

Road Safety Audit Report

**Incorporating
Stage 1 Completion of Preliminary Design;
Design Organisation Response to items raised; and
Auditors View of Design Organisation Response.**



Proposed Highway Access off the B3397 Hamble Lane Hamble-le-Rice

Client:
i-Transport

Client reference:
ITB13040

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Prepared by	JJF	Verified by	JCB	Approved by	JJF
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1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	December 2022
Document reference and revision:	RSA-22-158-4
Prepared by:	Fenley Road Safety Limited
On behalf of the Overseeing Organisation:	Hampshire County Council
Design Organisation:	i-Transport LLP
Project Sponsor:	CEMEX

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			29 th November 2022
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	JCB	JJF	30 th November 2022
2	Stage 1 Road Safety Audit Report format amended to incorporate a row for inclusion of a Design Organisation Response in order to maintain a concise record of items raised		JJF		30 th November 2022
3	Design Organisation Response incorporated		Imogen Nicholson on behalf of i-Transport		2 nd December 2022
4	Auditor's View of Design Organisation Response		JJF		2 nd December 2022

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2.0 INTRODUCTION

- 2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1 Road Safety Audit of a proposed highway access off the B3397 Hamble Lane in Hamble-le-Rice. The proposed access is to take the form of a simple priority junction that has been designed to restrict the right in and left out movements by heavy goods vehicles (HGV's) with a 4 metre exit radius and a splitter island. The proposed access is to facilitate access a minerals extraction site on land formerly occupied by Hamble Airfield. The Audit Team have undertaken a Stage 1 Road Safety Audit of the proposals previously in July 2018.
- 2.2 The Audit Brief identifies that the proposals do not include any Departures from Standard, whether related to strategic decisions or otherwise.
- 2.3 The Road Safety Audit was undertaken during November 2022 in accordance with the Road Safety Audit Brief provided, on the 28th November 2022 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, CEMEX. The Road Safety Audit comprised of a site visit as well as an examination of the documents provided which are identified in **Appendix A1**. The Audit Team were satisfied that that the Audit Brief was sufficient for the purpose of the Audit instructed.
- 2.4 The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of GG119 and have been approved to undertake this Road Safety Audits in Hampshire. The Audit Team consists of the following members:
- Audit Team Leader**
Jamie Fenning *BSc(Hons), MIHE, MCIHT, MSoRSA, Highways England RSA Certificate of Competency*
Road Safety / Highway Engineer
- Audit Team Member**
Jason Brown *MCIHT, MSoRSA*
Road Safety / Highway Engineer
- 2.5 The site has been visited twice; once as part of the previous Audit in May 2018 between the hours of 14:30 and 15:15 and again as part of this Road Safety Audit during the afternoon of Tuesday 28th November 2022 between the hours of 12:15 and 15:45. The site visit involved walking and driving around the local highway network for a total period of 75-minutes whilst observing local infrastructure and current off-peak traffic conditions. The weather during the site visits was observed overcast and during rain, the road surface was observed wet as well as dry and visibility was good. A number of pedestrians and cyclists were observed with a large number of school pupils from The Hamble School to the north and Hamble Primary School to the south. Vehicular traffic to include cars, light / heavy goods vehicles as well as passenger service vehicles were also observed, the traffic flow was moderate with a moving

northbound queue observed. Speeds were not recorded by the Audit Team but provided within the Audit Brief.

- 2.6 The terms of reference of this Road Safety Audit are as described in GG119. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or 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. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated beneath the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

