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Land at Foxhole Farm, Bolney: West Sussex County Council Response Note

Ref: DS/SGa/ITB16634-021A
Date: 2 July 2025

SECTION 1 Introduction

1.1 Context

1.1.1 Wates Developments has submitted a planning application (ref: *DM/25/1129*) for up to 200 new homes on land at Foxhole Farm, Bolney. The site has a draft allocation (ref: *DPA14*) in the submission Mid Sussex Regulation 19 District Plan (December 2023).

1.1.2 West Sussex County Council, in its capacity as local highway authority, has provided a response to the application dated 12th June 2025, requesting further information be provided.

1.1.3 A copy of the comments is provided at **Appendix A,** and the matters addressed within this note can be summarised as follows:

- Stage 1 Road Safety Audit
- Technical Review of Right Turn Lane (Design Audit)
- Highway works contributions
- Transport vision
- Off-site improvements

1.1.4 Section 2 responds to the comments received by WSCC, with sub-headings based on each paragraph where an action point is identified.

1.1.5 In addition, and while not sought by WSCC through its response, some additional sensitivity testing of the site access has been undertaken, and this is summarised in Section 3.

SECTION 2 Response to Comments

2.1 Stage 1 Road Safety Audit

2.1.1 Within their response, WSCC have request further information regarding the Stage 1 Road Safety Audit (RSA) completed for the access strategy, including requesting site of the RSA.

2.1.2 The independent Stage 1 RSA was undertaken by Fenley Road Safety Limited (Document Ref: RSA-23-022-3) in May 2023. A design organisation response was provided by i-Transport on 5th June 2023. A summary of the actions taken as a result of the RSA are included below:

- Eastbound entry taper set at 1 in 20;
- The inside corner of the 'S' bend on A272 Cowfold Road was amended to 100m and a centreline provided;
- It was agreed that an existing sign will be relocated to ensure visibility at the controlled crossing;
- The proposed depth of tactile paving on approach to the uncontrolled crossing was increased to 1,200mm; and
- Redundant sections of footway were removed.

2.1.3 Drawing No. **ITB16634-GA-005H**, submitted with the application, reflects all updates made a result of the Stage 1 RSA. The GG119 Audit Log, including responses from WSCC and agreed Audit actions, is attached at **Appendix B** and will be forwarded to WSCC in Word format to enable completion of the document.

2.1.4 The red coloured surfacing previously identified has been replaced with buff surfacing as requested by WSCC.

2.2 Technical Review of Right Turn Lane (Design Audit)

2.2.1 WSCC requested that the Applicant provide a Design Audit of the proposed access arrangement and the right turn lane, in line with CD123 parameters.

2.2.2 The requested Design Audit is included in **Appendix C**.

2.3 Contributions towards Highways Improvements

2.3.1 WSCC has requested that the Applicant considers providing a financial contribution towards highway improvement works that are anticipated to come forward at the Foxhole Lane and Bolney Chapel Road junctions as part of the Buckbarn to Bolney route study.

2.3.2 While further information on the scheme will be required to enable compliance with CIL Reg 122 tests and to detail the requirement in the Heads of Terms for the related S106 obligation, the principle of a financial contribution is accepted as the Applicant considers that this will enhance conditions for all highway users, consistent with the objectives of the National Planning Policy Framework.

2.4 Vision-led Approach

2.4.1 WSCC's response requested clarity regarding the several matters in respect to ensuring that a vision led approach has been taken. Each of these comments are addressed in turn below.

"The applicant should demonstrate how a vision led approach has been adopted through the TA."

2.4.2 Section 2 of the Transport Assessment submitted in support of the planning application (Document ref: ITB16634-017C) clearly sets out how the vision for the site has been derived. The vision for the site is as follows *"to create a high-quality, sustainable, residential-led neighbourhood, where people want to live and spend time."* This vision is incorporated through-out the design of the masterplan through the following:

- Provision of a network of 'liveable streets' where access to vehicles and parking is managed.
- Provision of a network of traffic free routes connecting the parcels of development with both each other, and the wider existing infrastructure beyond the site boundary.
- Providing community uses / accessible green space on site which will allow many day-to-day needs of residents to be met on site, reducing the need to travel off-site.

