

Road Safety Audit Report

Incorporating
Stage 1 Completion of Preliminary Design

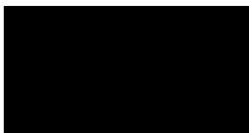


Proposed Development Access off the A259 New Road, Rustington

Client:
Commercial Development Projects Ltd

Client reference:
REDW-3167

Fenley Partnership
2 Blaenant
Emmer Green
READING
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Report Status 1

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REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
1	Stage 1 Road Safety Audit included	JJF	AJB	JJF	10 th January 2017

Contents:

1.0	Introduction	1
2.0	Items Raised in Previous Road Safety Audit	7
3.0	Items Raised at this Stage 1 Road Safety Audit	8
A.1	General	
A.2	Local Alignment	
A.3	Junctions	
A.4	Non-Motorised User Provision	
A.5	Road Signs, Markings, lighting, Drainage and Services	
A.6	Stage 1 Audit Team Statement	14

Appendices:

A1	Stage 1 Photographs taken at site visit	
A2	Stage 1 Drawings provided with the Audit Brief	
A3	Stage 1 Design Team's Response Items	

1.0 INTRODUCTION

- 1.1 The Fenley partnership has been appointed by Commercial Development Projects Ltd to prepare this Stage 1 Road Safety Audit of a relocated access. A Stage 1 Audit was undertaken previously in 2015, however the current proposals relocate the access and therefore the scheme is significantly different hence this new Stage 1 Audit Road Safety Audit. The proposals include the provision of a development access along the A259 and the closure of an existing access as well as a footway/cycleway link along the A259 New Road at Rustington to connect with that provided at an adjacent development. The proposals are to facilitate the development of a retail unit and public house/restaurant.
- 1.2 The location of the works is illustrated at Figure 1 below, whilst Figure 2 illustrates the proposals that are subject to this Audit and detailed on drawing number C697/101 revision C provided with the Audit Brief.

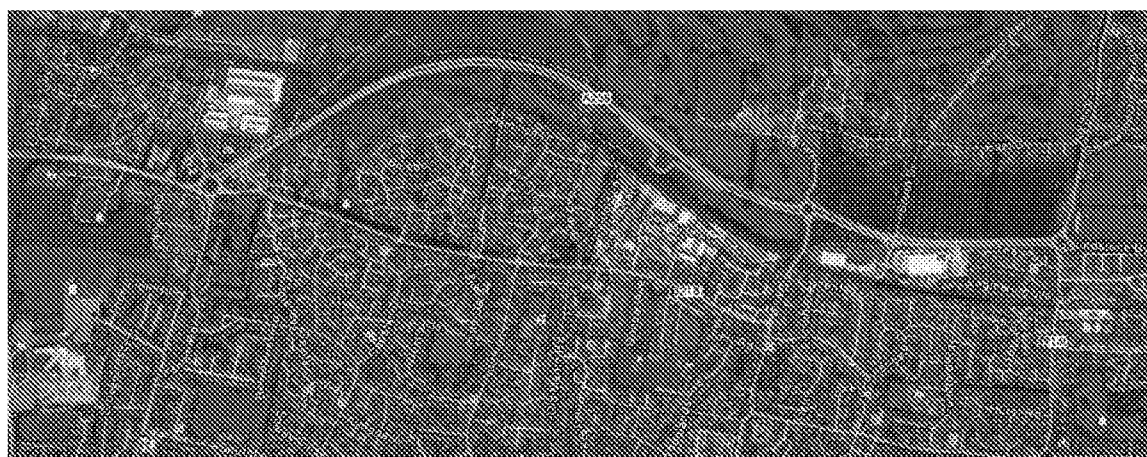
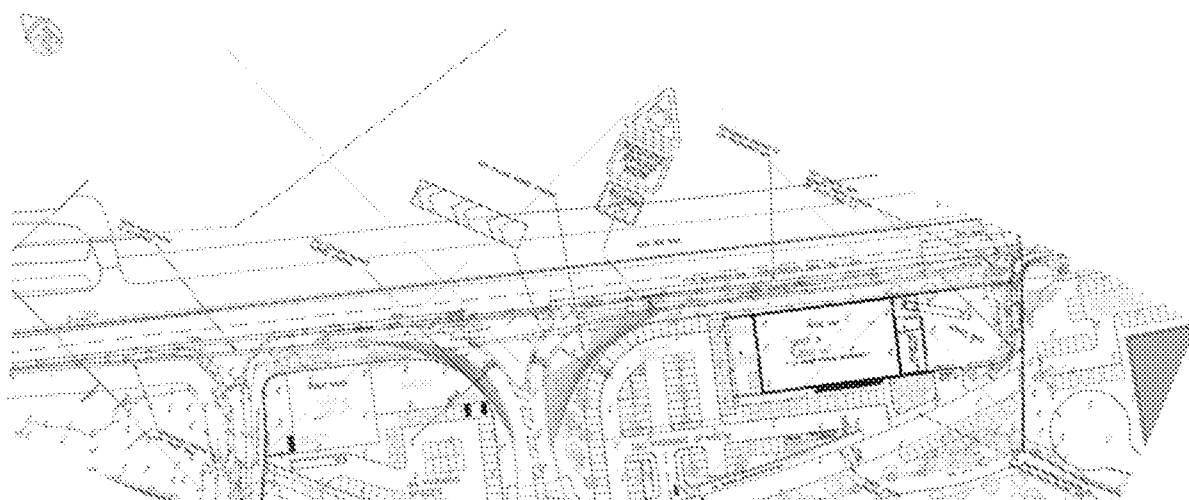


