
**LAND NORTHEAST OF
M1 JUNCTION 22,
MARKFIELD,
LEICESTERSHIRE**

**PROPOSED TOUCAN CROSSING
& SITE ACCESS ON A50**

**UPDATED STAGE 1
ROAD SAFETY AUDIT REPORT**

**REQUESTED BY:
RIDGE AND PARTNERS LLP**

JUNE 2026



RKS
Associates

Project: Land Northeast of M1 Junction 22, Markfield, Leicestershire
Proposed Toucan Crossing & Site Access on A50

Client: Ridge and Partners LLP

Document: Updated Stage 1 Road Safety Audit

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RKS
Associates

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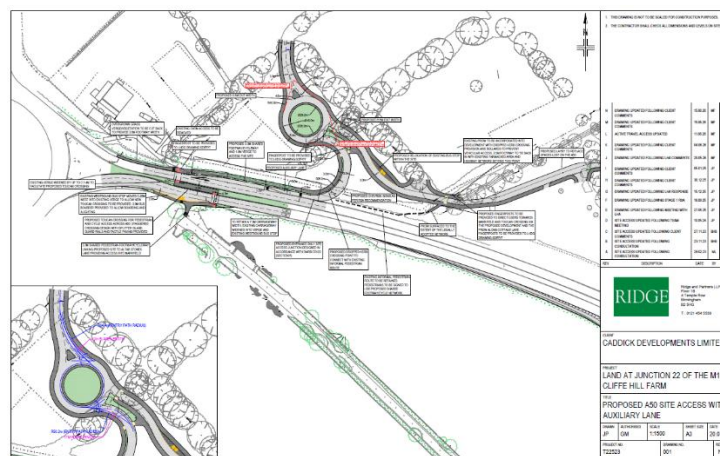
Appendix A: Location of Problems Identified During Updated Stage 1 Road Safety Audit

Appendix B: Road Safety Audit Decision Log

1 INTRODUCTION

- 1.1 This report results from a Stage 1 Road Safety Audit carried out on the updated highway works associated with a proposed Industrial/Storage (B2/B8) development on land located to the northeast of M1 Junction 22, Markfield in Leicestershire. The proposed development provides a total of 65,000m² Gross Internal Floor Area (GFA) arranged as six units with accesses taken from the A50 via an off-slip arrangement and a separate egress only on to Whitwick Road. The proposed site layout and respective accesses are shown in **Figure 1**.

Figure 1: Proposed Site Highway Works



- 1.2 The highway works subject to this Updated Stage 1 Road Safety Audit include widening of the A50 to provide a deceleration lane and slip road that continues into the development where it connects with an internal roundabout serving the development. The central island on the A50 is to be widened to accommodate a Toucan crossing across the A50 utilising approximately 100m from the grade separated roundabout at the M1 Junction 22. Additional updated highway works include the removal of the existing farm access on the northern side of the A50 and the provision of a 3m shared use facility from the proposed Toucan crossing into the development. The shared use facility continues south of the A50 to connect with the Altar Stones Lane and into Markfield. The updated highway works also include the relocation of the existing westbound bus stop further west by 25m forming a bus stop within the layby to the west of the proposed Toucan crossing.
- 1.3 Ridge and Partners LLP have supplied the following information upon which this Updated Stage 1 RSA is based:
- Designers Response prepared by Hub Transport Planning (now Ridge and Partners LLP) relating to the Stage 1 Road Safety Audit Report conducted by RKS Associates (September 2025);
 - Ridge and Partners LLP Drawing Numbers:
 - T22523-001 Revision N - Proposed A50 Site Access with Auxiliary Lane;
 - T22523-002 Revision M - Proposed A50 Site Access Swept Path Analysis;
 and

- T22523-005 Revision K – Toucan Crossing Stopping Sight Distances.

1.4 The main parties to this Road Safety Audit include the following:

Road Safety Audit Team Leader	Vimal Patel BEng (Hons), GMICE, Reg. RSA (IH), FIHE, NH Cert Comp
Road Safety Audit Team Member	Beth Newiss MCIHT, MSoRSA, NH Cert Comp
Local Highway Authority	Leicestershire County Council
Design Organisation	Ridge and Partners LLP

1.5 The Audit was undertaken following examination of the submitted documents, including reference to a site visit undertaken on Thursday 18th June 2026 between the hours of 10am and 1pm. The weather during the site inspection was sunny and the carriageway dry with moderate traffic flows and no pedestrian and cycle flows were observed along the A50.