2.4.3 Further to this, Section 6 of the Transport Assessment sets out the proposed Sustainable Transport Strategy for the site. This strategy follows the reduce, contain, facilitate hierarchy, which first seeks to reduce the need to travel, then seeks to accommodate needs locally, and finally facilitate sustainable travel to meet needs which cannot be met locally. The Sustainable Transport Strategy is comprehensive and has been derived to support the achieving of the vision for the site.

2.4.4 The provision of off-site highways works to support walking and public transport trips (as is discussed in Section 2.5) further demonstrates the Applicants commitment to delivering upon their vision.

"Explicit vision and specific targets in the Travel Plan should be provided. It is noted that the standard target of 10% reduction in vehicle trips has been set within the Travel Plan. However, no vision is included and clarification should be provided as to whether additional targets are to be set."

2.4.5 The Applicant submitted a Framework Residential Travel Plan (Document reference: ITB16634-013B) (RTP) in support of the planning application. This RTP seeks to ensure that practical steps are in place to deliver upon the vision for the site. The RTP contains interim targets to reduce private car usage to levels recorded within the 2011 census (which were considerably lower than recorded in the 2021 census).

2.4.6 An additional 'vision' set of mode share targets have now been included within the RTP. A summary of these targets against the baseline is included in **Table 2.1.**

Table 2.1: Vision Led Targets

Method of Travel	Proportion of Trips			Net Change from Baseline
	Baseline (Census 2021 levels)	Interim Targets (Census 2011 levels)	Vision-led Targets	
Driving a car or van	81%	71%	66%	-15%
Train	4%	13%	13%	+9%
On Foot	7%	8%	10%	+3%
Passenger in a car or van	4%	4%	5%	+1%
Bus, minibus, or coach	1%	1%	2%	+1%
Bicycle	1%	1%	2%	+1%
Motorcycle, scooter or moped	1%	1%	1%	-
Other method of travel to work	1%	1%	1%	-
Total	**100%**	**100%**	**100%**	**-**

Source: Consultant

2.4.7 The additional vision led targets seeks to reduce dependency on private vehicles below the level which was observed in the 2011 census. The modes which are targeted for the highest increases in the vision-led scenario are rail and travel on foot. These targets are reflective of the vision for the site.

"How will any additional mitigation be provided, if the target and vision isn't met? What form will this additional mitigation take?"

2.4.8 If targets are not met, additional travel planning drop-in sessions will be held for a further year beyond the end of the five-year monitoring period. Personalised one-to-one travel planning will also be undertaken with targeted households, identified from surveys as those with potential to change mode (e.g. those who pay for parking for work journeys and who could use an alternative), as well as an additional round of Travel Plan vouchers.

2.5 Off-site Improvements

2.5.1 WSCC's response included recommendations for further off-site highway improvements, beyond that which are already put forward in Section 6A in the Transport Assessment.

2.5.2 The recommendation put forward by WSCC were for improvements to 'The Street', and included the following:

- Northern build-out of tactile paving, and the inclusions of a full footway, as opposed to a 'virtual' footway adjacent to the eastern side of the carriageway.
- Provision of dropped kerbs / tactile paving at the junction of The Street / Paynesfield, to enable access to the bus stop of the northern side of the junction, as well as to the village hall; and
- Bus stop improvements on The Street, including the provision of Real Time Information on bus services.

2.5.3 Drawing **No. ITB16634-GA-008A** has been prepared to incorporate the recommendations for off-site improvements requested by WSCC.

SECTION 3 Additional Traffic Modelling

3.1 WSCC are satisfied that the proposed development will not have a 'severe residual cumulative impact', consistent with the objectives and relevant transport tests set out in paragraphs 115 and 116 of the National Planning Policy Framework. Accordingly, WSCC raises no objection to the proposal on traffic impact grounds.

