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 Access off and Highway Works along Albion Road Marden

Client: i-Transport Client reference: ITB15098

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Report Status 4

Job no	RSA-24-067	Issue no 4	Date	September 2024	
Prepared by	JJF	Verified by LA	Approved by	JJF	
Filename and Path	Fenley/Road Safety Au	fety Audits/RSA-24/RSA-24-067-4			

1.0 **PROJECT DETAILS**

Report Title:	Stage 1 Road Safety Audit
Date:	September 2024
Document reference and revision:	RSA-24-067-4
Prepared by:	Fenley Road Safety Limited
On behalf of the Overseeing Organisation:	Kent County Council
Design Organisation:	i-Transport
Project Sponsor:	B.Yond Homes

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			30 th August 2024
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	LA	JJF	3 rd September 2024
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		3 rd September 2024
3	Design Organisation Response incorporated	or	Mark Gimingh behalf of i-Tra		5 th September 2024
4	Audit's road safety view of response in respect of design change		JJF		6 th September 2024

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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 access off and associated highway works along Albion Road in Marden, Kent. The proposed simple priority access is to be situated at the location of an existing private driveway, formed with 10 metre corner radii access and allow access to a 7 metre carriageway (to accommodate the occasional large vehicles with minimal encroachment into the opposing lane) which reduces to 5.5 metres within the site. The highway works consist of a circa. 45 metre build-out along the eastern side of the carriageway to facilitate the provision of a footway. The proposed build-out reduces Albion Road to one-way working with a minimum carriageway width of 3.5 metres. The scheme is to facilitate access to a development of circa 117 dwellings on land to the east of Albion Road and north of Copper Lane.
- 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 September 2024 in accordance with the Road Safety Audit Brief and final scheme drawings provided, on the 30th August 2024 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, B.Yond Homes. The Road Safety Audit comprised 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. It has been confirmed that the existing levels of street lighting, measures to cater for surface water drainage, existing and proposed signage, bollards as well as the relocation of utilities to include covers and telegraph poles, are to be assessed during the detail design stage of the scheme.
- 2.4 The Road Safety Audit has been undertaken by an Audit Team whose qualifications as well as experience accord with the requirements of GG119 and have been approved to undertake this Road Safety Audit by Mr Tom Harris, Development Planner at Kent County Council. The Audit Team consists of the following members:

Audit Team Leader

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

Audit Team Member

Lisa Allen MSc, BEng(Hons), MCIHT, MSoRSA, National Highways RSA Certificate of Competency Road Safety / Highway Engineer

2.5 The site visit associated with this Road Safety Audit was undertaken during the hours of daylight during the afternoon of Thursday 15th February 2024 between the hours of 14:30



and 15:15. The site visit involved walking and driving around the local highway network for a 45-minute period whilst observing the existing infrastructure and off-peak traffic conditions. The weather during the site visits was overcast, the road surface was dry with damp patches and visibility was good. A number of pedestrians as well as cyclists were observed during the site visit. Vehicular traffic to include cars, and light as well as medium goods vehicles were also observed. The traffic flow was light, vehicular speeds were not recorded by the Audit Team but provided within the Road Safety 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 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 Lead Contractor Response has been prepared by: Name: Mark Gimingham Position / Organisation: Managing Partner, i-Transport
- 2.9 Any drawings or documents associated with the 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 undertook a Stage Road Safety Audit of a previous proposal for in April 2024, ref: RSA-23-24-005, which raised a number of road safety concerns which were addressed in a Designer's Response at that time.
- 3.2 That scheme has been further developed taking into consideration the topography of the existing verge as well as tree roots, which is subject to this Stage 1 Road Safety Audit that reassesses all elements of the current proposals taking on board the details of the Audit Brief.

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:	Albion Road				
Summary:	Insufficient space for a car to pass a large vehicle exiting the site				
Acc Type:	Sideswipe / rear to front end type collision				
Albion Road	l is a radial route linking the centre of Marden with areas to the southwest via the Thor				
Road contin	uation. The proposals include the provision of a proposed simple priority access o				
the eastern	side of Albion Road as well as a footway link to Seymour Drive, to the north. Th				
proposed fo	otway is to be provided on a build-out in order to eliminate any impact on the roo				
protection a	reas of existing trees within the verge. The proposed build-out generates a narrowin				
that is to be	circa 45 metres long and allow for one-way shuttle working with southbound traffi				
guided to gi	ve-way to northbound traffic. The Audit Brief includes various swept path analyse				
that illustrate	e the expected vehicles manoeuvring and identify that the proposals will not have				
detrimental	impact on movements. It is noted, however, that insufficient space is available for				
southbound	car to pass a large vehicle should the driver attempt to exit the proposed priorit				
junction at th	ne same time as a southbound motorist enters the section of one-way working. In thi				
scenario, if the motorist does not attempt to squeeze past the large vehicle , the driver of the large					
vehicle would be required to reverse back into the proposed access which could lead to sideswipe					
of rear to fro	ont end type collisions.				
RECOMME	NDATION:				

It is recommended that adequate width is provided for a car to pass a large vehicle to the south of the proposed section of one-way working and that a road centreline is provided to a point where a car can pass a large vehicle.





DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th September 2024 following formal issue of this Stage 1 Road Safety Audit on the 3rd September 2024.

Agreed – Drawing number ITB15098-GA-060 has been updated to provide widening to the carriageway south of the priority working to accommodate the tracking of the car and refuse vehicle passing. Additionally, a vehicle exiting the proposed priority access, has clear visibility to the north extending at least 50 metres in advance of the section of shuttle working and will therefore not exit unless it is safe to do so.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 6th September

Confirmation that the width of the carriageway to the south of the proposed narrowing has been increased to allow for a car to pass a large vehicle, addresses the road safety concern at this stage.

A.3	JUNCTIONS
A.3.1	PROBLEM
Location:	Albion Road / Seymour Drive
Summary:	Traffic may block back into the section of one-way working
Acc Type:	Sideswipe or rearend shunts type collision

Albion Road is a two-way single carriageway road that allows access to a number of side roads to include the residential cul-de-sac of Seymour Drive. The proposals include a build-out along the eastern side of Albion Road just south of Seymour Drive, in order to facilitate the provision of a footway. That proposed build-out commences just south of the Seymour Drive priority junction and reduces the carriageway to one-way working with southbound traffic directed to give-way to northbound vehicles. The Audit Brief includes various swept path analyses that illustrate that the proposals will not have a detrimental impact on movements at the Seymour Drive junction, the Audit Team have concerns that southbound traffic queuing at the road narrowing would block the right turn into Seymour Drive, particularly for large vehicles such as refuse / recycling collection vehicles. Traffic could queue behind stationary right turning traffic and block the one-way section of carriageway which could lead to sideswipe type collisions as motorists attempt to squeeze past vehicles as well as rearend shunts due to traffic unexpectantly stopping.



RECOMMENDATION:

It is recommended that measures are provided to ensure that stationary queuing traffic does not block the right turn into Seymour Drive.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th September 2024 following formal issue of this Stage 1 Road Safety Audit on the 3rd September 2024.

Agreed – The scheme drawing ITB15098-GA-060 has been updated to include a 'KEEP CLEAR' road marking at the priority junction to ensure that vehicles do not block the right turn.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 6th September

Confirmation that a KEEP CLEAR will be provided, should deter vehicles from blocking the right turn and addresses the road safety concern at this stage.

A.4	WALKING, CYCLING AND HORSE RIDING			
A.4.1	PROBLEM			
Location:	Albion Road			
Summary:	Proposed footway will not allow for pedestrians to pass buggies and wheelchair users			
Acc Type:	Pedestrian slip, trip, fall and personal injury, vehicle to pedestrian type collisions			
Albion Road	accommodates a verge both sides of the carriageway in the vicinity of the application			
site. Whilst	the verge to the west consists of mostly mud which due to vehicle encroachment as it			
is flat, the v	erge to the east rises away from the carriageway and accommodates a number of			
mature tree	mature trees. The proposals include provision of a footway along the eastern side of the			
carriageway	. The scheme drawings illustrates that the footway is to be mostly 1.5 metres wide			
with a minin	with a minimal length that is 1 metre wide in proximity to Seymour Drive and a circa 32 metre			
section that is to be 1.2 metres wide, to the south. The proposed 1.2 metre wide footway is				
adequate fo	adequate for two pedestrians to pass each other as well as for users of buggies and wheelchairs			
in single file, however, the Audit Team have concerns that the width is insufficient for a pedestrian				
to pass a user of a perambulator or wheelchair. Inadequate opportunities for users to pass one				
another, cou	another, could result in the requirement for a pedestrian to step into the carriageway, which is			
likely to resu	likely to result in a slip, trip or fall and lead to personal injuries as well as a potential for vehicle to			

pedestrian type collisions.



RECOMMENDATION:

It is recommended that localised widenings are provided along the narrow sections of footway to provide adequate width for users to pass one another.



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th September 2024 following formal issue of this Stage 1 Road Safety Audit on the 3rd September 2024.

Noted – The presence of the trees as well as associated roots and requirement for a 'no dig' construction limits the opportunities to widen the footway. A 1.2m width is sufficient for two pedestrians to pass each other. The occurrence of a pedestrian passing a wheelchair user or perambulator would be much less frequent. Additionally, the verge at the back edge of the 1.2m footway will be level and adequate for a pedestrian to step into on the rare occasion when two footway users meet.

