Road Safety Audit Report

Incorporating Stage 1 Completion of Preliminary Design;

Design Organisation Response to items raised; and Auditor's View on the Design Organisation Response.



Proposed Footpath Cyclepath Emergency Access onto Tukes Avenue Fareham

Client: Client reference:

i-Transport ITB10353-023

Fenley 2 Blaenant Emmer Green READING RG4 8PH

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Report Status 4

Job no		Issue no	Date
	RSA-22-056	4	July 2022
Prepared by		Verified by	Approved by
	JJF	ZB	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-22/RSA-22-056-4		



1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	July 2022
Document reference and revision:	RSA-22-056-4
Prepared by:	Fenley Road Safety Limited
On behalf of the Overseeing Organisation:	Hampshire County Council
Design Organisation:	i-Transport
Project Sponsor:	Miller Homes and Bargate Homes

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			4 th July 2022
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	ZB	JJF	7 th July 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		7 th July 2022
3	Design Organisation Response incorporated	or	Matthew Crac behalf of i-Tra		20 th July 2022
4	Auditor's View on the Design Organisation Response		JJF		26 th July 2022

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	A2	Item Location Plan
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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 proposed highway works along an existing service road off Tukes Avenue to form a footpath cyclepath and emergency link. The existing service road is situated between properties 143 and 145 and allows access to a concrete carriageway to the rear of the dwellings fronting Tukes Avenue, as well as a field gate associated with the application site. The proposed works include the resurfacing of the service road, the provision of build outs aimed at reducing speeds as well as to support lighting columns and the reconfiguration of the existing service road bellmouth with Tukes Avenue to form a vehicular crossover. It is understood that the development proposals associated with the scheme that is subject to this document includes the provision of circa. 375 dwellings on a parcel of land to the west of Tukes Avenue and east of Newgate Lane East.
- 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 June and July 2022 in accordance with the initial and updated Road Safety Audit Brief and provided on the 21st June and 5th July 2022 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, Miller Homes and Bargate Homes. 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 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 by Mr George Carpenter of the Highway Development Agreements Team at Hampshire County Council to undertake Road Safety Audits of all stages within the County. 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

Zane Beswick *MCIHT, MSoRSA* Road Safety / Highway Engineer

2.5 The site visit associated with this Road Safety Audit was undertaken during the afternoon of Tuesday 28th June 2022 between the hours of 18:30 and 20:00. The site visit involved walking and driving around the local highway network for a 90-minute period whilst observing the local infrastructure and current off-peak traffic and parking conditions. The weather during the site visit was overcast, the road surface was dry and visibility was good. A number



of pedestrians and cyclists were observed during the site visit. Vehicular traffic was also observed to include motorcycles, cars, passenger service vehicles, light and heavy goods vehicles as well as an emergency response vehicle. The traffic flow was moderate and free flowing. It was noted during the site visit, that vehicles park within the existing service road.

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: Matthew Craddy

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 not been made aware of any previous road safety audits associated with the scheme subject this document. The Audit Team has, however, previously undertaken a Stage 1 Road Safety Audit of a proposed roundabout along Newgate Lane East which is to form the vehicular access to the associated development as well as a series of further Stage 1 Road Safety Audits of schemes associated with proposed development; ref: RSA-22-072, 073, 074 and 075.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

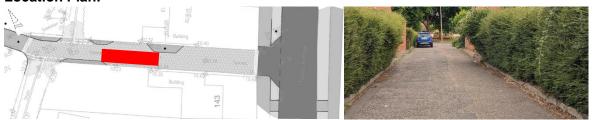
A.1	LOCAL ALIGNMENT	
	No Road Safety Concerns regarding LOCAL ALIGNMENT have been raised at this	
	stage	
A.2	GENERAL	
A.2.1	PROBLEM	
Location:	Service Road	
Summary:	Proposed buildouts may restrict use of route by Emergency Response Vehicles	
Acc Type:	Loss of control type collisions	

The existing service road is 4.2 metres wide with a narrow margin both sides of the carriageway adjacent to property walls which form boundary treatment. The proposals include the provision of buildouts along the existing service road which reduce the carriageway width to 3.0 metres with a single buildout from the northern channel line to the east and buildouts both sides of the carriageway to the west. The Audit Team understand that emergency accesses are permitted to be a minimum of 2.75 metres wide in accordance with Association of Chief Fire Officers as stated in Manual for Streets, however, there are concerns that the buildouts form a chicane that will be impassable for larger Emergency Response Vehicles such as a Fire Appliance which could lead to loss of control type collisions.

