Road Safety Audit Stage 3

Isherwood Road Junction Section 106 Works

CO00201439 / RSA 3/2022/006

29/09/2022

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Document Control Sheet

Project Name:	Isherwood Road Junction Section 106 Works
Project Number:	CO00201439
Report Title:	Road Safety Audit Stage 3
Report Number:	RSA 3/2022/006

Issue Status/Amendment	Prepared	Reviewed	Approved
First issue	Name: ... Signature: Date: 27/09/2022	Name: ... Signature: Date: 27/09/2022	Name: ... Signature: Date: 27/09/2022
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1. Introduction

1.1. Commission and Terms of Reference

1.1.1 This report results from a Stage 3 Road Safety Audit carried out on the Isherwood Road Junction Section 106 Works scheme at the request of … on behalf of the Overseeing Organisation, Trafford Council.

1.1.2 The Audit Team membership approved by … on 1/09/2022, who also issued / approved the brief, for this road safety audit was:

Membership	Name	Details
Audit Team Leader	xxx	IEng, FIHE, RegRSA(IHE)
Audit Team Member	xxx	FIHE, BSc (Hons) Civil Engineering

Table 1: Audit Team Membership

1.1.3 Both members of the Audit Team hold a Road Safety Certificate of Competency meeting the requirements of the European Directive 2008/96/EC and GG119 Rev.2.

1.1.4 It is confirmed that this is a Stage 3 Road Safety Audit and was undertaken in accordance with the requirements of GG119 Rev.2. The audit comprised an examination of the completed works together with the documents provided, and these are listed in Appendix A.

1.1.5 A site visit was completed by the audit team during daylight hours on Tuesday 13/09/2022 between 2:00pm and 4:00pm. The weather was fine and the road surface was dry. Traffic conditions were free flowing. The site visit during the hours of darkness took place on the same day between 8:15pm and 9:15pm. The weather was fine and the road surface was dry.

1.1.6 Invites were issued to Greater Manchester Police and to the maintaining agent for the overseeing organisation, Trafford Council. … representing the maintaining agent for Trafford Council attended, however, the Police were unavailable on this occasion.

1.1.7 The terms of reference of the audit are described in GG119 Rev.2. The team has examined and reported only on the road safety implications of the scheme as presented in the provided documents (Appendix A) and has not examined or verified the compliance of the designs to any other criteria.

1.1.8 All comments contained in the report with regard to Traffic Signs will be in accordance with the Traffic Signs Regulations and General Directions (TSRGD), 2016 or revisions thereof. Diagram numbers will be referred to if necessary.

1.1.9 This is the Second known audit for the scheme. A previous Stage 1/2 Road Safety Audit was undertaken in July 2020 by Amey and any relevant matters will be reported in Section 2.

1.1.10 The comments and suggestions for road safety improvements made in this report are aimed to address matters that might have an adverse effect on road safety in the context of the chosen design. To clearly explain a safety problem or a recommendation to resolve a problem, the Audit Team may, on occasion, refer to a Design Standard. In addition, the Audit Team may provide an illustrative sketch to clarify a recommendation particularly in the event of a complex recommendation. Such sketch illustrations do not represent any design solution.

1.1.11 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG 119 Rev.2, and in no way, imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