Notwithstanding the above, the scheme drawing ITB15098-GA-060 has been updated and replaces the southern section of 1.2m footway with a 1.5m footway.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 6th September

Confirmation that the width of the proposed footway has been increased and that the verge will be level with the surface so can therefore be utilised occasionally, addresses the road safety concern at this stage.

A.4.2	PROBLEM			
Location:	Albion Road			
Summary:	Proposed footway is at a significantly higher level than the existing carriageway			
Acc Type:	Pedestrian tip fall and personal injury			
In the vicinit	y of the application site, the verge to the east rises away from the carriageway and			
accommoda	tes a number of mature trees. The proposals include provision of a footway along the			
eastern side	eastern side of the carriageway. The scheme drawings identify that the majority of the footway is			
to be of star	to be of standard construction with a standard 125mm kerb height. It is noted, however, that a			
short section	short section of the footway, to the north, is to be constructed utilising a cell web system with a			
double heigh	double height kerb set at a level of 300m above the carriageway and that a section to the south is			
to be constru	to be constructed with a suspended grid system that incorporates a steel plate edging that is to be			
to 410mm	above the carriageway. Whilst the proposed footway should be adequate to			
accommoda	te pedestrians as well as users of perambulators and wheelchairs, the Audit Team			



have concerns that a user could misstep or inadvertently encroach off the footway which could result in a slip, trip or fall and lead to personal injuries which are exacerbated by the proposed height, as well as a potential for vehicle to pedestrian type collisions.

RECOMMENDATION:

It is recommended that the height of the footway is reduced.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th September 2024 following formal issue of this Stage 1 Road Safety Audit on the 3rd September 2024.

Agreed – the level of the footway at either end of the priority working has been set by not impacting on the root protection area of trees. At the northern end, the footway is 1.5m wide so users do not need to travel close to the edge. At the southern end, the footway is 1.2 metres wide in places where the height above Albion Road exceeds 125mm - the adjacent verge is to be level with the footway surface and can be utilised on occasions to ensure that users do not travel close to the edge of the facility. The risks of a user encroaching over the edging of the proposed footway is no greater than on any footway.

Notwithstanding the above, the updates to scheme drawing ITB15098-GA-060 (requiring the removal of trees TG3007, 3027 and 3028) has meant that the southern section of footway has been lowered enabling standard construction with standard 125mm kerbing as well as a 1.5m width as set out earlier. It is not possible to lower the northern section of footway due to potential impacts on Ash tree 3019 (third party tree) but in this location the footway is 1.5m wide and it is a double height kerbing solution which is common and only for a short length.

AUDITOR'S VIEW OF DESIGN ORGANISATION RESPONSE dated 6th September

At the southern section, the changes to the level of the footway addresses the road safety concern at this stage.

At the northern section, it is understood that the existing root protection zones require the footway to be set at a greater level than a standard footway for a short section. The 1.5 metre wide footway and level verge reduces the risks of a pedestrian inadvertently encroaching off the footway and should be adequate for all users to include those with perambulators and wheelchairs.

A.5	TRAFF	C SIGNS	, CARRIAG	SEWAY MA	RKINGS	AND LIG	HTING
	No Roa	d Safety	Concerns	regarding	TRAFFIC	SIGNS,	CARRIAGEWAY
	MARKIN	GS AND L	IGHTING ha	ve been rais	sed at this s	tage.	



STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT 5.0

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, NH RSA Certificate of Competency

Signed:

Road Safety / Highway Engineer Position: Fenley Road Safety Limited Organisation: 6th September 2024 Date:

Audit Team Member

Lisa Allen MSc, BEng(Hons), MCIHT, MSoRSA, NH RSA Certificate of Competency

Signed:

Name:

Position: Date:

Road Safety Engineer Organisation: Fenley Road Safety Limited 3rd September 2024



Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

Audit Stage	Doc. No. Rev		Title
	Email Dated 27th Ju	n. '24	Preliminary Road Safety Audit Brief
	ITB15098-104	-	Stage 1 Road Safety Audit Brief
	ITB15098-103	Α	Transport Assessment
	<u>Dwg No.</u>	Rev	Title
	ITB15098-GA-060	С	Potential Footway Arrangement along Albion Road
	ITB15098-GA-063	В	Potential Footway Arrangement along Albion Road -
	TID10090-GA-003	в	Visibility
Stage 1		А	Potential Footway Arrangement along Albion Road
5 -	ITB15098-GA-064		Swept Path Analysis – Refuse Vehicle and Estate Car
		-	Potential Footway Arrangement along Albion Road
	ITB15098-GA-069		Swept Path Analysis – Estate Car
	ITB15098-GA-070	-	Potential Footway Arrangement along Albion Road
	11D10090-GA-070		Swept Path Analysis – Fire Appliance
	ITB15098-GA-071	-	Swept Path Analysis – Estate Car
	6730-1509	P3	Priority Working Scheme Details Sections
	6730-1508	P6	Priority Working Scheme Details



