

Road Safety Audit Report

Incorporating
Stage 1/2 Completion of Detail Design;
Design Organisation Response to items raised.



Proposed Works to existing Public Footpaths through Meadow Gardens, North End Road Yapton

Client:
i-Transport

Client reference:
ITB14679

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Report Status 3

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Prepared by	JJF	Verified by	FB	Approved by	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-20/RSA-20-193-3				

1.0 PROJECT DETAILS

Report Title:	Stage 1/2 Road Safety Audit
Date:	March 2021
Document reference and revision:	RSA-20-193-3
Prepared by:	Fenley Road Safety Limited
On behalf of the Overseeing Organisation:	West Sussex County Council
Design Organisation:	i-Transport LLP
Project Sponsor:	Redrow Homes Ltd

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1/2 Road Safety Audit drafted for Audit Team discussions	JJF			22 nd March 2021
1	Stage 1/2 Road Safety Audit finalised and issued to the Design Organisation	JJF	FB	JJF	22 nd March 2021
2	Stage 1/2 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			22 nd March 2021
3	Design Organisation Response incorporated	Dominic Smith on behalf of i-Transport			23 rd March 2021

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	B2	Item Location Plan
	B3	Drawings associated with the Design Organisation Response

2.0 INTRODUCTION

- 2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1/2 Road Safety Audit of proposed works to existing public footpaths through a proposed development to the east of North End Road and south of Ford Lane in Yapton, Arundel. The works include the reconstruction of public footpaths 357, 358 and a section of 359 through a development of 100 dwellings that is subject to an extant permission and include the provision of uncontrolled crossing points within the proposed development that benefit from tactile paving and staggered barriers. It is understood that although there are no committed proposals at this stage, there are aspirations to upgrade the existing public footpath 357 to a footway cycleway and 358 to a bridleway.
- 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 March 2021 in accordance with the initial and updated Road Safety Audit Briefs provided on the 11th February and 17th March 2021 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, Redrow Homes. The Road Safety Audit comprised of a site visit as well as an examination of the documents provided which are identified in **Appendix B1**. 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. 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

Farouk Bhatti *MCIHT*
Road Safety Auditor

- 2.5 The site associated with this Road Safety Audit has been visited on two occasions with the first unrelated to the proposals which was undertaken during the afternoon of Wednesday 26th August 2020 and the second following receipt of the initial Audit Brief on the 11th March between 11:30 and 12pm. The latest site visit involved walking and driving around the local highway network for a 30-minute period whilst observing local infrastructure and current traffic conditions. The weather during the site visit was overcast, the road surface was dry with damp patches and visibility was good. A number of pedestrians but cyclists were observed during the site visit. Vehicular traffic to include cars, passenger service vehicles, light and heavy goods vehicles were also observed.

- 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 B2**.

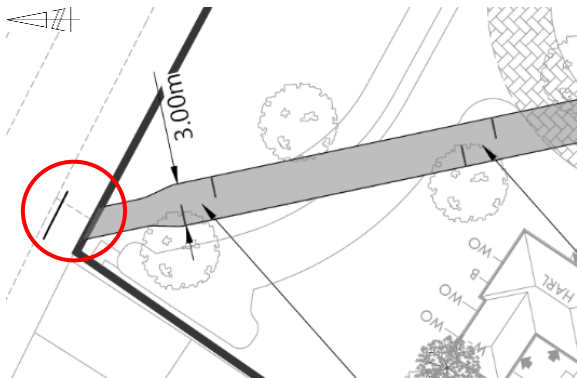
Design Organisation Response

- 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: Dominic Smith
Position / Organisation: Associate Partner, i-Transport LLP
- 2.9 Any drawings or documents associated with the Design Organisation Response are listed at **Appendix B3**, if applicable.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

- 3.1 Fenley Road Safety Limited are aware that the proposed vehicular access off Ford Lane and emergency / pedestrian / cyclist access off North End Road have been subject to a Stage 1 Road Safety Audit by others, ref: SG/RP/13-1006 RSA1v6 DR undertaken in June 2014, but are not aware of any previous road safety audits associated with the public footpaths that run through the associated site that are subject to this Stage 1/2 Road Safety Audit.