Terms of Reference

1.6 The Audit Team is independent of the project design team and has no other involvement with the project apart from undertaking the Stage 1 Road Safety Audit on the original scheme in September 2025. This Stage 1 RSA has been undertaken in accordance with the relevant sections of GG-119 Revision 2, part of the Design Manual for Roads and Bridges (DMRB).

1.7 The Safety Audit Team has examined only matters relating to road safety implications of the updated scheme and has not verified compliance of the design to any other criteria. The Audit Team has not been made aware of any Departures from Standard and have been provided with the Designers Response to the Stage 1 Road Safety Audit conducted in September 2025 on the original scheme. For ease of reference any issues that have not been addressed in the designers response have been reiterated in this Updated Stage 1 Road Safety Audit.

1.8 All of the problems identified in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and to minimise accident occurrence for all users. The location of the problems identified in this Safety Audit is shown in **Appendix A** where the reference numbers relate to the problems identified in this report.

1.9 The recommendations in this report are aimed at addressing the identified road safety problems; however, there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities. The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit and would encourage the Designer to consult them on this matter.

1.10 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the As-Built design pack to be provided and retained by the Local Highway Authority on completion.

- 1.11** For ease the Road Safety Audit Decision Log template is included in **Appendix B**. This enables the Designers and Overseeing Organisations Response to the Audit to be documented along with an agreed RSA Action.

Collision Data

- 1.12** Publicly available Personal Injury Collision (PIC) information obtained from the Crashmap UK website (www.crashmap.co.uk) for the 5-year period up to December 2024 has been reviewed within the vicinity of the highway works. The collision data indicates that a total of 5 collisions have occurred on the wider highway network in the vicinity of the highway works. A closer examination of the collision data indicates that one collision was recorded on the A50 eastbound carriageway a short distance west of Whitwick Road overbridge, the collision involved four vehicles and resulted in one slight injury.

Trip Generation/Traffic Flow Data

- 1.13** The Design Engineers Ridge and Partners LLP have provided details of the likely trip generation associated with the proposed development via an email. The trip generation assessment indicates that the proposed development is likely to generate 531 and 348 two-way vehicle trips during the AM and PM peak hour periods respectively.

2 ISSUES IDENTIFIED DURING UPDATED STAGE 1 ROAD SAFETY AUDIT

2.1 **Problem:**

Summary: Potential risk of collisions associated with poor drainage

Location: *General.*

No details have been provided in respect of surface water drainage or other services, and it is therefore not possible to ascertain whether there will be any safety implications. The absence of surface water drainage may result in the collection of surface water which could increase the risk of loss of control collisions.

Recommendation:

Ensure that the detailed design incorporates surface water drainage to mitigate localised flooding/ponding.

2.2 **Problem:**

Summary: Potential risk of collisions associated with unclear layout

Location: *General – Proposed shared use facility/pedestrian footway.*

No details have been provided in respect of signs and corduroy paving associated with the proposed shared use pedestrian/cycle facility at this stage and it is therefore not possible to ascertain whether there will be any safety implications. The absence of appropriate signs and paving informing non-motorised users of the layout and operation of the proposed shared use facility may increase the risk of collisions between pedestrians and cyclists using the proposed shared use facility. .

Recommendation:

Ensure that appropriate signs and tactile paving informing non-motorised users of the layout and operation of the proposed shared use facility is provided, any signs should be placed at the back of footway where will not cause an obstruction for users.

2.3 **Problem**

Summary: Potential risk of cycle collisions associated with poor facility

Location: *General – Throughout cycle access onto and off shared use facility*

No details relating to safe facilities for cyclists to gain access onto and off the proposed shared use facility have been provided. The absence of safe facilities may result in cyclists negotiating full height kerbs to access onto or off the shared use facility, this may increase the risk of injury to cyclists should they dismount and fall into the carriageway.

Recommendation

Ensure that a safe facility is provided for cyclists to gain access onto and off the proposed shared use facility.