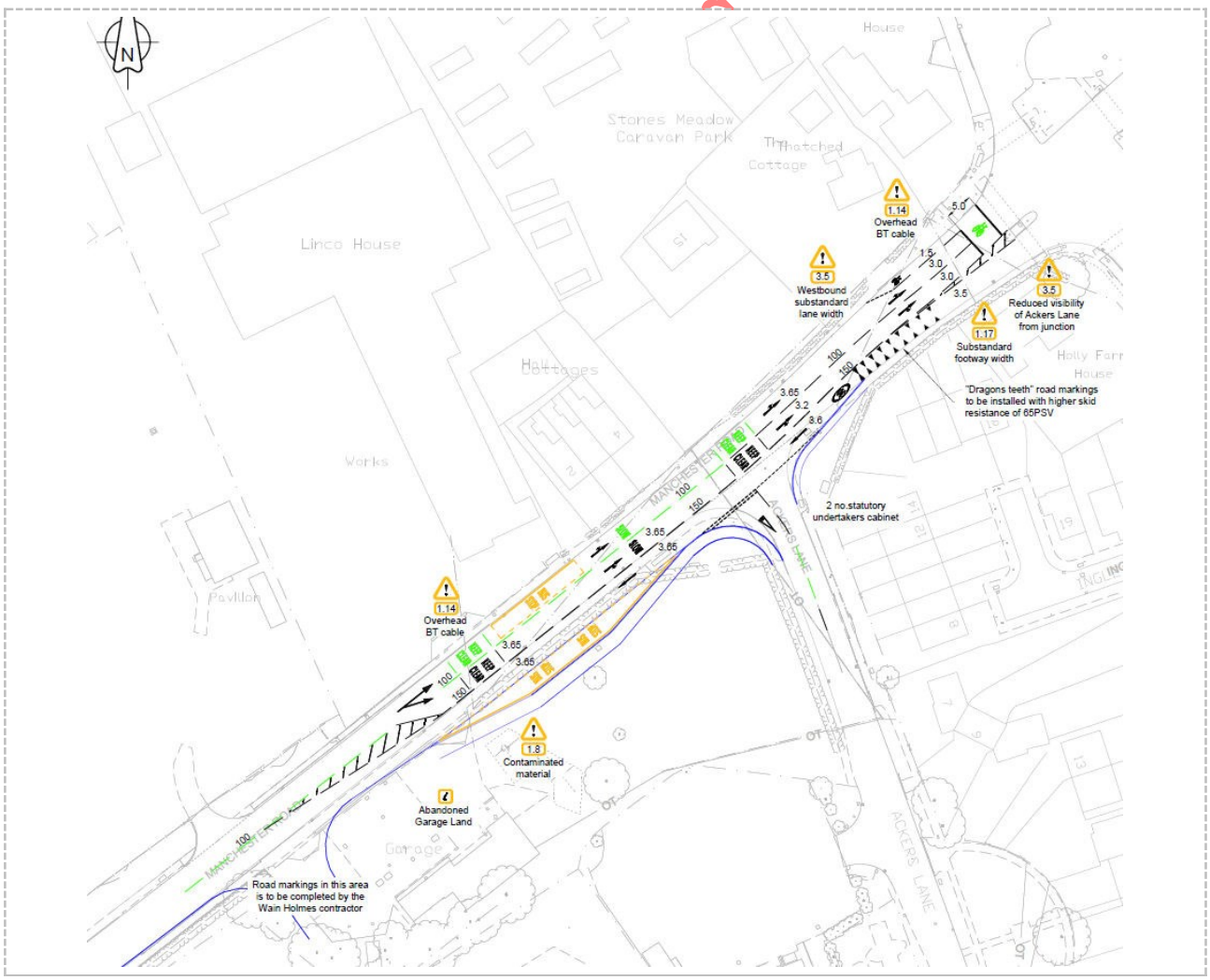
1.2. Scheme Description

1.2.1 The scheme is a section 106 junction improvement on Manchester Road (which becomes Carrington Lane at the junction of Isherwood Road) as part of future development and includes:

- An extension of the right turn lane to Isherwood Road
- New junction access to proposed development
- Widening of the carriageway on south side of Manchester Road
- New bus lay-by
- Relocation of gullies in line with new kerb/channels
- Relocation of existing lighting columns
- Associated signals work
- Signing and lining amendments to suit the new carriageway layout

1.2.2 Figure 1.2-1 indicates the extents of the scheme considered under this Stage 3 Road Safety Audit in accordance with the Audit Brief.

Figure 1.2-1: Extent of Road Safety Audit Stage 3



1.3. Audit Management

1.3.1 Upon issue of the Road Safety Audit report a Road Safety Audit Response Report in line with GG119 Rev.2 (Section 4 and Appendix F) shall be produced by the design organisation in collaboration with the Overseeing Organisation. A copy of this response report should be issued to the Audit Team within one month after their Road Safety Audit report's submission.