Appendix A2

Item Location Plan



Road Safety Audit Report: Proposed Access and Highway Works, Albion Road, Marden





Appendix A3

Drawings associated with the Design Organisation Response

Audit Stage	Drawing No.	Rev	Title
	ITB15098-GA-060	D	Potential Footway Arrangement along Albion Road
	ITB15098-GA-063	С	Potential Footway Arrangement along Albion Road -
			Visibility
Ctore 1	ITB15098-GA-064	В	Potential Footway Arrangement along Albion Road Swept Path Analysis – Refuse Vehicle and Estate Car
Stage 1	ITB15098-GA-067	В	Potential Footway Arrangement along Albion Road
	11D10030-0A-007		Swept Path Analysis – 7.5T Rigid Vehicle & Estate Car
	ITB15098-GA-070	А	Potential Footway Arrangement along Albion Road
	11D13030-GA-070		Swept Path Analysis – Fire Appliance
	ITB15098-GA-071	Α	Swept Path Analysis – Estate Car

















HEALTH, SAFETY & ENVIRONMENT

It is the responsibility of the client to ensure that those undertaking the works are competent and experienced in the type of work to be undertaken.

In addition to the hazards usually associated with the types of work detailed on this drawing, the following specific hazards have been identified through design risk assessment. The planning and execution of the works should take into account all usual and specific hazards.

Hazards should also be taken into account in the maintenance, operation, decommissioning and demolition of the works.



NOTES

- 1. All dimensions are in millimetres (mm) and levels in metres Above Ordnance Datum (mAOD) unless noted otherwise.
- 2. Do not scale from this drawing.
- 3. The copyright in this drawing belongs to Structa LLP; the designs and details may not be used on any project other than that indicated in the titleblock.
- 4. Where CAD or BIM files of the drawing are issued, they are provided for the convenience of others, and shall not be used for construction purposes or relied upon for accuracy or completeness.
- 5. For location of sections refer to Structa drawing 6730-1508.

Р3	28.08.24	SECTION D-D AMENDED TO SHOW 1.5m FOOTWAY. FILL ADJACENT TO BACK OF FOOTWAY ADDED/AMENDED.	GE	GE	TJS
P2	22.08.24	SECTION F-F ADDED	MPG	GE	SLT
P1	14.08.24	FIRST ISSUE	MPG	TJS	TJS
Rev.	Date	Description	Drawn	Checked	Approve

PRELIMINARY

ALBION ROAD, MARDEN	

ALBION ROAD, MARDEN	

PRIORITY WORKING SCHEME SECTIONS



0.5	1	1.5	2	2.5

Ρ3



HEALTH, SAFETY & ENVIRONMENT

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In addition to the hazards usually associated with the types of work detailed on this drawing, the following specific hazards have been identified through design risk assessment. The planning and execution of the works should take into account all usual and specific hazards.

Hazards should also be taken into account in the maintenance, operation, decommissioning and demolition of the works.

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- 4. Where CAD or BIM files of the drawing are issued, they are provided for the convenience of others, and shall not be used for construction purposes or relied upon for accuracy or completeness.
- Highway boundary location taken from iTransport drawing 5. ITB15098-GA-053B.
- 6. For section refer to Structa drawing 6730-1509.

P6	28.08.24	FOOTWAY WIDTH INCREASED AT NORTHERN END OF SCHEME	GE	GE	TJS
Р5	22.08.24	LONG SECTIONS UPDATED. SECTION F-F ADDED TO PLAN	MPG	GE	TJS
P4	14.08.24	SECTIONS MOVED TO ADDITIONAL SHEET. LONG SECTION ADDED & UPDATED. RPAS ADJUSTED	MPG	TJS	TJS
Р3	26.07.24	SECTION E-E ADDED. SECTION ON RAISED FOOTWAY ADDED. EXTENT OF CELLWEB AMENDED AT NORTHERN END OF WIDENING.	GE	TJS	TJS
P2	22.07.24	INSITU CONCRETE UPSTAND SHOWN ON SECTIONS A-A AND B-B.	GE	TJS	TJS
P1	15.07.24	FIRST ISSUE	GE	TJS	TJS
Rev.	Date	Description	Drawn	Checked	Approve

PRELIMINARY

ALBION ROAD, MARDEN

PRIORITY WORKING SCHEME DETAILS

London | Hemel Hempstead | Swindon | Warwich

6730-1508

Structural

Geo-environmental

Drawing No:

Civil

structo

Revision:

P6