2.4

Problem:

Summary: Potential risk of collisions associated with poor visibility

Location: *Proposed shared use facility onto the A50*

No details of the visibility splays to and from the tactile paving on the northern side of the proposed Toucan crossing have been provided. Observations undertaken during the site inspection noted that vegetation along the northern verge of the A50, on the approach to the Toucan crossing may restrict visibility. This could increase the risk of collisions between pedestrians and cyclists crossing from north to south and vehicles travelling eastbound along the A50. The road safety is further compromised during periods when the Toucan crossing is not operational, as users may attempt to cross the A50 without signal control, increasing their exposure to traffic.

Recommendation:

Ensure visibility splays to and from the tactile paving on the northern side of the proposed Toucan crossing are provided, any obstruction in visibility should be cut back and regularly maintained or replaced with a low-level variety.

2.5

Problem:

Summary: Potential risk of loss of control collisions associated poor carriageway surface

Location: *A50 approaches to the proposed Toucan*

It is unclear from the information provided if the carriageway surface on the A50 approaches to the proposed Toucan crossing is to be resurfaced. The introduction of the Toucan crossing may result in sudden/late braking of vehicles approaching the Toucan crossing when a red traffic signal aspect is activated. This may lead to a greater risk of loss of control collisions particularly during wet/damp road surface conditions.

Recommendation:

Review the carriageway surface on the A50 approaches to the proposed Toucan crossing to ensure that appropriate skid resistance (PSV) accord with highway standards, if necessary resurface the carriageway.

2.6

Problem:

Summary: Potential risk of speed related/loss of control collisions

Location: *Proposed development access*

There is concern that the proposed layout of the auxiliary deceleration lane does not provide any additional speed reducing measures. Consequently, there is a greater risk of speed related and/or loss of control collisions associated with vehicles traveling along the auxiliary lane at inappropriate speed.

Recommendation:

Ensure additional speed reducing measures are provided on the entry to the development to mitigate the risk of collisions associated with vehicles traveling at inappropriate speed.

2.7

Problem:

Summary: Potential risk of loss of control collisions associated with carriageway space
Location: *Proposed development access*

The proposed width of the access road serving the development varies in width from 7.3m on the entry to 6m on the approach to the internal site access roundabout. The vehicle swept path analysis provided indicate that large vehicles can negotiate the access road, however where the width narrows there is concern that larger vehicles may overrun the kerbs/verge. This may increase the risk of loss of control collisions which may be exuberated by vehicles travelling at inappropriate speed whilst traversing the bend in the road.

Recommendation:

Review the layout, the access road should be of a consistent width with carriageway hatch markings used to direct vehicles safely around the bend.

2.8

Problem:

Summary: Potential risk of collisions associated with vertical alignment
Location: *Proposed development access*

No details of surface levels have been provided at this stage, it is therefore not clear whether vehicles will be able to negotiate the proposed development access safely. Observations during the site inspection noted that the vertical alignment between the A50 and the proposed development access roundabout, consequently the proposed layout of the access may result in an adverse camber. This may increase the risk of loss of control collisions particularly for high sided vehicles accessing the development.

Recommendation:

Ensure that a cross fall suitable for the horizontal alignment and design speed is provided for the proposed development access junction.

2.9

Problem:

Summary: Potential risk of non-motorised users struck by passing traffic
Location: *Proposed crossing facility across development access road*

No details relating to the visibility splays to and from the tactile landings at the proposed uncontrolled crossing facility across the proposed development entry have been provided. There is concern that visibility to and from the proposed tactile landings may be compromised by vegetation which may lead to non-motorised users entering the carriageway to observe oncoming traffic leading to an increased risk of them being struck by vehicles.

Recommendation:

Ensure visibility splays to and from the tactile landings at the proposed uncontrolled crossing facility across the development access road are provided. Vegetation within/behind the visibility splays should be cut back and regularly maintained, alternatively move the crossing facility closer towards development access roundabout.



2.10

Problem:

Summary: Potential risk of pedestrian collisions associated with poor provision

Location: *Proposed PROW link south of internal access road.*

The proposed layout indicates that the existing Public Right of Way (PRoW) is to be incorporated into the development, with a dropped kerb crossing and bollards provided across the internal access road to prevent vehicular access. The footway continues southwards across the internal access road towards the A50 where an informal dropped kerb facility across the A50 entry is to be provided for onward pedestrian connectivity. Whilst it is acknowledged that the route forms part of an existing PROW, there is concern that the crossing facility across the A50 entry into the proposed development may put pedestrians at greater risk of being struck by vehicles.

