to give way	
It is proposed to construct a new priority junction that allows left in, left out and right out turning movements. No vehicles will be able to turn right from Mold Road into the site but must travel north and use the St Giles Park roundabout to undertake a U-turn manoeuvre to access the development. The Audit Team did consider that there was a risk of drivers travelling to Stansty Chain Road indicating to pull left from Mold Road prior to the site access junction. This could be confusing to drivers pulling out of the proposed access in error into the path of an approaching southbound vehicle. It is considered that this is exacerbated by the close proximity of the site junction and the diverge.		
RECOMMENDATION		
It is recommended that the taper diverge is reduced in length so that the diverge point which is very close to the site access junction is moved south and that a level of separation is created. This should be achievable as the design speed of Mold Road will be reduced by the relocation of the speed limit. It is also recommended that signing is introduced to help delineate between the new junction and Stansty Chain Road junction.		



PROBLEM		2-9
Location:	Old Mold Road	
Summary:	A lack of suitable uncontrolled crossings will increase the risk of collisions.	
It is noted that the existing crossing of Old Mold Road located on the slip from Mold Road will be upgraded and provided with tactile paving. The footway terminates roughly 15m north of the upgraded route over Old Mold Road (slip from Mold Road) This results in pedestrians then crossing Old Mold Road to gain access to the footway along the eastern side of the road to continue their journey. This uncontrolled crossing does not have tactile paving. Which will lead to confusion for visually impaired pedestrians.		
RECOMMENDATION		
Tactile paving needs to be provided at the existing dropped crossing over Old Mold Road		

PROBLEM		2-10
Location:	Old Mold Road	
Summary:	A lack of suitable uncontrolled crossings will increase the risk of collisions.	
The Audit Team noted that the existing uncontrolled crossings of Old Mold Road do not correspond to the desire line observed by the Audit Team. Well-worn path in the verge indicates that pedestrians are not following the proposed route over Old Mold Road (slip road). Instead, they are crossing Old Mold Road and walking along the verge.		
 The photos clearly show that this is a well walked route which would indicate that this is the preferred pedestrian desire line. The new development may well increase footfall and as such formalisation of this route should be considered by the designers. The current route is likely to be underutilised as it is convoluted and lengthy.		
RECOMMENDATION		
Formalisation of the established desire line that is shown in the photos should be considered as part of the design or introduce pedestrian route signing.		

**END OF PROBLEMS IDENTIFIED AND RECOMMENDATIONS PRESENTED IN THIS
STAGE 2 ROAD SAFETY AUDIT**

4 Audit Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG119	
ROAD SAFETY AUDIT TEAM LEADER	
NAME:	JON BIRKETT
SIGNED:	
POSITION:	DIRECTOR
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	17 AUGUST 2026
ROAD SAFETY AUDIT TEAM MEMBER	
NAME:	NAOMI COOK
SIGNED:	
POSITION:	ASSOCIATE DIRECTOR
ORGANISATION	MERAKI ALLIANCE LTD
DATE:	17 AUGUST 2026



Appendix 1 – Audited Documents

Mold Road Parallel Crossing iss 1

Mold Road Gwersyllt RSA 1 Rev 0

ITS1827 A541 Mold Road Crossing iss 1

260443-SCP-HGN-ZZ-DR-C-4000-001 - Standard Details-A1 LANDSCAPE

260443-SCP-HGN-ZZ-DR-C-1200-002 - Signs & Road Markings (Sheet 2 of 2)

260443-SCP-HGN-ZZ-DR-C-1200-002 - Signing + Lining Schedule-A1 LANDSCAPE

260443-SCP-HGN-ZZ-DR-C-1200-001 - Signs & Road Markings (Sheet 1 of 2)

260443-SCP-HGN-ZZ-DR-C-1100-002 - Kerbs, Footways & Paved Areas (Sheet 2 of 2)

260443-SCP-HGN-ZZ-DR-C-1100-001 - Kerbs, Footways & Paved Areas (Sheet 1 of 2)

260443-SCP-HGN-ZZ-DR-C-0200-002 - Site Clearance (Sheet 2 of 2)

260443-SCP-HGN-ZZ-DR-C-0200-001 - Site Clearance (Sheet 1 of 2)

260443-SCP-HGN-ZZ-DR-C-0000-002 - General Arrangement (Sheet 2 of 2)

260443-SCP-HGN-ZZ-DR-C-0000-001 - General Arrangement (Sheet 1 of 2)