4.0 ITEMS RAISED AT THIS STAGE 1/2 ROAD SAFETY AUDIT

B.1	LOCAL ALIGNMENT
	<i>No Road Safety Concerns regarding LOCAL ALIGNMENT have been raised at this stage</i>
B.2	GENERAL
B.2.1	PROBLEM
Location:	Northern section of PROW 357
Summary:	Scheme encourages cyclists to travel down a steep set of steps
Acc Type:	Cyclist fall and vehicle cyclist collision
Footpath 357 forms a public right of way that currently passes between the southeast and northwest extents of a field meeting footpaths 358 and 359 to southeast and Ford Lane to the northwest. The field is set above the level of the Ford Lane carriageway with access gained via a set of 6 uneven concrete slab steps with a wooden handrail, up the grass embankment. The Audit Brief that has been supplied to provide sufficient information to undertake this Stage 1/2 Road Safety Audit, states that the connections between the site and existing rights of way which are outside the redline boundary, are outside the scope of the Audit and that the current proposals are to provide footpaths within the application site. However, it is understood that there are aspirations to upgrade footpath 357 to a footway cycleway. Whilst the existing connection between the footpath and Ford Lane allows pedestrian to walk up steps that are currently substandard and result in a pedestrian stepping straight onto the carriageway, the use of the connection by cyclists would result in the requirement for a bicycle to be transported up / down steps and could lead to cyclist falling and a personal injury or falling into the Ford Lane carriageway into the path of a vehicle resulting in a vehicle cyclist collision.	
RECOMMENDATION:	
It is recommended that the northern most section of footpath 357 is reduced to 2 metres and measures are provided to deter use by cyclists with landscaping / planting provided either side of the staggered barriers to ensure that cyclists cannot bypass the measures.	
Location Plan:  	

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 23rd March 2021 following formal issue of this Stage 1/2 Road Safety Audit on the 22nd March 2021

Accepted – the width of the footway has been narrowed to 2m and landscaping features have been identified on either side of the path/barrier to prevent by-passing of the infrastructure. The revised design is presented in drawing ITB14679-GA-002 Rev C.

B.2.2 PROBLEM

Location: Scheme

Summary: Users will travel around the proposed staggered barriers on uneven ground

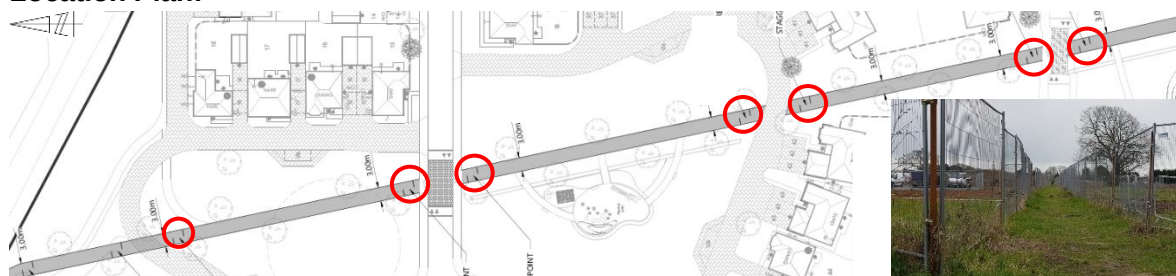
Acc Type: User trip and fall

The existing footpath 357 that passes through a field to the east of North End Road and south of Ford Lane in an unmade and narrow route that is uneven in places. The proposals subject to this Stage 1/2 Road Safety Audit include the widening of the existing footpaths to 3 metres and the reconstruction with a 225mm base course below 75mm of dust and 100mm of limestone type 1 topped with 25mm of limestone dust which will provide an adequate surface that is cambered to ensure surface water drains to the soft verges either side that are detailed on the landscaping plans associated with the approved application Y/112/20/DOC. The current proposals illustrated on dwg ITB16479-GA-002 revision B included with the Audit Brief, identifies that staggered barriers are to be provided adjacent to all locations where the public right of way crosses the on-site roads. The scheme drawing also identifies that raised tables or shared surface areas are to be provided where the footpath crosses the on-site roads and the landscaping plans indicate that the crossings are to be fairly open with no high-level planting provided in close proximity. Whilst staggered barriers assist in slowing users to ensure that they proceed with caution, users tend to bypass the measures if a route is available. It is therefore likely that users of the public right of way, will bypass the staggered barriers on the adjacent soft verge which is likely to become uneven as a result of use particularly during inclement conditions. An uneven surface could give rise to trips, falls and personal injury.