Recommendation:

Review the layout, if possible and where feasible, the PRoW should be diverted to utilise the proposed footway along the southern side of the access road, with onward connectivity provided via the proposed uncontrolled pedestrian crossing across the development access.



3 AUDIT TEAM STATEMENT

- 3.1** We certify that this audit has been carried out in accordance with GG-119 Revision 2 of Design Manual for Roads & Bridges Volume 5 Section 2 - Road Safety Audits. Its sole purpose being to identify features of the scheme that could be removed or modified to improve safety. No member of the Audit Team has been involved in the scheme design.

Audit Team Leader

Vimal Patel
BEng (Hons), GMICE, FIHE, NH Cert Comp

Signed: 

Date: 23rd June 2026

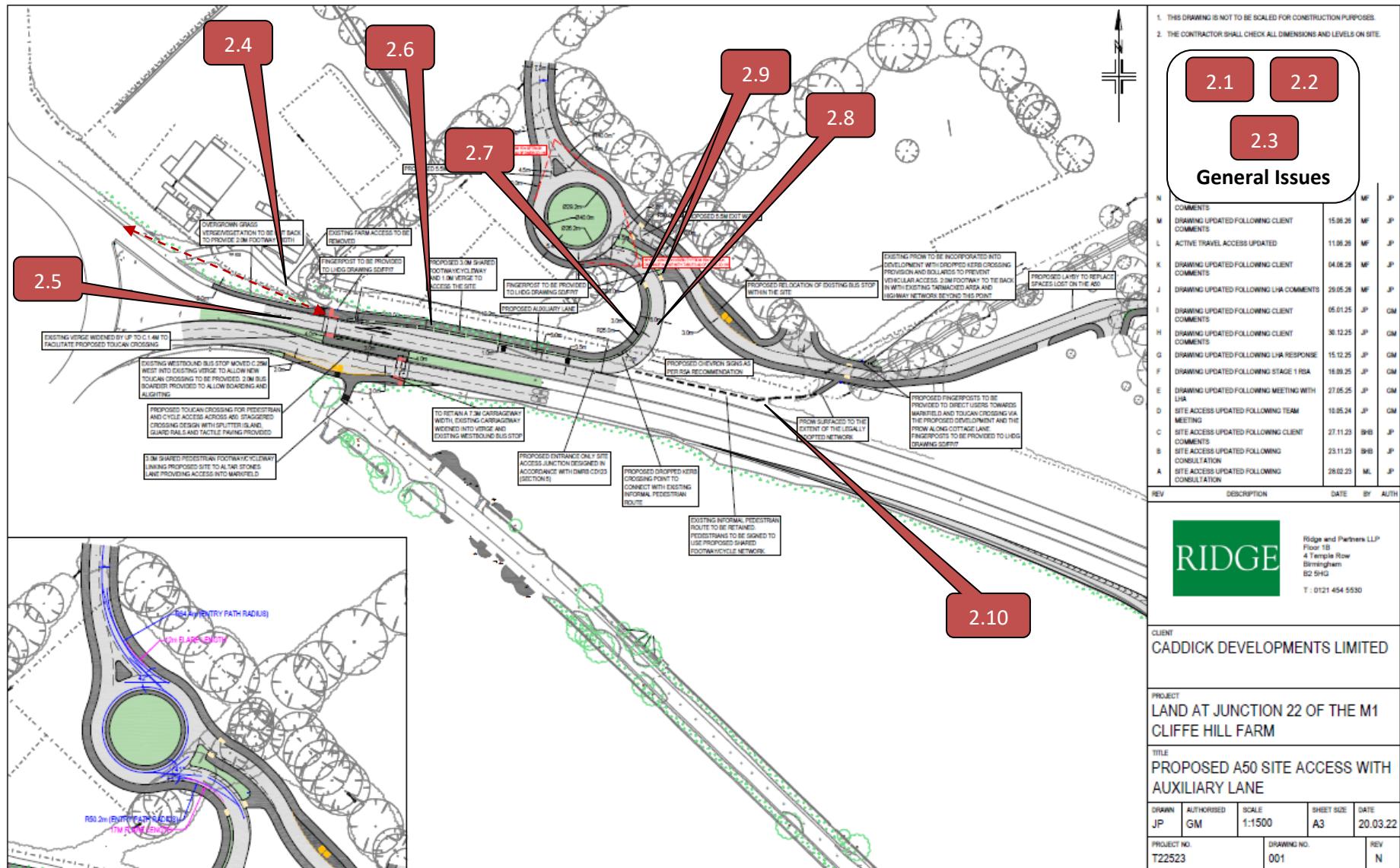
Audit Team Member

Beth Newiss
MCIHT, MSoRSA, NH Cert Comp

Signed: 