Appendix 2 – Problem Location Plan



meraki alliance

Highways, Transportation & Safety Consulting

Problem Location Plan

Problems General to the Scheme

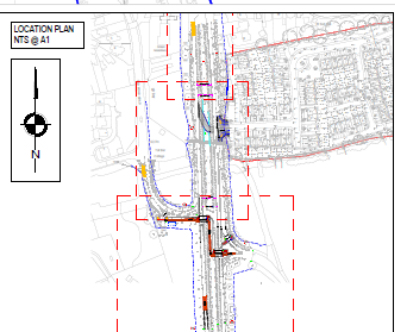
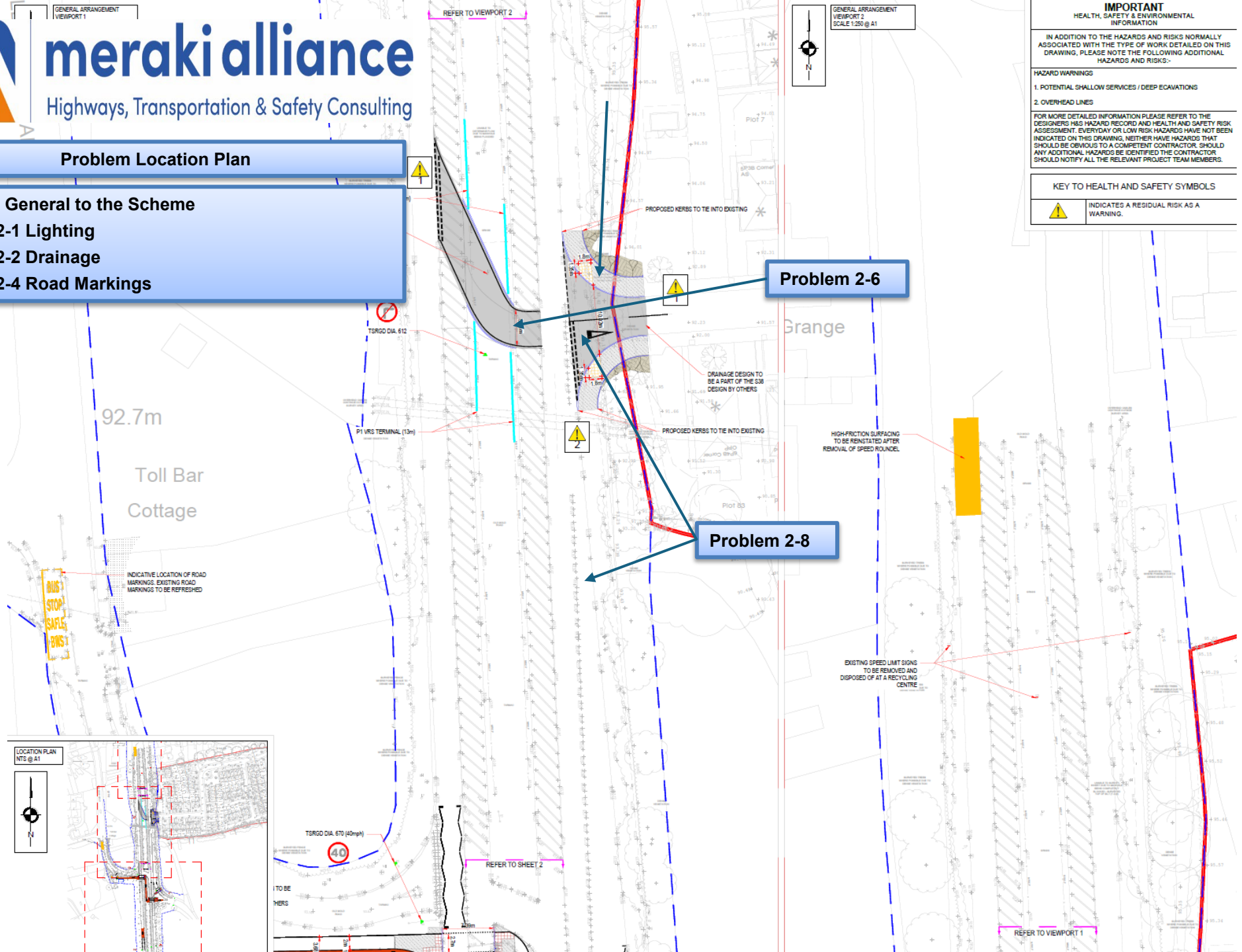
Problem 2-1 Lighting

Problem 2-2 Drainage

Problem 2-4 Road Markings

Problem 2-6

Problem 2-8



GENERAL ARRANGEMENT
VIEWPORT 2
SCALE 1:250 @ A1



IMPORTANT
HEALTH, SAFETY & ENVIRONMENTAL
INFORMATION

IN ADDITION TO THE HAZARDS AND RISKS NORMALLY ASSOCIATED WITH THE TYPE OF WORK DETAILED ON THIS DRAWING, PLEASE NOTE THE FOLLOWING ADDITIONAL HAZARDS AND RISKS:-

HAZARD WARNINGS

1. POTENTIAL SHALLOW SERVICES / DEEP ECAVATIONS
2. OVERHEAD LINES

FOR MORE DETAILED INFORMATION PLEASE REFER TO THE DESIGNER'S HAZARD RECORD AND HEALTH AND SAFETY RISK ASSESSMENT. EVERYDAY OR LOW RISK HAZARDS HAVE NOT BEEN INDICATED ON THIS DRAWING. NEITHER HAVE HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED THE CONTRACTOR SHOULD NOTIFY ALL THE RELEVANT PROJECT TEAM MEMBERS.

KEY TO HEALTH AND SAFETY SYMBOLS

INDICATES A RESIDUAL RISK AS A WARNING.

HIGH-FRICTION SURFACING
TO BE REINSTATED AFTER
REMOVAL OF SPEED ROUND

EXISTING SPEED LIMIT SIGNS
TO BE REMOVED AND
DISPOSED OF AT A RECYCLING
CENTRE

REFER TO VIEWPORT 1

REFER TO SHEET 2

REFER TO VIEWPORT 2

92.7m

Toll Bar
Cottage

Grange

TSRCO DIA. 612

P1 VRS TERMINAL (13m)

PROPOSED KERBS TO TIE INTO EXISTING

DRAINAGE DESIGN TO
BE A PART OF THE S38
DESIGN BY OTHERS

PROPOSED KERBS TO TIE INTO EXISTING

INDICATIVE LOCATION OF ROAD
MARKINGS EXISTING ROAD
MARKINGS TO BE REFRESHED

BUS
STOP
SAPLE
BWS 1

TSRCO DIA. 670 (40mph)

40

TO BE
OTHERS