RECOMMENDATION:

It is recommended that the proposed buildouts allow for the path of Emergency Response Vehicles travelling at the appropriate speed.







DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree - the design has been updated to reflect comments received within the Stage 1 RSA. Furthermore, vehicle swept path analysis has been undertaken to demonstrate that emergency response vehicles can navigate accordingly. This is presented in Drawing ITB10353-GA-046

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the proposed infrastructure allows for emergency response vehicles addresses the road safety concern at this stage.

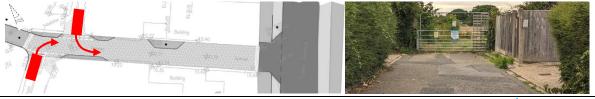
A.2.2	PROBLEM	
Location:	Service Road	
Summary:	Proposed buildouts may be an obstruction to vehicles accessing the service road to the rear of properties fronting Tukes Avenue	
Acc Type:	Loss of control type collisions	

The existing service road is 4.2 metres wide and allows vehicular access to further rear access road to the north and south that are associated with the rear of properties fronting Tukes Avenue. The proposals include the provision of buildouts along the existing service road that reduce the carriageway width to 3.0 metres with one either side of the carriageway adjacent where the rear access roads priority junctions. No swept path analysis has been provided with the Audit Brief. The Audit Team have concerns that the proposed carriageway reduction from 4.2 metres to 3.0 metres may restrict vehicular access to / from the rear access road which could lead to loss of control type collisions.

RECOMMENDATION:

It is recommended that the proposals allow for vehicles to manoeuvre to and from the existing rear access roads.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree - the design has been updated to reflect comments received within the Stage 1 RSA. Furthermore, vehicle swept path analysis has been undertaken to demonstrate a medium panel van can navigate accordingly. This is presented in Drawing ITB10353-GA-046

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the proposed infrastructure allows for the expected vehicles to manoeuvre, addresses the road safety concern at this stage.



A.2.3	PROBLEM
Location:	Service Road
Summary:	Proposed buildouts may not be clearly visible
Acc Type:	Cyclist / vehicle collisions with kerbs

The existing service road passes between properties 143 and 145 Tukes Avenue and is not subject to street lighting. The proposals include the provision of buildouts along the existing service road and street lighting with a column proposed within the buildout to the east and another just within the application site to the west. The scheme drawing notes that 'Sensitive lighting (LED directed) with maximum of 5.0 metre high lighting column – exact details to be agreed with HCC at detailed design stage', however, the Audit Team have concerns that the proposed buildouts will not be clearly visible during the hours of darkness, particularly should the sensitive lighting fail which could lead to a cyclist or vehicle striking the kerbs of the buildouts and a fall / personal injury or loss of control type collision respectively.

RECOMMENDATION:

It is recommended that measures are provided to ensure that the proposed buildouts are clearly visible.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree -the buildouts will accommodate reflective bollards – exact details of bollards will be provided at detailed design stage.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that reflective bollards will be provided, addresses the road safety concern at this stage.

A.2.4	PROBLEM
Location:	Service Road
Summary:	Parking along the Service Road will restrict access
Acc Type:	Cyclist / vehicle collisions with kerbs

The existing service road was observed to accommodate on-street parking with a car and motorcycle situated along the northern side of the carriageway in proximity to Tukes Avenue. The proposals include the works to the existing service road to provide a footway cycleway emergency access to a development of 375 dwellings. Whilst a pedestrian and cyclist will be able to pass a

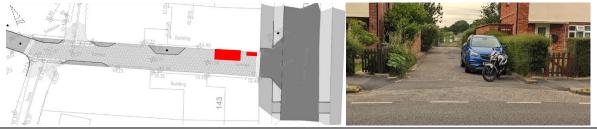


parked vehicle, it is unlikely that an Emergency Response Vehicle will be able to pass which could lead to sideswipe type collision and secondary incidents as a result of delays in response times.