1.3.2 In addition to the Road Safety Audit report, the Road Safety Audit team shall report to the Overseeing Organisation any other issues relating to maintenance defects and those that are not covered by the RSA brief.

2. Matters Raised at Previous Road Safety Audit Stage

2.1. Previous Audits

2.1.1 The previous Stage 1/2 Road Safety Audit which was undertaken in July 2020 by Amey, identified 7 problems.

2.1.2 A designers response was provided. After inspecting the constructed works, it was deemed five of the problems were either addressed or deemed to be no longer an issue and two remain either partly or fully unaddressed and are reiterated as follows:

2.2. Problem 1 – (as numbered and written in the Stage 1/2)

Location: Visibility of Ackers Lane junction from the signalled junction

Summary: Intervisibilty of Ackers Lane junction from the signalled junction

Details: The ahead / right turn lane on the northeast bound approach to the signalled junction is to be extended back across the junction of Ackers lane. This requires carriageway widening which has been taken from the south side of Manchester Road. This will set back the give way line of the Ackers Lane junction by a few metres.

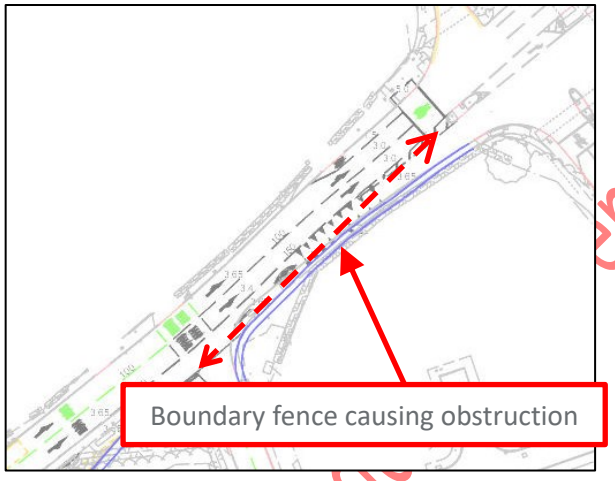


Figure 2.2-1 :Intervisibilty is reduced by setback junction

Photo 2.2-1: Ackers Lane junction would not be seen from northeast approach

Consequently, this will reduce the intervisibilty of the Ackers Lane junction to the approach from the signalled junction. The rear boundary fence of the properties would appear to be the main feature causing the obstruction (see Figure 2.2-1 and Photo 2.2-1). The remaining intervisibility is deemed inadequate for the existing speed limit. It is possible drivers travelling at speed through the signalled junction from the north east could approach Ackers Lane too fast, particularly towards the end of the green stage when drivers tend to accelerate to avoid stopping at the signals which could potentially result in a side impact type collisions.

Recommendation:

Adequate intervisibilty for the expected speeds should be provided by amending the design accordingly.

Designers Response:

The removal of the existing hedge as already included in the design will benefit the visibility from the signalised junction to Ackers Lane. Change in alignment not possible due to existing position of highway boundary between Ackers Lane and the signalised junction.

Comment at this Stage 3 Road Safety Audit:

Even though the designer's response states the alignment cannot be improved due to the highway boundary, it could be seen during the site visit, that the existing hedge row due for removal had not been done and is still obscuring the intervisibility between the bell mouth of Acker Lane junction and vehicles approaching from the Isherwood Road signalled junction, as shown in Photos 2.2-2 and 2.2-3.

Photo 2.2-2: Intervisibility between Isherwood Rd and Ackers Ln is obscured by hedge row

Photo 2.2-3: Intervisibility from Ackers Lane to Isherwood Road is obscured by hedge row

Therefore, as per the site clearance drawing, the foliage should be cut back as far as possible to increase and achieve maximum intervisibility between the two junctions.

2.3. Problem 2 – (as numbered and written in the Stage 1/2)

Location: Southwest bound approach through the signalled junction and past Ackers Lane junction

Summary: Adverse deflection between signalled junction and Ackers Lane

Detail: The carriageway widening on the southeast side of the signalled junction will create a new alignment for the southwest bound approach from the signalled junction as it nears the junction with Ackers Lane.