Figure 1: Location of the proposed works



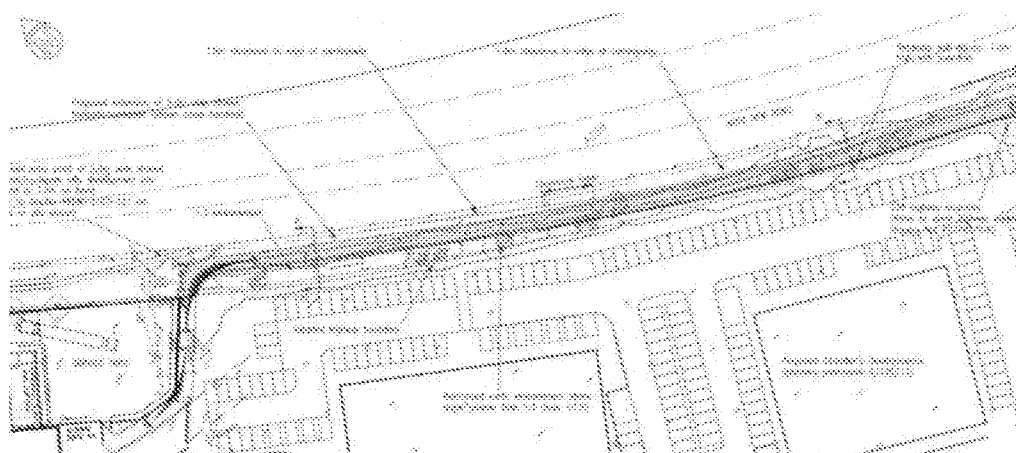


Figure 3: Extract of proposed footway / cycleway link

- 1.3 The A259 in proximity of the site is a dual carriageway and is derestricted, therefore subject to a 70mph speed limit. Brook Lane is taken off the south side of the A259 and is therefore only accessible to westbound traffic. Traffic survey data has been provided with the Audit Brief that identifies that the 85th percentile speed of westbound traffic equates to 67mph.
- 1.4 This Road Safety Audit is an assessment of the proposed access including a mini roundabout on site, as well as the footway / cycleway that is to be provided as part of the proposals only and does not include the on-site access road or parking/servicing arrangement.
- 1.5 The site visit associated with this Stage 1 Road Safety Audit commenced during day light at 11:20am on Thursday 5th January 2017, the site visit associated with the previous audit was undertaken at 10am on 5th March 2015. Weather conditions during the site visit were sunny with light wind, the road surface was dry and visibility was clear. Photographs from the site visit are attached at the relevant **Appendix 1**.
- 1.6 No pedestrians were observed during the visit but cyclists as well as motorised vehicular traffic was observed travelling on the A259 in proximity of the site, speeds were not recorded.
- 1.7 The site visit allowed the team to assess the existing infrastructure in the vicinity of the site and put the proposals in context with conditions on the local highway network.

Collision History

- 1.8 Personal Injury Accident data has been provided with the Audit Brief. The data covers the 5 year period to the 30th November 2014 and indicates no history or pattern of personal injury road traffic accidents occurring in proximity of the site that were attended to by the local constabulary.