RECOMMENDATION:

It is recommended that measures are provided to prevent on-street parking along the proposed footway cycleway emergency access.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agreed – Firstly it should be noted, that whilst there are changes to the corridor, this currently serves the existing dwellings with vehicular access to the rear, and operates acceptably currently with the existing parked car and motorcycle with no recorded accident or issues.

The proposed arrangement which now provides a small buildout in this location, along with different surface material and signage should be sufficient to prevent on-street parking along this corridor. However, if required a TRO can be undertaken to provide double yellow lines at a later stage should parking be an issue.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that parking restrictions could be pursued at a later stage should parking cause road safety concerns, addresses the road safety concern at this stage.

A.2.5	PROBLEM	
Location:	Service Road	
Summary:	Provision of resurfacing may remove the margin between the path of a vehicle and adjacent properties	
Acc Type:	Vehicle collision with property structure	

The existing service road is circa 4.2 metres wide and benefits from a narrow kerbed margin between the concrete carriageway and boundary / side wall of the adjacent properties. The proposals include highway works to the existing service road to allow access to a footway cycleway emergency access associated with a development of 375 dwellings to the west. The scheme drawing notes that 'link to be re-surfaced' and the 'access revised to a vehicle crossover arrangement ...'. No details of the proposed resurfacing have been provided at this stage, however, the Audit Team have concerns that the provision of a vehicular crossover will raise the

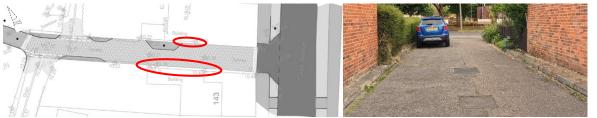


carriageway to the height of the margin which could lead to vehicle travelling closer to the adjacent properties and vehicle collisions with the property structure.

RECOMMENDATION:

It is recommended that an adequate margin is retained between the carriageway and adjacent properties.





DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agreed – the existing margin between the carriageway and adjacent properties is to be retained and is annotated on Drawing ITB10353-GA-032

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the existing margin is to be retained, addresses the road safety concern at this stage.

A.3	JUNCTIONS
A.3.1	PROBLEM
Location:	Service Road
Summary:	Visibility between cyclists and users of the rear access road is limited
Acc Type:	Vehicle to cyclist / pedestrian collision

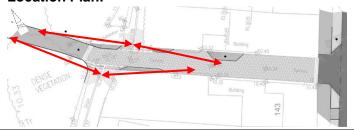
The existing service road forms a link between Tukes Avenue and the application site via a field gate as well as providing access to the rear access road associated with properties to the north and south. As observed on-site, vegetation and property boundaries restrict visibility from the rear access road. The proposals include works to upgrade the service road to allow access to a footway cycleway emergency access that accommodates a removable bollard to restrict general vehicular access. The scheme drawing provided with the Audit Brief illustrates that give-way road markings are to be provided at the rear access road junction with the service road and that a buildout is to be provided both sides of the carriageway just to the east. The proposed buildout increases the level of visibility that is achievable, however, the Audit Team have concerns that cyclists will proceed at speed on approach to the priority junctions and that the driver of egressing vehicles and cyclists will not become aware of one-another at a safe distance, which could lead to vehicle to cyclist type collisions.



RECOMMENDATION:

It is recommended that measures are provided and existing vegetation trimmed / maintained to ensure the level of achievable visibility is adequate.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree – the alignment of the shared footway/cycleway into the site along with staggered barriers will ensure that cyclists reduce speeds on the approach to the shared surface area.

The proposed buildouts have been revised to assist in improving visibility and encourage slow speeds.

Vehicles egressing the access points on the north and south side currently protrude onto the access road and has been in safe operation for a significant number of years. As part of these proposals this looks to build out the junction and increase the existing visibility i.e. this arrangement is a betterment.

Whilst this will now forms a shared use route for pedestrian, cyclists and vehicles, 9m forward visibility from both the east and west can be achieved on the approach to the access points on the southern and northern side of the access road, which allows approaching drivers, cyclists and pedestrians to clearly see any overhang of vehicles emerging from the access points. This equates to 10mph design speed.