Date: 23rd June 2026

Appendix A





Appendix B



Issue N°	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
2.1	No details have been provided in respect of surface water drainage or other services, and it is therefore not possible to ascertain whether there will be any safety implications. The absence of surface water drainage may result in the collection of surface water which could increase the risk of loss of control collisions.	Ensure that the detailed design incorporates surface water drainage to mitigate localised flooding/ponding.	Accepted, this will be dealt with as part of the detailed design stage, limited to the extent of the works.		
2.2	No details have been provided in respect of signs and corduroy paving associated with the proposed shared use pedestrian/cycle facility at this stage and it is therefore not possible to ascertain whether there will be any safety implications. The absence of appropriate signs and paving informing non-motorised users of the layout and operation of the proposed shared use facility may increase the risk of collisions between pedestrians and cyclists using the proposed shared use facility. .	Ensure that appropriate signs and tactile paving informing non-motorised users of the layout and operation of the proposed shared use facility is provided, any signs should be placed at the back of footway where will not cause an obstruction for users.	Accepted, this will be dealt with as part of the detailed design stage, limited to the extent of the works.		



2.3	No details relating to safe facilities for cyclists to gain access onto and off the proposed shared use facility have been provided. The absence of safe facilities may result in cyclists negotiating full height kerbs to access onto or off the shared use facility, this may increase the risk of injury to cyclists should they dismount and fall into the carriageway.	Ensure that a safe facility is provided for cyclists to gain access onto and off the proposed shared use facility.	Not accepted. On the development site, 3.0m shared footway/cycleways are provided into each unit via the internal access road, which will allow cyclists to transition at appropriate points, with dropped kerbs and signage where necessary. To access the site, a toucan crossing is provided to connect the site with Markfield via Altar Stones Lane. From Altar Stones Lane a cyclist may safely cycle to each unit on the development without leaving a safe cycle path. The footway to the west of the crossing is not a shared footway/cycleway and it would not be appropriate to provide transitions to the west that actively encourage cycling along the A50 and A511, which are both high speed and high trafficked roads. Therefore, no design changes have been made.		
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2.4	No details of the visibility splays to and from the tactile paving on the northern side of the proposed Toucan crossing have been provided. Observations undertaken during the site inspection noted that vegetation along the northern verge of the A50, on the approach to the Toucan crossing may restrict visibility. This could increase the risk of collisions between pedestrians and cyclists crossing from north to south and vehicles travelling eastbound along the A50. The road safety is further compromised during periods when the Toucan crossing is not operational, as users may attempt to cross the A50 without signal control, increasing their exposure to traffic.	Ensure visibility splays to and from the tactile paving on the northern side of the proposed Toucan crossing are provided, any obstruction in visibility should be cut back and regularly maintained or replaced with a low-level variety.	Accepted. Please refer to Drawing T22523.010 rev A . The existing vegetation will be cut back as part of the s278 works to provide the required visibility splays and will be maintained by LCC as the local highway authority thereafter.		
2.5	It is unclear from the information provided if the carriageway surface on the A50 approaches to the proposed Toucan crossing is to be resurfaced. The introduction of the Toucan crossing may result in sudden/late braking of vehicles approaching the Toucan crossing when a red traffic signal aspect is activated. This may lead to a greater risk of loss of control collisions particularly during wet/damp road surface conditions.	Review the carriageway surface on the A50 approaches to the proposed Toucan crossing to ensure that appropriate skid resistance (PSV) accord with highway standards, if necessary resurface the carriageway.	Accepted. The specification of the carriageway PSV on approach to the toucan crossing will be agreed as part of the detailed design stage.		