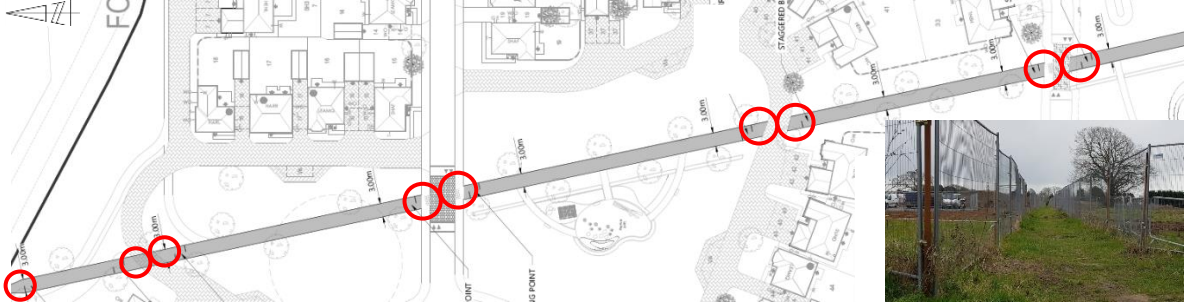
RECOMMENDATION:

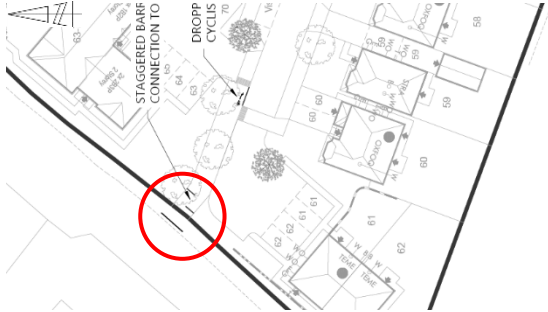
It is recommended that the staggered barriers are replaced with bollards that include reflective features to reduce the likelihood of users bypassing the surfaced route and crossing at a location away from the dropped kerb crossing points that benefit from tactile paving.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 23 rd March 2021 following formal issue of this Stage 1/2 Road Safety Audit on the 22 nd March 2021	
Accepted – the staggered barriers have been removed from the internal aspect of the layout and replaced with bollards. The bollards are to be fitted with reflective material, and also incorporate way-finding for the Public Right of Way.	
B.3	JUNCTIONS
	<i>No Road Safety Concerns regarding JUNCTIONS have been raised at this stage</i>
B.4	WALKING CYCLING AND HORSE RIDING
B.4.1	PROBLEM
Location:	Scheme
Summary:	Users will travel around the proposed staggered barriers on uneven ground
Acc Type:	User trip and fall
The proposals that are subject of this Stage 1/2 Road Safety Audit include the provision of a surfaced 3 metre route for pedestrians through a proposed development between footpath 358 and Church Lane to the south and Ford Lane to the north as illustrated on dwg ITB16479-GA-002 revision B included with the Audit Brief. The proposed route is to cross the on-site roads that are to facilitate vehicular access, a number of times with two crossing of shared surface areas and two crossing of general carriageway where the crossing point is to be provided on a raised table. Each of the crossing locations is in-line where pedestrians walk towards the carriageway and are to consist of dropped kerbs that are understood to include an upstand of between 0 and 6mm and benefit from tactile paving. However, as illustrated on the scheme drawings, a minimum of two rows of tactile paving slabs are to be provided allowing for a minimum depth of 0.8 metres. Pedestrians could step across two rows of tactile paving and as such, visually pedestrians could enter the carriageway without warning. The crossing points are to be provided at shared surface areas or where raised tables are provided and as such, vehicles should be proceeding with caution at a low speed, however, a pedestrian entering the carriageway and the path of a vehicle without warning, could lead to vehicle pedestrian collisions. Furthermore, no tactile warning surface is provided adjacent to the stepped access to Ford Lane which could lead to pedestrians falling down the steps into the carriageway	
RECOMMENDATION:	
It is recommended that tactile paving is provided for a minimum depth of 1.2 metres where pedestrians walk towards a hazard i.e. carriageway of steps.	