Visibility of 2.0m x 9.0m can be achieved to the left and right from both the southern and northern access points.

In addition, where existing vegetation overhangs the highways, this will be trimmed back behind the proposed visibility splays.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the proposals increase the achievable level of visibility and measures will be provided to ensure that cyclists and pedestrians slow on approach to the existing service road, addresses the road safety concern at this stage.



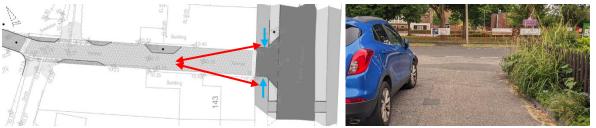
A.4	WALKING, CYCLING AND HORSE RIDING
A.4.1	PROBLEM
Location:	Tukes Avenue
Summary:	Pedestrian visibility at the proposed uncontrolled crossing is restricted
Acc Type:	Vehicle cyclist collision with a pedestrian

The existing footway of Tukes Avenue is graded down to the existing carriageway to allow pedestrians level access across the existing service road. Property boundaries of the dwelling adjacent to the service road currently restricts visibility between pedestrians and users of the service road. The proposals include highway works to the junction of the service road with Tukes Avenue to form a vehicular crossover and provide tactile paving on the footway to ensure that pedestrians become aware they are crossing the service road. The scheme drawings illustrate that the width of the service road is to remain unchanged in proximity to Tukes Avenue. The Audit Team have concerns that although tactile paving is proposed, the configuration is to consist to two rows (800mm), which may be overstepped by a pedestrian leading to a pedestrian walking into the path of an approaching user of the service road. Furthermore, intervisibility between eastbound users of the service road and pedestrians is limited, which could lead to pedestrians stepping out into the path of an approaching vehicle or cyclist resulting in a collision.

RECOMMENDATION:

It is recommended that the configuration of tactile paving is increased to no less than 1200mm and that the proposed crossover is reduced in width to allow for adequate intervisibility to be achieved.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree – the vehicle crossover has been revised on the northern side to bring the uncontrolled crossing in line with the existing boundary. Drawing ITB10353-GA-032 has been revised to reflect this, and demonstrates that 9m forward visibility can be achieved to the crossing points which relates to a design speed of 10mph. In reality vehicles are likely to be travelling at slower speeds on the approach to the vehicle crossover. Furthermore, an additional row of tactile has been provided to both sides.



AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the proposed tactile paving extends for a depth of 1200mm and that the forward visibility of 9 metres can be achieved, addresses the road safety concern at this stage.

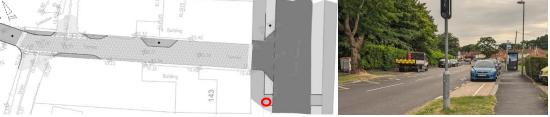
A.4.2	PROBLEM	
Location:	Tukes Avenue	
Summary:	Existing street furniture will be an obstruction to pedestrians	
Acc Type:	Pedestrian collision with street lighting column	

Tukes Avenue allows access to Woodcot Primary School that is situated to the east opposite the service road and benefits from school crossing warning signs as well as flashing signals. Uncontrolled pedestrian crossings are provided across Tukes Avenue to the north and south. The proposals include the provision of a 2.0 metre wide uncontrolled crossing point immediately to the south of the service road that will allow pedestrian access between the service road and primary school. The scheme drawings identify that the uncontrolled crossing is to be situated at the tangent of the existing service road corner radii. The Audit Team have concerns that an existing pole associated with an illuminated school crossing warning sign and flashing signals, is situated at the location of the proposed crossing which will be an obstruction to pedestrians and could lead to the need for a user to cross at full height kerbs. Full height kerbs are an obstruction and could lead to pedestrian trips falls and personal injuries.

RECOMMENDATION:

It is recommended that the proposed uncontrolled crossing or warning sign/pole is relocated appropriately.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree – existing warning sign/pole to be relocated accordingly. Exact details to be provided at detailed design stage

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that the existing warning sign / pole will be relocated, addresses the road safety concern at this stage.