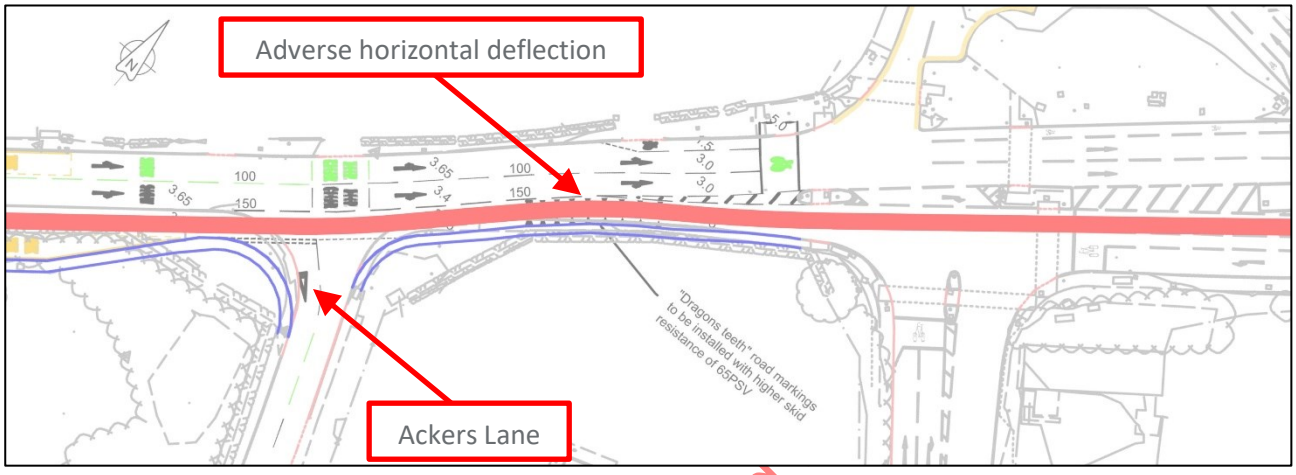


Figure 2.3-1: Adverse deflection travelling southwest through the junctions

Such severe deflection could potentially cause a vehicle travelling at speed to lose control or potentially encroach into the adjacent lane and have a head-on collision with a vehicle approaching in the opposing direction.

Additionally it was observed, as existing there is no keep left bollard on the south west bound exit from the signalled junction which is where the new alignment & deflection begins as shown below.

Figure 2.3-2: Adverse deflection travelling southwest through the junctions

Recommendation:

The adverse change in alignment should be reduced if possible and highlighted to approaching drivers together with installing a keep left bollard to help channelise drivers accordingly. For example contrast could be added to the carriageway to help make its alignment more prominent.

Designer's comments: Comment accepted. Change in alignment not possible due to existing position of highway boundary between Ackers Lane and the signalised junction. Therefore, design change will be inclusion of new 'keep left' bollard on the pedestrian island as mentioned in the above recommendation. Furthermore, current elements within the design including the removal of the hedge and the dragons teeth markings will contribute to reducing the effect of the adverse alignment.

Comment at this Stage 3 Road Safety Audit:

Even though the designer's response states the alignment cannot be improved due to the highway boundary, it could be seen during the site visit, that the existing hedge row had not been removed and is still obscuring the intervisibilty between the bell mouth of Acker Lane junction and vehicles approaching from the Isherwood Road signalled junction as shown below. Also, the proposed keep left bollard had not been installed (see Photo 2.3-1).

Photo 2.3-1: Hedgerow not cut back and bollard not installed

Therefore, the foliage should be cut back as far as possible to increase and achieve maximum intervisibility between the two junctions and the keep left bollard should be installed.

3. Items Identified at this Stage 3 Road Safety Audit

3.1. Problem 1

Location: Western end of the scheme at the unfinished bell mouth into the proposed development.

Summary: The western most radius of the new bell mouth is directly in the line of travel of westbound vehicles whereby drivers could collide head on into it and lose control.

Detail: There is an unfinished bell mouth for the junction of a future development yet to be constructed. Sections of the radii corners for this junction are partly installed as shown in Photos 3.1-1 and 3.1-2.