2.6	There is concern that the proposed layout of the auxiliary deceleration lane does not provide any additional speed reducing measures. Consequently, there is a greater risk of speed related and/or loss of control collisions associated with vehicles traveling along the auxiliary lane at inappropriate speed.	Ensure additional speed reducing measures are provided on the entry to the development to mitigate the risk of collisions associated with vehicles traveling at inappropriate speed.	Not accepted. The deceleration length of 110m is in line with DMRB CD123 for a 100km/hr design speed (dual carriageway) and provides sufficient time for vehicles to decelerate before the bend. From speed surveys undertaken in 2025, it is clear that this is significantly over the observed 85th percentile speeds at this location (38.7mph (62km/hr). Notwithstanding the above, there are proposals for 'SLOW' road markings to be provided on the auxiliary lane as well as the proposed chevron boards in line with the previous Stage 1 RSA recommendation to reinforce the need for drivers to slow down on the approach to the bend. Therefore, no design changes have been made.		
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2.7	The proposed width of the access road serving the development varies in width from 7.3m on the entry to 6m on the approach to the internal site access roundabout. The vehicle swept path analysis provided indicate that large vehicles can negotiate the access road, however where the width narrows there is concern that larger vehicles may overrun the kerbs/verge. This may increase the risk of loss of control collisions which may be exuberated by vehicles travelling at inappropriate speed whilst traversing the bend in the road.	Review the layout, the access road should be of a consistent width with carriageway hatch markings used to direct vehicles safely around the bend.	Partly accepted. Vehicle swept paths for an 18.55m HGV have been provided and show that they can comfortably negotiate the bend without overrunning the kerb line as proposed. However, the design has been updated to provide hatching around the whole bend to guide drivers from the auxiliary lane to the roundabout approach. Please refer to Drawing T22523.010 rev A .		
2.8	No details of surface levels have been provided at this stage, it is therefore not clear whether vehicles will be able to negotiate the proposed development access safely. Observations during the site inspection noted that the vertical alignment between the A50 and the proposed development access roundabout, consequently the proposed layout of the access may result in an adverse camber. This may increase the risk of loss of control collisions particularly for high sided vehicles accessing the development.	Ensure that a cross fall suitable for the horizontal alignment and design speed is provided for the proposed development access junction.	Accepted. The access road has been engineered to work with the levels that are present at the site. Appropriate cross falls and gradients can be achieved.		