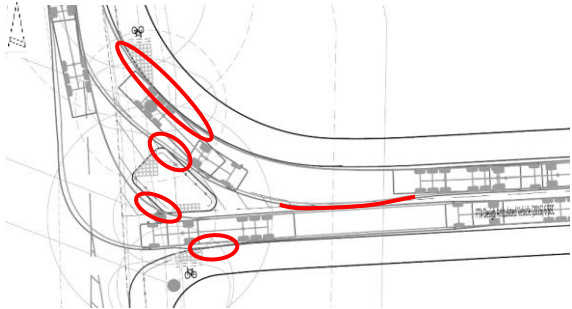

Design Organisation Response

- 2.7 In accordance with national standards, this Road Safety Audit was finalised and issued to the Design Organisation as per the Road Safety Audit Report Template within Appendix D of GG119, which can be provided upon request from either the Audit Team or Design Organisation. The format of the Audit Report was subsequently revised to incorporate these paragraphs under the sub-heading as well as sufficient space beneath the items and recommendation, within Section 4, for the inclusion of a Design Organisation Response. This is generally contained within a separate Design Organisation Response Report but is included within this document in order to maintain a single record of all problems, recommendations and responses for the benefit of a concise Road Safety Audit trail to be held on file for Quality Assurance purposes.
- 2.8 The Design Organisation Response has been prepared by:
- | | |
|--------------------------|------------------------|
| Name: | Imogen Nicholson |
| Position / Organisation: | Associate, i-Transport |
- 2.9 Any drawings or documents associated with the Design Organisation Response are listed at **Appendix A3**, if applicable.
- 2.10 Upon the request of the Design Organisation and following receipt of the Design Organisation Response with any associated drawings, the Road Safety Audit Team Leader has provided a further comment on the item raised. The “Auditor’s View on the Design Organisation Response” is included within a row beneath each item, for clarity.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

- 3.1 Fenley Road Safety Limited have previously undertaken a Stage 1 Road Safety Audit of the proposals in May 2018, ref: RSA-18-026. Those proposals have been developed further through consultation with the County Highway Authority and are fully reassessed.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

A.1	LOCAL ALIGNMENT
	<i>No Road Safety Concerns regarding LOCAL ALIGNMENT have been raised at this stage</i>
A.2	GENERAL
A.2.1	PROBLEM
Location:	Hamble Lane / Proposed access
Summary:	Geometric parameters do not allow for even a small deviation from the swept path illustrated
Acc Type:	Vehicle to pedestrian/ cyclist, loss of control, sideswipe type collisions
<p>Hamble Lane is a single carriageway road that accommodates a shared footway cycleway to the east which is level with but segregated from the carriageway by a grass verge that is approximately 1 metre wide. The proposals include the provision of a priority access off the eastern side of Hamble Lane which is to allow access to a minerals extraction site and accommodate an uncontrolled crossing point that benefits from a refuge island. Guardrailing is to be provided on the approaches to the crossing point to guide pedestrians and cyclists to the crossing point and deter users from crossing elsewhere. The Audit Brief details that the access is expected to observe 144 HGV movements throughout the day with peak of 26 in an hour. The scheme drawings illustrate the swept path of a 16.5 metre long articulated vehicle manoeuvring into and out of the proposed access, however, the wheel tracks as well as body of the vehicle appears to brush and encroach the kerb line with no margin for error or space for even a negligible deviation from the path illustrated particularly for the inbound movement. The Audit Team have concerns that a large vehicle deviating from the path illustrated, would encroach the proposed footway which could lead to a vehicle to pedestrians/cyclist collision, strike the proposed kerbing as well as guardrailing leading to a loss of control type collision or encroach the opposing lanes into the path of oncoming vehicles leading to sideswipe type collisions.</p>	
RECOMMENDATION:	
It is recommended that geometric parameters are increased to ensure adequate space	
Location Plan:	
	