Photo 3.1-1: Western most radius section of unfinished bell mouth

Photo 3.1-2: Eastern most radius section of unfinished bell mouth

However, the kerb alignment on the southern side of Manchester Road places the western radius section directly in the line of travel of westbound drivers, whereby they could collide head on into it. This 'head on' alignment is shown in Photos 3.1-3 and 3.1-4 from the dashcam for both day and night.

Photo 3.1-3: Western radius of unfinished bell mouth is directly ahead - day

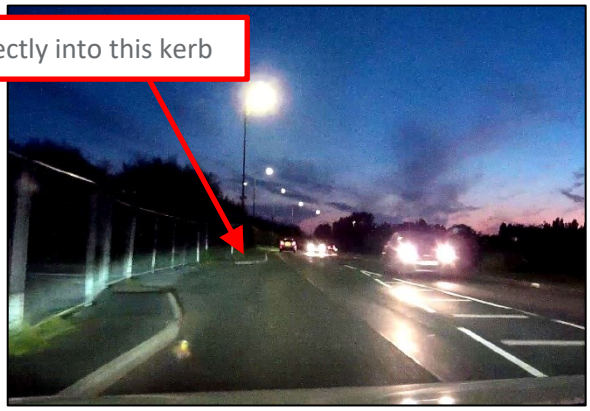


Photo 3.1-4: Western radius of unfinished bell mouth is directly ahead - night

Recommendation: Guidance, such as an edge of carriageway marking to delineate the edge of the driven lane should be provided to align drivers accordingly.

3.2. Problem 2

Location: Western end of the scheme at the unfinished bell mouth into the proposed development.

Summary: The bell mouth has no delineation to show the edge of carriageway, whereby vehicles might enter this area and collide with pedestrians crossing the newly formed junction.

Detail: Further to the previous problem, the bell mouth leaves a rather wide-open area of live carriageway for pedestrians to cross with no delineation of the edge of carriageway for passing drivers, as shown in Photo 3.2-1.

Photo 3.2-1: Bell mouth has no delineation putting pedestrians at risk of being struck by vehicles

It is possible drivers could drive into this area without realising and put pedestrians at risk of being struck.

Recommendation: Guidance such as an edge of carriageway marking to delineate the edge of the main line should be provided to align drivers away from the bell mouth area.

3.3. Problem 3

Location: Western end of the scheme at the unfinished bell mouth into the proposed development.

Summary: The bell mouth edges are in a state that present a slip, trip and fall hazard for pedestrians.

Detail: The installed radius sections of the bell mouth edges have been left in a state that present an unsafe transition from footway to carriageway as shown in Photos 3.3-1 and 3.3-2.

Photo 3.3-1: Western radius is in a state that presents a trip hazard

Photo 3.3-2: Eastern radius is in a state that presents a trip hazard

It is possible that pedestrians could slip, trip and fall at these transition points particularly during the hours of darkness.

Recommendation: The transition points of the footway to carriageway should be made safe for pedestrians to safely cross.

3.4. Problem 4

Location: Western end of the scheme on south side of Manchester Road.

Summary: An area of footway has an unfinished rear edge, presenting a slip, trip and fall hazard to pedestrians.

Detail: Towards the western end of the scheme, west of the new bell mouth, there is an area of footway that is left in such a state that it presents a slip, trip and fall hazard as shown in Photos 3.4-1 and 3.4-2.

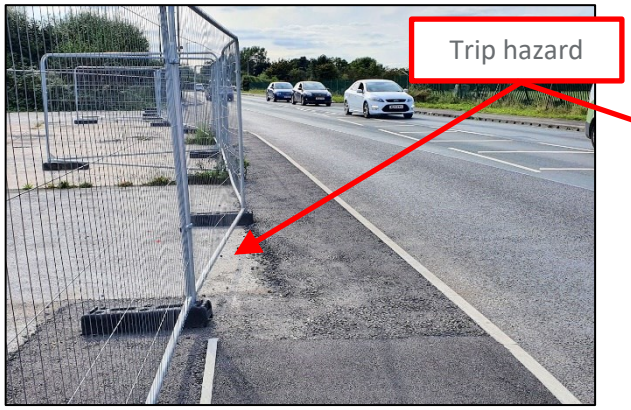


Photo 3.4-1: Footway area with trip hazard at the rear edge – facing west

Photo 3.4-2: Footway area with trip hazard at the rear edge – facing east

It is possible that pedestrians could slip, trip and fall at this location.