Scheme Details

- 1.9 The proposals subject to this Stage 1 Road Safety Audit include the stopping up of an existing access, known as Brook Lane, off the A259, and the provision of a new access approximately 80 metres further east. The proposals are to accommodate a 170 metre acceleration lane and a 147 metre deceleration lane.
- 1.10 The 147 metre deceleration lane incorporates a 30 metre direct taper and is followed by an inside corner radius of 20 metres. The carriageway width around the corner equates to 6.5 metres with hatching around the outside of the bend restricting the running lane to approximately 5.5 metres. It is proposed to offset the kerbed island 2.0 metres from the running carriageway of the A259.
- 1.11 Approximately 25 metres after the corner, the access meets a mini-roundabout that allows access to the retail unit to the east and the public house as well as the existing Brook Lane to the west.
- 1.12 The link from the mini-roundabout to the acceleration lane is 6.5 metres wide with hatching on the outside of the bend and follows a 30 metre inside corner radius. Following a 40 metre nose, the 130 metre acceleration lane tapers back to the existing southern channel line of the A259.
- 1.13 The deceleration and acceleration lanes are provided by widening the existing carriageway and do not require the relocation of a headwall associated with a brook that passes under the A259, as did the previous proposals.
- 1.14 As part of the proposals, a 3.0 metre shared surface footway/cycleway link is to be provided to link the eastern side of the site, to the recently constructed facility associated with the adjacent retail development. The footway / cycleway associated with the adjacent consented development, links to the existing facility along Mill Lane, to the east.
- 1.15 The scheme drawing notes that a Vehicle Restraint System alongside the development and in the central reserve is to be provided. Street lighting is also proposed to tie into the street lighting recently installed along the A259 as part of the scheme associated with the adjacent development.
- 1.16 The two facilities; the retail unit and public house, are to be provided with parking facilities and it is understood that 30 overflow reinforced grass parking spaces are to be provided perpendicular to the carriageway either side of the mini-roundabout with 20 in close proximity to the mini-roundabout.

Scheme Documents

- 1.17 Whilst the following Table 1.1 details the drawings that have been examined as part of this audit, copies are attached at the relevant **Appendix 2**.

Table 1.1 – Drawings

<u>Audit Stage</u>	<u>Drawing Number</u>	<u>Rev</u>	<u>Title</u>
Stage 1	REDW-3167-120	-	Off-site Footpath / cyclepath
	REDW-3167-121	-	Highway Access Plan
	REDW-3167-122	-	Articulated Vehicle to M&S
	REDW-3167-123	-	Rigid to pub
	REDW-3167-124	-	Articulated Vehicle to pub
	REDW-3167-125	-	Fire Tender
	REDW-3167-130	-	Cross Sections

- 1.18 Furthermore, the following Table 1.2 identifies the documents that were supplied with the Audit Brief.

Table 1.2 – Documents

<u>Audit Stage</u>	<u>Document No.</u>	<u>Rev</u>	<u>Title</u>
Stage 1	PMcL/3167/d1	Feb15	Transport assessment
	PMcL/3167/DFS2	Dec 16	Departures Form Standard

- 1.19 With regard to compliance of the scheme with National Standards, the audit team has been made aware of the following departures identified within the following Table 1.3.

Table 1.3 – Departures from standard

<u>Audit Stage</u>	<u>Departure Reference No.</u>	<u>Description</u>
Stage 1	TD42/95 Para. 7.54	Provision of a 30 metre entry radius rather than 40m as detailed in TD42/95

Terms of Reference

- 1.20 The Terms of Reference of the audit are as described in the Department for Transport document HD19/15, entitled 'Road Safety Audit', which is contained in the Design Manual for Roads and Bridges. The audit also takes account of the Chartered Institute of Highways and Transportation publication "Road Safety Audit" published in October 2008, each member of the team holds a Certificate of Competency in accordance with European Legislation and are members of the Society of Road Safety Auditors.