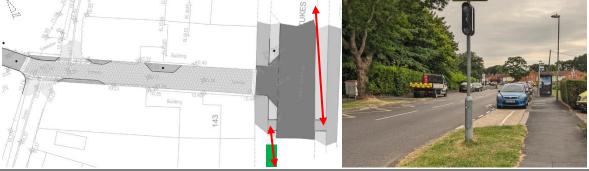
A.4.3	PROBLEM		
Location:	Tukes Avenue		
Summary:	Pedestrian visibility is limited by parked cars		
Acc Type:	Vehicle pedestrian collision		

Tukes Avenue is a single carriageway two-way road that is subject to a 30mph speed limit, accommodates parking bays and mature trees either side of the carriageway, allows access to Woodcot Primary School that is situated to the east opposite the service road and benefits from school crossing warning signs as well as flashing signals. Uncontrolled pedestrian crossings are provided across Tukes Avenue to the north and south. The proposals include the provision of a 2.0 metre wide uncontrolled crossing point immediately to the south of the service road that will allow pedestrian access between the service road and primary school. The Audit Team have concerns that visibility between a pedestrian and approaching drivers / riders will become restricted by parked cars. Restricted visibility at an uncontrolled pedestrian crossing point could lead to a pedestrian entering the carriageway into the path of a vehicle when it is not safe to do so, which could lead to a vehicle to pedestrian collision.

RECOMMENDATION:

It is recommended that the channel line of Tukes Avenue proposed uncontrolled crossing is formed on a buildout similar to the existing crossing points to the north and south.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 20th July 2022 following formal issue of this Stage 1 Road Safety Audit on the 8th July 2022.

Agree – a buildout on both sides has been provided to assist visibility and pedestrians crossing in similar arrangement to other buildouts along Tukes Avenue.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 26th July 2022

Confirmation that a build out is to be provided at the location of the crossing point, addresses the road safety concern at this stage.

A.5	TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING				
	No Road Safety Concerns regarding TRAFFIC SIGNS, CARRIAGEWAY				
	MARKINGS AND LIGHTING have been raised at this stage				



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: 26th July 2022

Audit Team Member

Name: Zane Beswick MCIHT, MSoRSA

Signed:

Position: Road Safety / Highway Engineer Organisation: Fenley Road Safety Limited

Date: 8th July 2022



Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

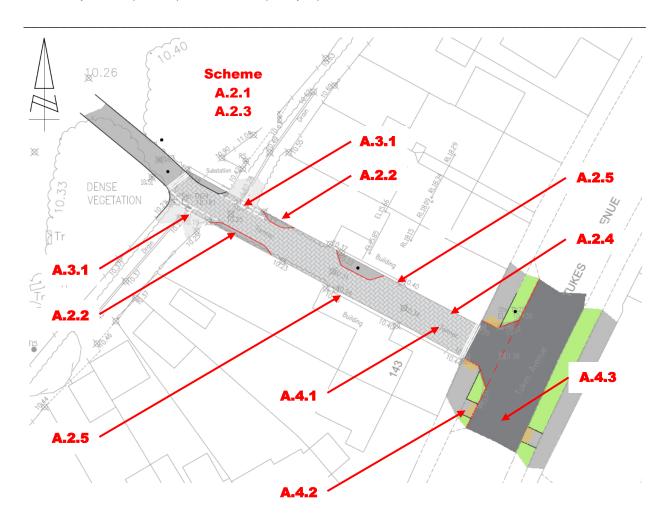
Audit Stage	Doc. No.	Rev	<u>Title</u>
Stage 1	ITB10353-023	-	GG119 Stage 1 Road Safety Audit Brief
	ITB13747-009	Α	Non-motorised User Audit
	Dwg No.	Rev	<u>Title</u>
	ITB10353-GA-032	Α	Footway / Cycleway / Emergency proposals into Tukes Avenue



Appendix A2

Item Location Plan







Appendix A3

Drawings associated with the Design Organisation Response

Audit Stage	Drawing No.	Rev	<u>Title</u>
Stage 1	ITB10353-GA-032	В	Footway / Cycleway / Emergency proposals into Tukes Avenue
	ITB10353-GA-038	В	Footway / Cycleway proposals onto Tukes Avenue Visibility and land titles
	ITB10353-GA-046	-	Footway / Cycleway / Emergency proposals onto Tukes Avenue Vehicle Swept Path Analysis