Recommendation: The area at the rear of the footway should be made safe.

3.5. Problem 5

Location: A6144 Manchester Road – west arm of signalled junction with Isherwood Road / Carrington Lane.

Summary: The original road markings are still showing on the west arm of the signalled junction which could mislead drivers into the wrong position and cause head-on and side-swipe type collisions.

Detail: The west arm of the signalled junction has the original white lining still showing as shown in Photos 3.5-1 and 3.5-2.

Photo 3.5-1: Original white lining showing through - eastbound

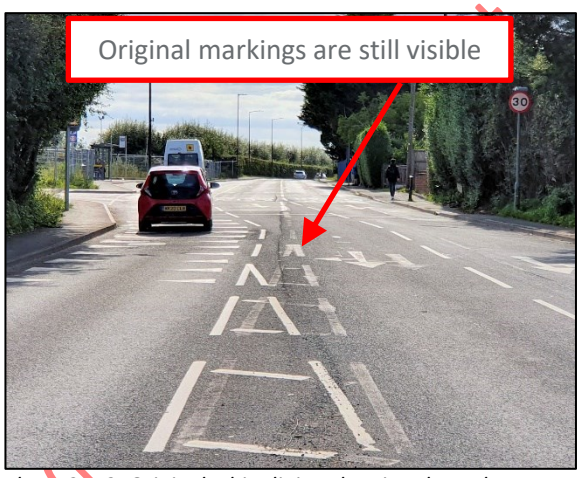


Photo 3.5-2: Original white lining showing through - westbound

It is possible the original lining could mislead drivers and cause them to follow the previous alignment, potentially causing head-on and side-swipe type collisions.

Recommendation: The original white lining should be properly removed.

3.6. Problem 6

Location: East of Ackers Lane.

Summary: Pedestrian intervisibility between approaching traffic from the signalled junction is obscured by foliage.

Detail: It was observed that pedestrian / vehicle intervisibility, east of Ackers Lane, is obscured by foliage when stood at the corner of the junction, more than how it was prior to scheme implementation as shown in Photos 3.6-1 and 3.6-2.

Photo 3.6-1: Intervisibility pre-scheme implementation 2020

Photo 3.6-2 : Intervisibility post-scheme implementation 2022

If left like this is, it could cause pedestrian / vehicular conflicts if a left turning vehicle into Ackers Lane emerges from the Isherwood Road junction at speed, as a pedestrian is just about to step into the carriageway. The speed limit sign is also partially obscured at this location.

Recommendation: The foliage should be removed to improve intervisibility and to make the sign more visible.

3.7. Problem 7

Location: Western corner of Ackers Lane.

Summary: Loose tactile paving slab could present a slip, trip and fall hazard.

Detail: It was observed there was a tactile paving slab which was beginning to come loose which moved as it was walked upon. The slab is shown in Photo 3.7-1.