- 1.21 The Audit Brief provided to the Audit Team includes an introduction, background information, a summary of the proposals, the name of the associated development, existing traffic flows, Collision data for the latest 5 year period and details of the associated departure from standard.
- 1.22 This audit has examined and reported only on the road safety implications of the scheme proposals as presented and has not examined or verified the compliance of the design to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may, in some instances, have referred to a design standard or document without touching on technical audit.
- 1.23 Items identified as **PROBLEM** are considered to be worthy of immediate attention in respect of safety considerations of the proposals. For ease of reading, rather than providing an overall item location plan within the Appendices, the location of each item is illustrated adjacent to the problem and recommendation.
- 1.24 Items that are not a direct result of the proposals or could be outside the scope of the audit to include existing highway defects in proximity, are not listed within this audit in accordance with HD19/15.

Main Parties to the Audit

- 1.25 In accordance with the above documents, this audit has been carried out by an 'Audit Team' consisting of the following members:

Audit Team Leader

Jamie Fenning BSc (Hons), MIHE, MSoRSA, EU RSA Certificate of Competency
Road Safety / Highway Engineer

Audit Team Member

Angharad Bradley BEng (Hons), MCIHT, MSoRSA, EU RSA Certificate of Competency
Road Safety Auditor

Others involved

Žaneta Svačinová
Road Safety Trainee / Administrator
Fenley

General Information

- 1.26 The following **Section 2.0** identifies any previous Road Safety Audits that have been undertaken prior to this document being prepared by ourselves and summarises the items raised. The safety implications of the current proposals are discussed within the relevant paragraphs of

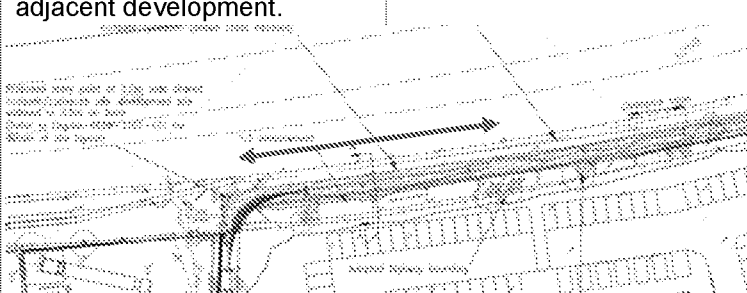
Section 3.0, along with the Design Team Response that has been incorporated in order to maintain a record of responses to all items raised. The signature of the member of the Design Team that prepared the response is included within the Stage 1 Audit Statement for completeness.

- 1.27 Any new or revised plans associated with the Design Team Response are included at the relevant **Appendix 3** along with any further information that the Design Team consider appropriate to support their response.

2.0 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS.

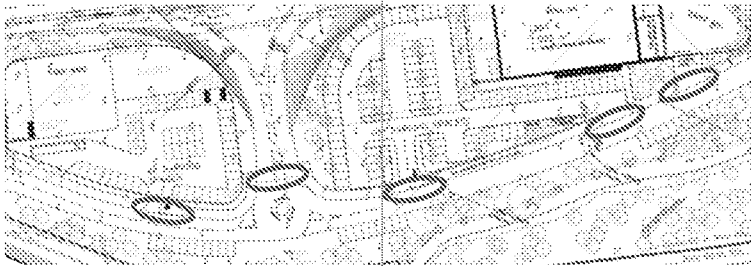
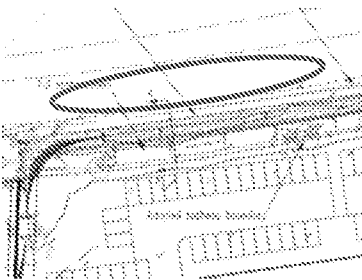
Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
.1	GENERAL		
	The Audit Team has not been made aware of any previous Road Safety Audits associated with the proposals.		
.2	LOCAL ALIGNMENT		
	The Audit Team has not been made aware of any previous Road Safety Audits associated with the proposals.		
.3	JUNCTIONS		
	The Audit Team has not been made aware of any previous Road Safety Audits associated with the proposals.		
.4	NON-MOTORISED USER PROVISION		
	The Audit Team has not been made aware of any previous Road Safety Audits associated with the proposals.		
.5	ROAD SIGNS, MARKINGS, LIGHTING, DRAINAGE AND SERVICES		
	The Audit Team has not been made aware of any previous Road Safety Audits associated with the proposals.		