<p>DESIGN ORGANISATION RESPONSE provided by i-Transport on the 2nd December '22 following formal issue of this Stage 1 Road Safety Audit on the 30th November '22.</p>	
<p>Swept path analysis has been undertaken for a 16.5m long articulated vehicle to demonstrate the 'worst case scenario'. It is however envisaged that the majority of HGV movements to / from the site will be undertaken by 20 tonne rigid vehicles (which have an approximate length of 10 metres) with larger articulated vehicles only observed on a rare occasion. Swept path analysis of the proposed access has been undertaken for a large tipper truck, as shown on drawing ITB13040-SK-013, which demonstrates that vehicles regularly anticipated to use the proposed site access junction can enter and egress the site safely.</p>	
<p>AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 2nd December '22</p>	
<p><i>Confirmation that the majority of vehicles that access the proposed minerals extraction site, will be 20 tonne rigid vehicles which can manoeuvre safely at the proposed junction and that articulated vehicles will not be regularly observed but can be accommodated, addresses the road safety concern at this stage.</i></p>	
A.3	JUNCTIONS
A.3.1	PROBLEM
Location:	Hamble Lane
Summary:	Vehicles may be required to wait for some time to manoeuvre into the access
Acc Type:	Vehicle sideswipe / loss of control type collisions
<p>Hamble Lane is a single carriageway road that observes a traffic flow of circa 1,200 vehicles during the busiest hour and accommodates a shared footway cycleway to the east that allows access between Hamble-le-Rice and observes a footfall of circa 68 pedestrians as well as 26 cyclists during the period before and after the school day. Observations made during the first site visit undertaken, indicates that the footfall during these hours consists of groups of pupils spaced an estimated 5 to 10 metres apart that pass the site within a 5-minute period. The proposals include the provision of a priority access off the eastern side of Hamble Lane that benefits from an uncontrolled crossing and refuge island. Whilst the Audit Brief includes an assessment which details that the proposed priority junction will operate effectively and within capacity with design year traffic flows, the Audit Team is concerned that the updates to the highway code in recent years prioritise pedestrians and cyclists at priority accesses, will lead to the requirement for HGV's to wait within the Hamble Lane carriageway for some time. A stationary HGV waiting to turn left at a priority access could lead to traffic attempting to overtake as well as cyclists undertaking which could lead to vehicle sideswipe and HGV to cyclist type collisions.</p>	
<p>RECOMMENDATION:</p>	
<p>It is recommended that the proposed crossing is relocated along the access road to allow adequate space for a HGV to exit the Hamble Lane carriageway before stopping to allow a pedestrian and</p>	

cyclists to cross and that the proposed guardrailling is extended to the relocated crossing to prevent pedestrians and cyclists from crossing along the desire line.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 2nd December ‘22 following formal issue of this Stage 1 Road Safety Audit on the 30th November ‘22.

Considered – However, the latest version of the highway code, which states at Rule 170 and H2 that drivers should “give way to pedestrians crossing or waiting to cross a road into which or from which you are turning. If they have started to cross they have priority, so give way”. As such, it is expected that all drivers should now give way to pedestrians and cyclists crossing the side arm of junctions (whether new or existing) and therefore, other road users (such a car drivers following behind) should expect to wait for vehicles to give way. This is not limited to the proposed access arrangement and is the case for all new and existing priority junctions with crossing points. Moreover, it is noted that the traffic flows entering the site in the periods surrounding the beginning and the end of the school day are low. Between 08:00-09:00 it is anticipated that 6-10 HGV arrivals and 4-6 HGV arrivals between 15:00 – 16:00 across the different traffic phases of the proposed development, equating to on average one HGV movement every 6-10 minutes during the morning school peak and one HGV movement every 10-15 minutes in the afternoon. Therefore, there would not be frequent occurrences when vehicles had to wait if they arrived at the same time as pedestrians or cyclists are crossing the site access.

Consideration of relocating the pedestrian and cycle crossing further within the site (circa 20m) to allow a HGV to wait off Hamble Lane for pedestrians and cyclists to cross has been given. While this would be technically possible, it is considered contrary to prevailing pedestrian and cycle design guidance which states that “Designers should avoid layouts which make cyclists stop, slow down, or deviate unnecessarily from their desired route”. Furthermore, relocating the crossing point within the site limits pedestrian and cycle visibility splays to turning traffic and reduces the forward visibility of drivers to pedestrians and cyclists on approach to the junction.

AUDITOR’S VIEW OF DESIGN ORGANISATION RESPONSE dated 2nd December ‘22

It is understood that following the updated rules of the Highway Code, drivers / riders following traffic that is turning into a side road, should expect to wait behind a vehicle giving way to

pedestrians and cyclists, that the likelihood of a HGV arriving when school pupils pass is slim, and that relocating the crossing point away from the desire line is contrary to guidance on the design of cycle infrastructure detailed in LTN1/20, however, there is a risk as there is at the majority of junctions that observe HGV traffic.