Location Plan: 	
DESIGN ORGANISATION RESPONSE provided by i-Transport on the 23 rd March 2021 following formal issue of this Stage 1/2 Road Safety Audit on the 22 nd March 2021	
Accepted – tactile paving depth has been increased to a minimum of 1.2m through the scheme, and additional tactile paving has been incorporated on FP357 on the approach to Ford Lane.	
B.4.2	PROBLEM
Location:	North End Road
Summary:	Cyclists and pedestrians may not be aware of one another
Acc Type:	Cyclist and pedestrian collisions
The proposals that are subject of this Stage 1/2 Road Safety Audit include the provision of a surfaced 3 metre route for pedestrians through a proposed residential development that is lightly trafficked and accommodates a network of footways alongside the on-site roads. The scheme drawing provided with the Audit Brief, identifies that whilst pedestrian access to the site can be gained via connections to Public Right of Way 358 to the northeast, 358, 359 and to the south, and 357 to the northwest, a new link is to be provided to the via a shared footway cycleway facility to North End Road to the west. Hazard warning tactile paving is to be provided where the proposed on-site footways meet the shared facility allowing pedestrians travelling from the development to become aware of the change in use and potential for cyclists, however, no tactile warning surface is provided where the shared facility crosses the existing North End Road footway. Furthermore, no facilities are provided to allow cyclists level access between the shared footway cycleway and North End Road carriageway. The lack of tactile warning surface along the existing footway could give rise to pedestrians, particularly the visually impaired, walking into the path of cyclists without warning and the lack of measures to allow level access between the carriageway and shared facility, could lead to cyclist falls.	
RECOMMENDATION:	
It is recommended that a hazard warning tactile surface is provided in accordance with national guidelines	

Location Plan:  	
DESIGN ORGANISATION RESPONSE provided by i-Transport on the 23rd March 2021 following formal issue of this Stage 1/2 Road Safety Audit on the 22nd March 2021	
Accepted – a Section 278 Agreement has been entered into for works to be undertaken on the highway outside of the redline boundary. However, corduroy paving and end of route signage has been incorporated into the revised design ITB14679-GA-002 Rev C.	
B.5	ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING
	<i>No Road Safety Concerns regarding ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING have been raised at this stage</i>

5.0 STAGE 1/2 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: 22nd March 2021

Audit Team Member

Name: **Farouk Bhatti** MCIHT

Signed:



Position: Road Safety Engineer

Organisation: Fenley Road Safety Limited

Date: 22nd March 2021

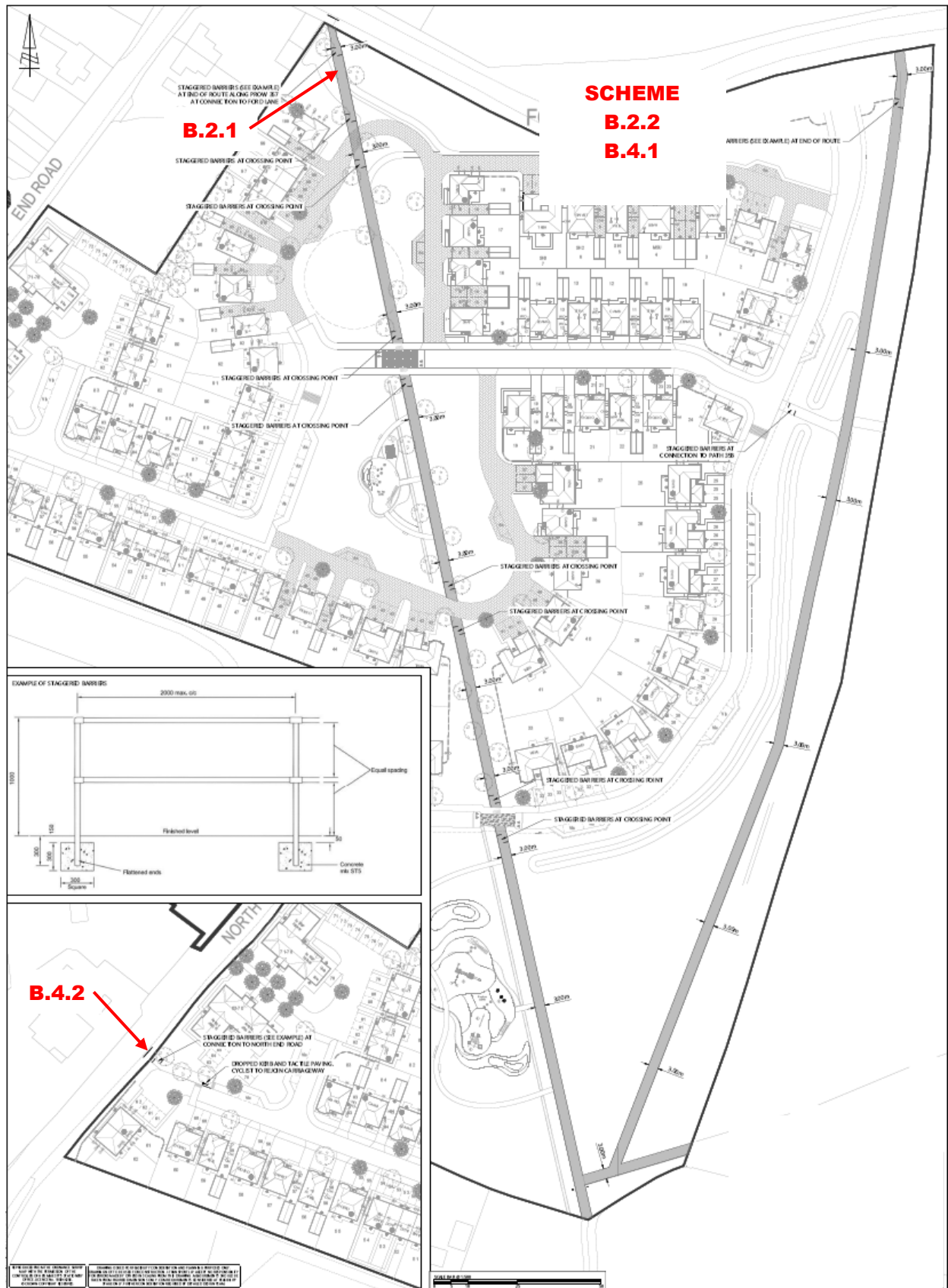
Appendix B1

Documents and Drawings provided for this Stage 1/2 Road Safety Audit

<u>Audit Stage</u>	<u>Doc. No.</u>	<u>Rev</u>	<u>Title</u>
Stage 1/2	Email dated 11 th Feb '21		Initial Stage 1/2 Road Safety Audit Brief
	ITB14679-006	A	Stage 1/2 Road Safety Audit Brief
	<u>Dwg No.</u>	<u>Rev</u>	<u>Title</u>
	ITB14679-GA-002	B	Rights of Way Plan
	D2831-FAB-00-GL-L-0403	PL02	Section through public right of way footpaths 358 and 359
	D2831-FAB-00-GL-L-0402	PL02	Section through public right of way footpaths 357
	D2831-FAB-00-GL-L-0100	PL09	Coloured Masterplan

Appendix B2

Item Location Plan



Appendix B3

Drawings associated with the Design Organisation Response

<u>Audit Stage</u>	<u>Drawing No.</u>	<u>Rev</u>	<u>Title</u>
Stage 1/2	ITB14679-GA-002	C	Rights of Way Plan

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