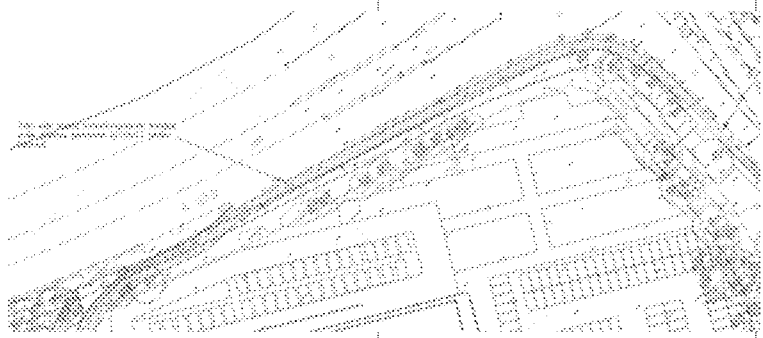
3.0 ITEMS RAISED IN THIS STAGE 1/2 ROAD SAFETY AUDIT

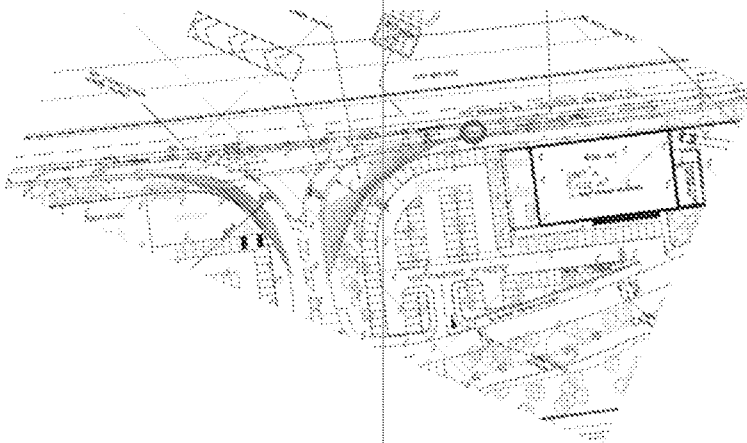
Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.1	GENERAL		
A.1.1	PROBLEM <i>Inadequate weaving length</i> Accident Type <i>Side swipes / rear end shunts</i> Location <i>East of proposed deceleration lane</i> It was apparent from the site visit that the recently constructed acceleration lane associated with the adjacent development to the east, merges with the A259 channel line approximately 40 metres to the east of the proposed deceleration lane. Therefore vehicles exiting the adjacent development will be in conflict with vehicles entering the proposed development which are likely to be changing lanes simultaneously. This may result in side swipes and shunts along the recently constructed acceleration lane where vehicles are not able to merge onto the A259 from the adjacent development. 	It is recommended that the weaving length is increased appropriately.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5

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Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.3	JUNCTIONS		
A.3.1	<i>The provision of a left in / left out access off the A259 westbound dual carriageway that benefits from deceleration and acceleration lanes and the provision of a mini-roundabout 25 metres from the end of the deceleration lane does not raise any road safety concerns regarding JUNCTIONS at this stage provided the further items within this document are addressed adequately.</i>		
A.4	NON-MOTORISED USER PROVISION		
A.4.1	PROBLEM <i>No Vehicle Restraints provided</i> Accident Type <i>Vehicle NMU collision</i> Location <i>Adjacent to proposed footway / cycleway link</i> The Cross Sections illustrated on the scheme drawings, identify that a retaining wall and 1 metre rail are to be provided to ensure that NMU's do not fall to the south into the adjacent site, however no Vehicle Restraints are illustrated. It is noted that Vehicle Restraints are to be provided alongside the development but not alongside the proposed footway / cycleway link. 	It is recommended that a Vehicle Restraint System similar to the recently constructed measure, is provided.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5

Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.4.2	PROBLEM <i>No dropped kerb crossing points</i> Accident Type <i>Pedestrian trip / cyclists fall</i> Location <i>Footway / cycleway through the site</i> The scheme drawings do not identify that dropped kerb crossing points are to be provided along the length of the proposed footway / cycleway. 	It is recommended that dropped kerb crossing points with tactile paving are provided in accordance with guidelines.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5
A.5	ROAD MARKING, SIGNS, LIGHTING, DRAINAGE AND SERVICES		
A.5.1	PROBLEM <i>Faded road markings</i> Accident Type <i>Vehicle collisions</i> Location <i>Alongside proposed footway / cycleway</i> The A259 road markings alongside the proposed footway / cycleway appear to be faded. This is an existing issue, however observations show that the recently constructed scheme has re-laid markings adjacent to the works. There will therefore be a gap in the markings which could confuse drivers. 	It is recommended that the A259 road markings are re-laid alongside the entire scheme.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5

Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.5.2	PROBLEM <i>No directional signage proposed</i> Accident Type <i>Vehicle collisions</i> Location <i>East of proposed development</i> The scheme drawings do not identify any directional road signage and therefore it is possible that vehicles intending to access the proposed retail unit and public house, will manoeuvre as if to access the adjacent recently constructed development and change direction at the last minute when the driver becomes aware of the access to the proposed retail unit. Last minute lane changes could result in vehicle. 	It is recommended that appropriate signage is installed to inform approaching drivers of the amenities off each access.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5
Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.5.3	PROBLEM <i>No drainage provided</i> Accident Type <i>Vehicle loss of control</i>		

	Location <i>A259 adjacent to works</i> It is clear that surface water from the westbound carriageway of the A259 currently falls to the soft verge to the south. The proposals to provide full height kerbs alongside the A259 will prevent surface water from draining and could result in ponding.	It is recommended that a surface water drainage system is provided.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5
Audit Item No.	Audit Team Observation	Audit Team Recommendation	Design Team / Scheme Response
A.5.4	PROBLEM <i>Service covers present</i> Accident Type <i>Vehicle loss of control</i> Location <i>South verge of A259</i> Observations show that service covers are present within the verge to the south of the A259. Protruding/sunk service covers would cause vehicles to lose control. 	It is recommended to adjust service covers accordingly.	Refer to Redwood Partnership response dated 15th March 2017, Ref 3167D5

A.6.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

A.6.1 We certify that this Road Safety Audit has been carried out in accordance with HD 19/15.

Audit Team Leader

Name: **Jamie Fenning**

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Date: 10th January 2017

Tel:

e-mail:

Audit Team Member

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BEng (Hons), MCIHT, MSoRSA, EU RSA Certificate of Competency

Position: Partner

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Organisation: Fenley

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RG8 7AP

Date: 10th January 2017

Tel:

e-mail:

Others Involved

Žaneta Svačinová

Road Safety Trainee / Administrator
Fenley

Design Team that prepared Response

Name: Paul McLaughlin

Signed:

Position: Director

Organisation: Redwood Partnership Transportation Limited

Date: 10th January 2017

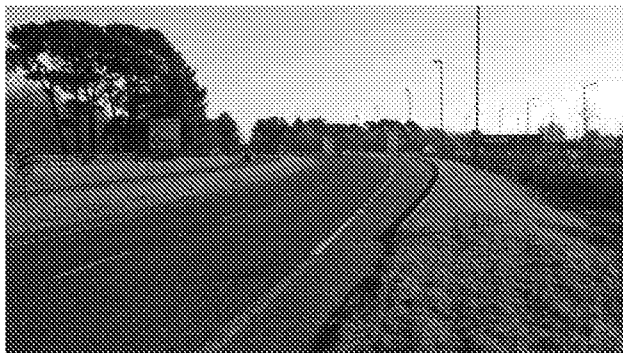
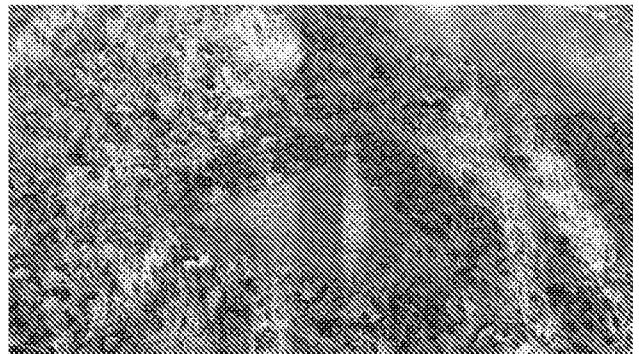
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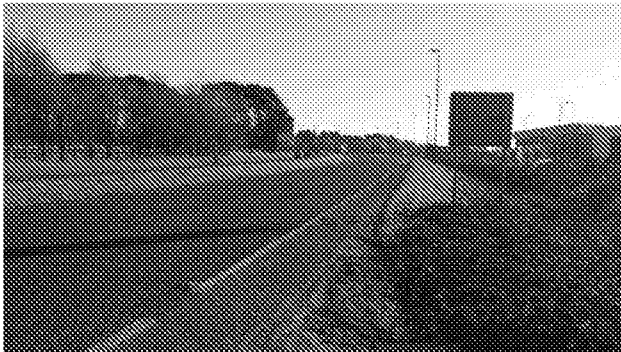
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Appendix A1