A.4 WALKING, CYCLING AND HORSE RIDING

A.4.1 PROBLEM

Location: Hamble Lane / Proposed access

Summary: Pedestrians and cyclists are likely to travel along the existing verge

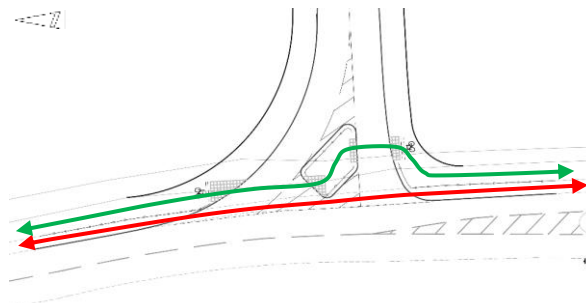
Acc Type: Vehicle to cyclist / pedestrian type collisions

Hamble Lane benefits from a shared footway cycleway along the eastern side of the carriageway that is offset from the carriageway by a one metre wide grass verge and allows access between The Hamble School to the north and Hamble-le-Rice to the south. As observed, the existing shared footway cycleway accommodates a high footfall particularly before and after the school day with users travelling along the grass verge as well as the footway cycleway. The proposals include the provision of a priority access off the eastern side of Hamble Lane. As part of the proposals, an uncontrolled crossing point is to be provided which benefits from a refuge island and guardrailling is to be installed to guide users towards the crossing point. It is though, however, that a number of pedestrians and cyclists will continue along the verge on the carriageway side of the guardrailling and attempt to cross the proposed junction along the edge of the Hamble Lane carriageway. Due to the seating position and eye height of a driver travelling in a Heavy Goods Vehicle, visibility in close proximity is very restricted and the Audit Team have concerns that a pedestrian or cyclist crossing in front of a Heavy Goods Vehicle will not be seen leading to a vehicle to cyclist / pedestrian collision.

RECOMMENDATION:

It is recommended that the deterrent paving is installed within the verge besides the proposed guardrailling.

Location Plan:



<p>DESIGN ORGANISATION RESPONSE provided by i-Transport on the 2nd December '22 following formal issue of this Stage 1 Road Safety Audit on the 30th November '22.</p>	
<p>Considered – There is potential to install deterrent paving to prevent the pedestrians and cyclists from using the verge and travelling on the wrong side of the pedestrian guard railing, if considered necessary by Hampshire County Council – the Local Highway Authority.</p>	
<p>AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 2nd December '22</p>	
<p>Confirmation that deterrent paving could be provided and will be further considered, addresses the road safety concern at this stage.</p>	
<p>A.5</p>	<p>TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING</p>
	<p><i>No Road Safety Concerns regarding TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING have been raised at this stage</i></p>

5.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

5.1 We certify that this Road Safety Audit has been carried out in accordance with GG119.

Audit Team Leader

Name: **Jamie Fenning** *BSc (Hons), MIHE, MCIHT, MSoRSA, HE RSA Certificate of Competency*

Signed:



Position: Road Safety / Highway Engineer


Organisation: Fenley Road Safety Limited

Date: 2nd December 2022

Audit Team Member

Name: **Jason Brown** *MCIHT, MSoRSA*

Signed:



Position: Road Safety / Highway Engineer

Organisation: Fenley Road Safety Limited

Date: 30th November 2022

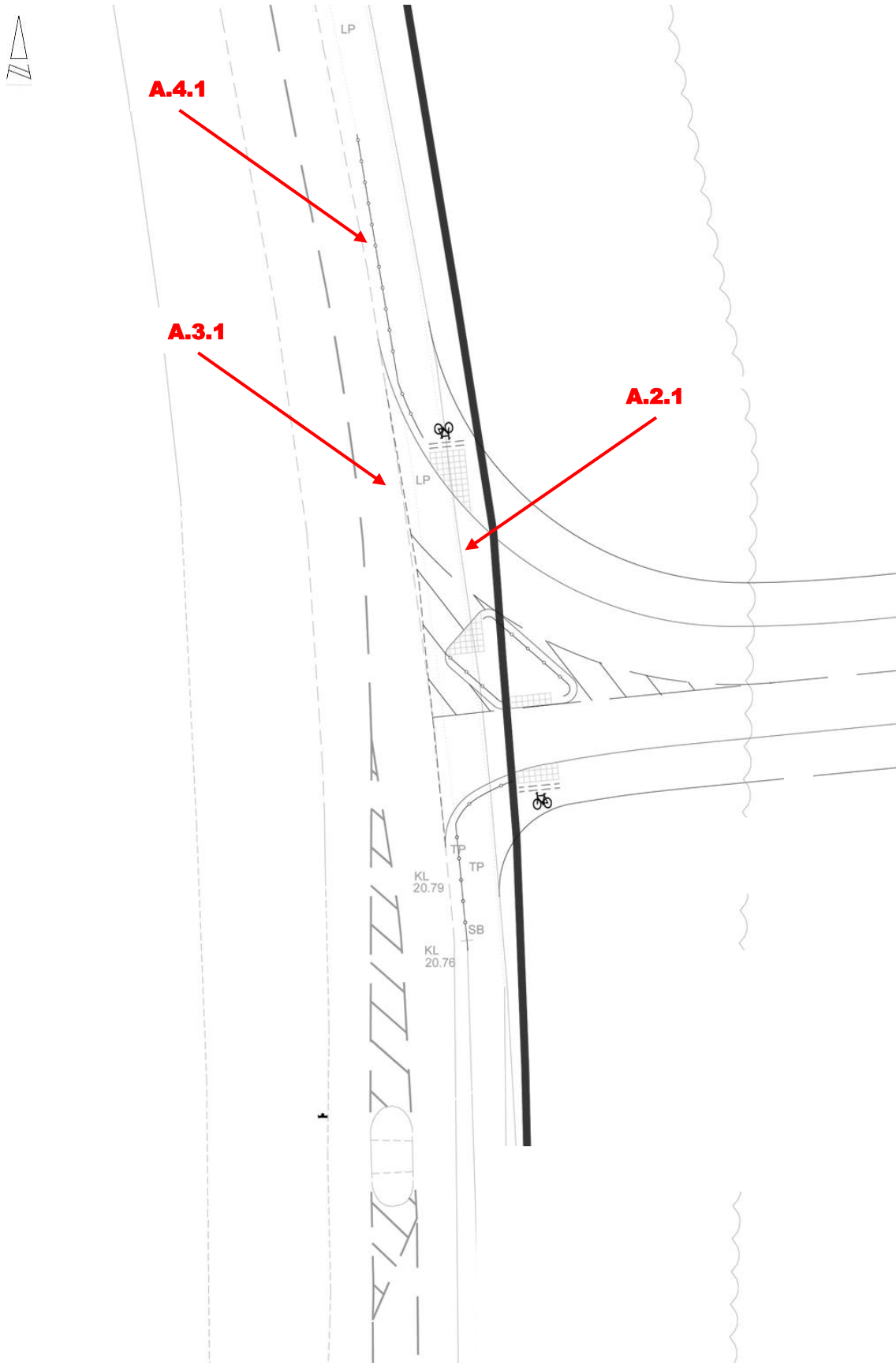
Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

Audit Stage	Doc. No.	Rev	Title
Stage 1	ITB13040-RSA Brief		Stage 1 Road Safety Audit Brief
	Dwg No.	Rev	Title
	ITB13040-SK-002	D	Swept Path Analysis – 16.5m Articulated Vehicle
	ITB13040-SK-004	C	Swept Path Analysis – Fire Tender
	ITB13040-SK-005	C	Swept Path Analysis – Panel Van
	ITB13040-SK-006	F	Proposed site access
	ITB13040-SK-010	A	Proposed Site Access Pedestrian Visibility
ITB13040-SK-011	A	Proposed Site Access Cycle Visibility	

Appendix A2

Item Location Plan



Appendix A3

Drawings associated with the Design Organisation Response

<u>Audit Stage</u>	<u>Drawing No.</u>	<u>Rev</u>	<u>Title</u>
Stage 1	ITB13040-SK-013	-	Swept Path Analysis – Panel Van

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