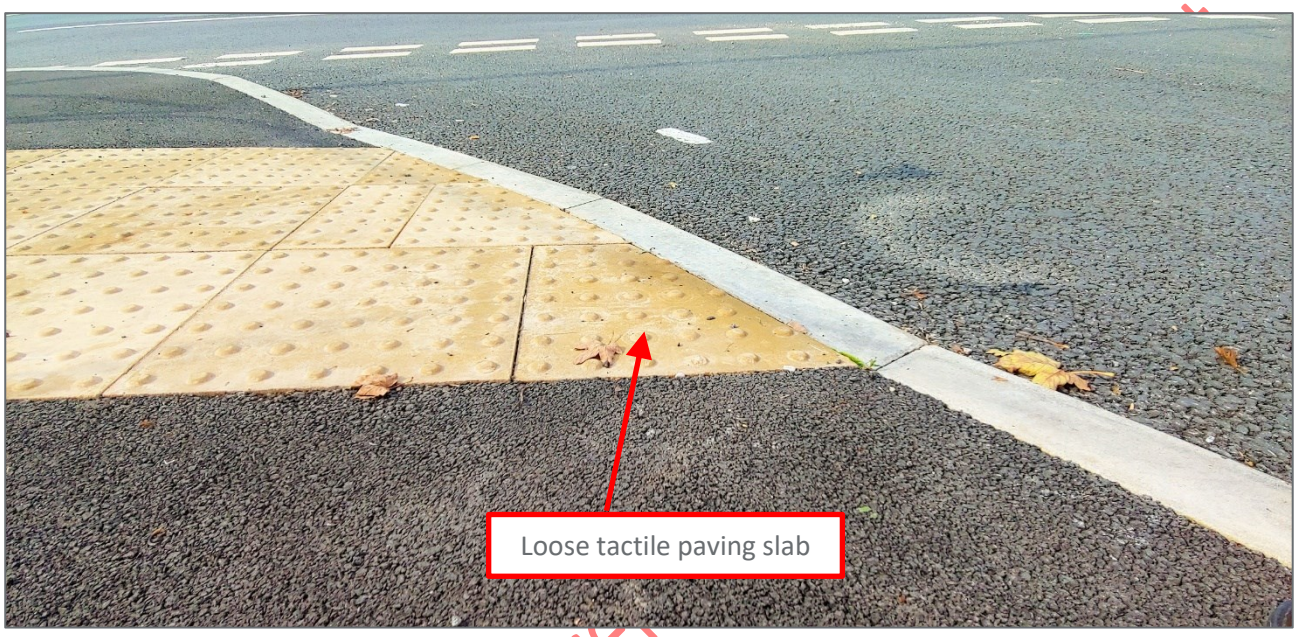


Photo 3.7-1: Loose tactile paving slab will become a slip, trip and fall hazard over a period of time

Even though it did not present a significant problem at the time of the site visit it is likely to deteriorate over a period of time and possibly become a slip, trip and fall hazard.

Recommendation: The tactile paving slab should be rectified accordingly so it is no longer loose.

3.8. Problem 8

Location: A6144 Manchester Road - westbound exit from signalled junction with Isherwood Road / Carrington Lane.

Summary: Westbound 30mph speed limit gateway sign is obstructed by foliage whereby drivers could drive at inappropriate speeds causing tail end type shunts.

Detail: The speed limit gateway sign informing drivers of a drop in the speed limit from 40mph to 30mph on the western arm of the signalled junction is obscured by foliage in the westbound direction as shown in Photo 3.8-1.

Photo 3.8-1: Speed limit gateway sign is obstructed in westbound direction

Notwithstanding there is a speed limit roundel marking on the carriageway, it is possible drivers could miss this and continue to travel at inappropriate speeds, whereby a tail end shunt, side-swipe or loss of control type collision could occur.

Recommendation: The foliage on the approach to this sign should be permanently removed.

4. Audit Team Statement

4.1.1 We certify that this audit has been carried out in accordance with GG119 Rev.2.

Road Safety Audit Team Leader

… Signed:

Date:

Road Safety Audit Team Member

… Signed:

Date:

Appendix A. Scheme Documentation

The Road Safety Audit was conducted using the documents listed in the table below:

Drawing Number	Revision	Details
HW-201293-001-04	C2	Site Clearance and Earthworks
HW-201293-001-05	C1	Drainage
HW-201293-001-06	C2	Construction Plan and Details
HW-201293-001-07	C2	Kerbing
SL-201293-001-01	C0	Lighting Layout
TR-201293-001-01__A	C2	Proposed Road Markings
TR-201293-001-01__B	C2	Site Clearance Road Markings
TR-201293-001-02	C1	Proposed Traffic Signs and Signs Site Clearance
TR-201293-001-03	C0	Proposed traffic signs
Documentation		
RSA 3 Brief		
Isherwood Road ESA		
IsherwoodRd_RSA12 with designers comments amended		

Table 2: List of documents

Appendix B. Problem Location Plan