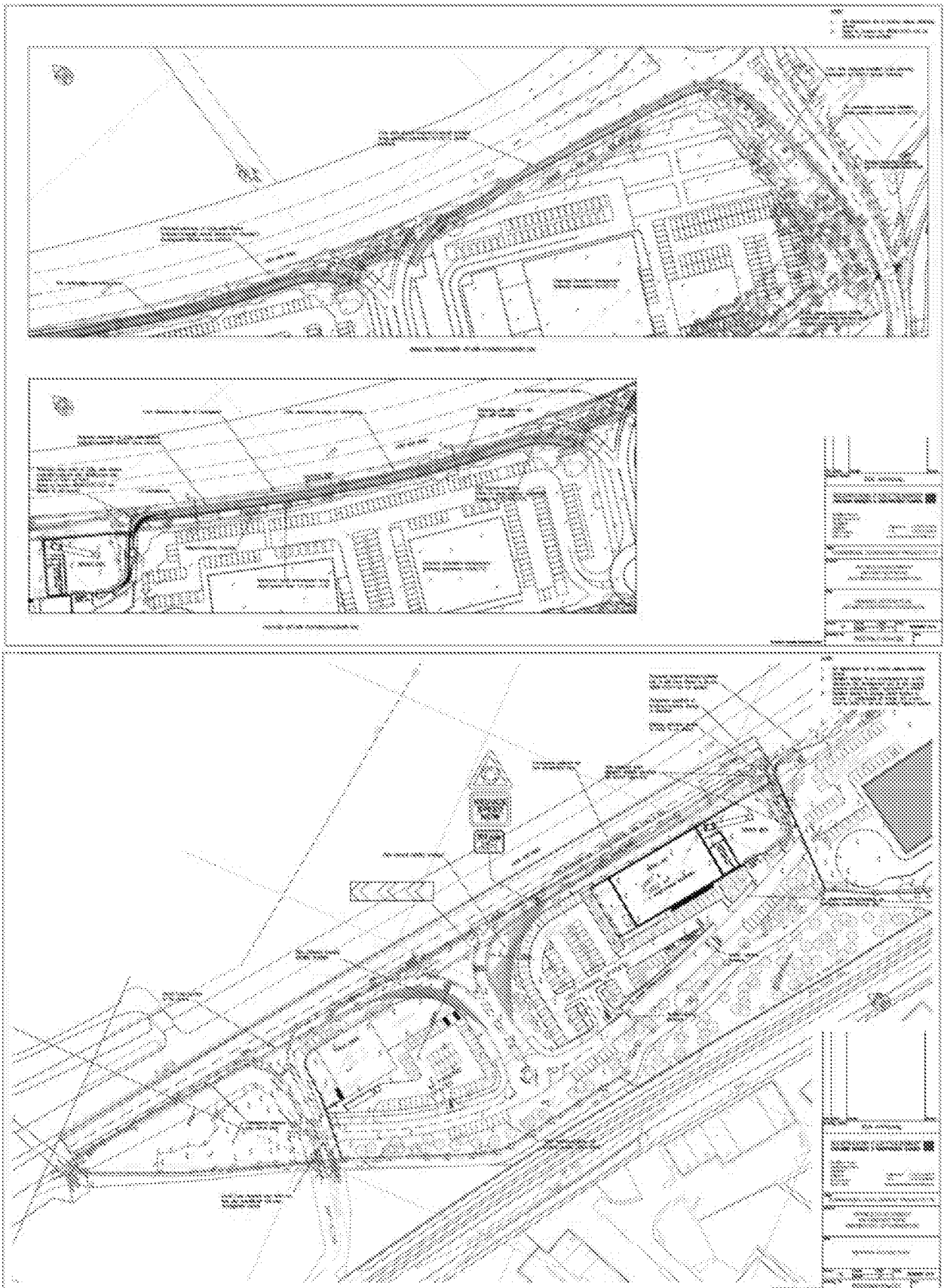
Photographs taken at site visit





Appendix A2

Drawings provided with the Audit Brief



Appendix A3

Drawings and Documents associated with the Design Team Response

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