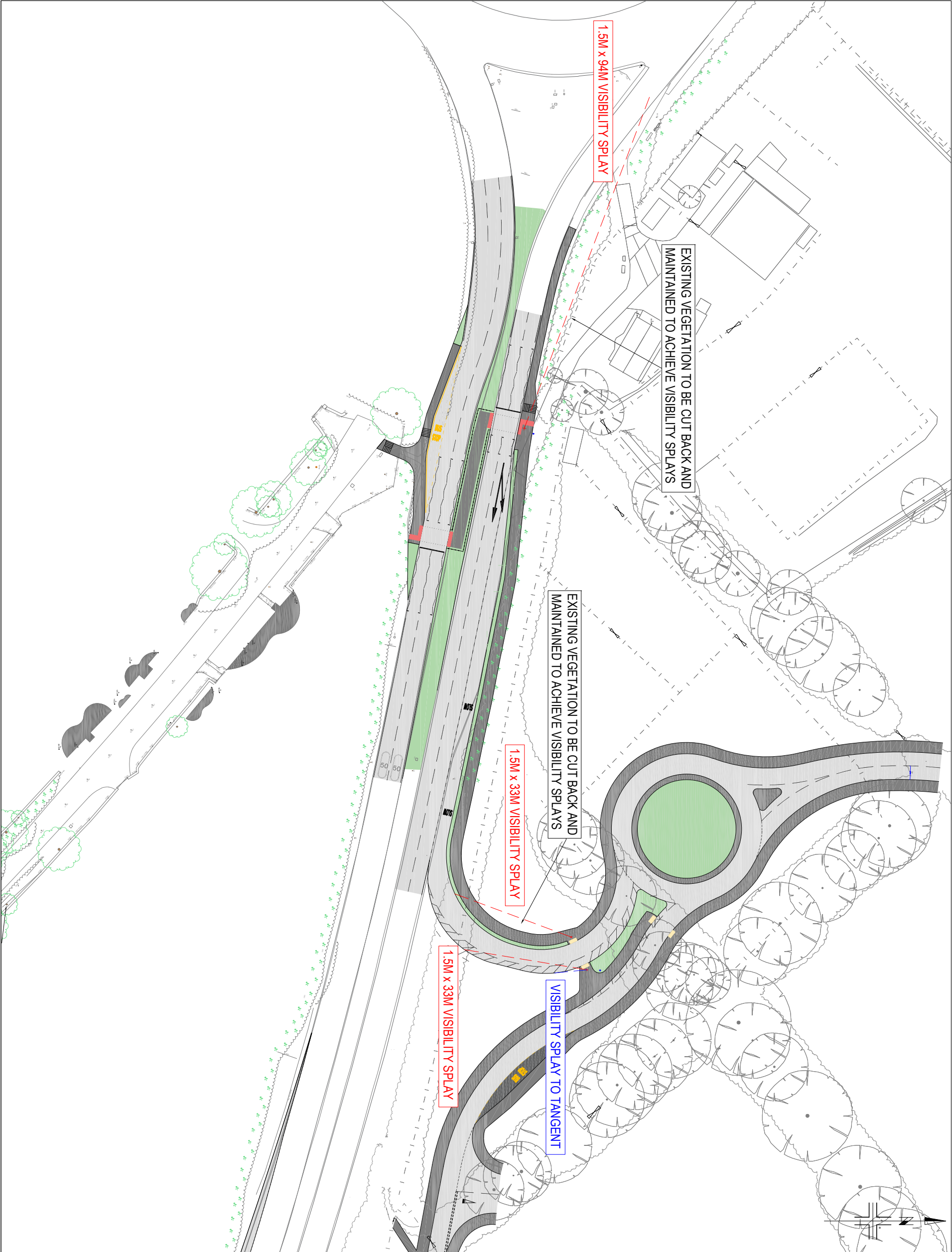
2.9	No details relating to the visibility splays to and from the tactile landings at the proposed uncontrolled crossing facility across the proposed development entry have been provided. There is concern that visibility to and from the proposed tactile landings may be compromised by vegetation which may lead to non-motorised users entering the carriageway to observe oncoming traffic leading to an increased risk of them being struck by vehicles.	Ensure visibility splays to and from the tactile landings at the proposed uncontrolled crossing facility across the development access road are provided. Vegetation within/behind the visibility splays should be cut back and regularly maintained, alternatively move the crossing facility closer towards development access roundabout.	Accepted. Please refer to Drawing T22523.010 rev A . The cutting back of vegetation will form part of the s278 works.		
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2.10	The proposed layout indicates that the existing Public Right of Way (PRoW) is to be incorporated into the development, with a dropped kerb crossing and bollards provided across the internal access road to prevent vehicular access. The footway continues southwards across the internal access road towards the A50 where an informal dropped kerb facility across the A50 entry is to be provided for onward pedestrian connectivity. Whilst it is acknowledged that the route forms part of an existing PROW, there is concern that the crossing facility across the A50 entry into the proposed development may put pedestrians at greater risk of being struck by vehicles.	Review the layout, if possible and where feasible, the PROW should be diverted to utilise the proposed footway along the southern side of the access road, with onward connectivity provided via the proposed uncontrolled pedestrian crossing across the development access.	Accepted. The PROW has been upgraded as it crosses through the site in accordance with LCC highways design guidance & LHA comments. The extent of the PROW 'R1' ends at the site boundary as indicated on Drawing T22523.001 rev O. The informal route along the northern side of the A50 does not form part of the PROW network and, although it is acknowledged that there is some limited use of this route, the proposed uncontrolled crossing at the site access has been removed. Additional signage will be provided within the site to route pedestrians via the proposed uncontrolled crossing and shared footway/cycleway through the site. This route is only c. 30m longer than the informal route along A50 and is preferable in terms of pedestrian safety Please refer to Drawing T22523.001 rev O.		
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Drawings



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.

REV	DESCRIPTION	DATE	BY	AUTH
A	DRAWING UPDATED FOLLOWING STAGE 1 RSA	03.07.26	MF	JP



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CLIENT CADDICK DEVELOPMENTS LIMITED				
PROJECT LAND AT JUNCTION 22 OF THE M1 CLIFFE HILL FARM				
TITLE PROPOSED CROSSING POINT VISIBILITY SPLAYS				
DRAWN	AUTHORISED	SCALE	SHEET SIZE	DATE
MF	JP	1:1500	A3	01.07.26
PROJECT NO.		DRAWING NO.		REV
T22523		010		A