3.2 Notwithstanding, a number of comments have been made through third-party representations in relation to the performance of the site access junction. The Applicant has sought to take a rigorous approach to the testing of the site access throughout the planning of the site and, to that end, additional sensitivity testing has been undertaken.

3.3 The modelling set out 8.4.12 of the Transport Assessment is based on information from Kangaroo in relating to their operation. They have advised that, on average, there will be 18 people in attendance at the site formed by a mixture of service users and staff (both support and administrational functions) and that there will a maximum attendance of 33 people.

3.4 To assess a 'worst case' scenario, a further sensitivity test has been undertaken using a maximum attendance of 33 persons attending the site and all arriving / departing the site during the network peak hours.

3.5 It has been assumed that all attendees will come to the site by car as a single occupant (staff) or as a single occupant escort journey (attendees) with the vehicle both arriving and departing during the same hour for the latter. The staff movements will comprise a morning arrival and an evening departure only. The movements are summarised in Table 3.1

Table 3.1: All Movements Occurring During Peak Hours – Community Building

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Trip Generation	33	25	58	25	33	58

3.6 The movements have been distributed onto the network using the agreed distribution parameters, and the proposed access junction remodelled. The outputs of the assessment are set out in **Table 3.2**, and the full outputs are provided at **Appendix D.**

Table 3.2: Sensitivity Capacity Testing – Site Access

Arm/Movement	2030 Base			
	AM Peak Hour		PM Peak Hour	
	Max RFC	MMQ (PCUs)	Max RFC	MMQ (PCUs)
Site Access	0.49	1	1	0.36
A272 – Right Turn	0.12	0	0.18	0

3.7 As set out in Section 8.4 of the Transport Assessment, such a level of movement is not expected by Kangaroo and that the movements are not concentrated into a single hour. However, the assessment demonstrates that, even under the worst-case conditions, there is more than sufficient residual capacity in the junction – the junction will not have a severe residual cumulative impact on network performance nor have an unacceptable impact on highway safety, as required by paragraph 116 of the National Planning Policy Framework.

SECTION 4 Summary

4.1 Wates Developments has submitted a planning application (ref: *DM/25/1129*) for up to 200 new homes on land at Foxhole Farm, Bolney. The site has a draft allocation (ref: *DPA14*) in the submission Mid Sussex Regulation 19 District Plan (December 2023).

4.2 West Sussex County Council, in its capacity as local highway authority, has provided a response to the application dated 12th June 2025, requesting further information be provided.

4.3 The note demonstrates that:

- An independent Stage 1 Road Safety has been undertaken for the access proposals;
- A Design Audit has been undertaken for the proposed right turn lane of the access;
- The Applicant agrees to the principle of financial contributions towards highway improvements;
- That both the Transport Assessment and RTP have been underpinned by the transport vision for the site;
- The Framework Travel Plan has been updated in line with WSCC's request; and
- The proposals for off-site improvements have been updated in line with WSCC's recommendation.
- The proposed access junction can accommodate traffic flows higher than those forecast without having an unacceptable network capacity or highway safety impact.

DRAWINGS

KEY:

SITE BOUNDARY BASED ON OS MAPPING

HIGHWAY BOUNDARY BASED ON OS MAPPING

SCALE BAR @ 1:1000

0 10 25 50 100

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.

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REV	DATE	BY	DESCRIPTION	CHK	APD
H	24.06.25	TA	HIGH FRICTION SURFACE COLOUR HAS BEEN AMENDED	DS	DS
G	28.10.24	JB	VISIBILITY SPLAY UPDATED	DS	DS
F	07.08.23	JB	VISIBILITY SPLAY UPDATED	ML	DS
E	06.08.23	JB	DESIGN UPDATED TO TOPO SURVEY	ML	DS
D	10.08.23	JB	DRIVEWAYS AND SIGNAL HEADS ADDED	ML	DS
C	06.06.23	JB	DRAWING UPDATES FOLLOWING RSA	ML	DS

STATUS: FOR INFORMATION

TITLE: INITIAL SITE ACCESS ARRANGEMENT

PROJECT: LAND WEST OF BOLNEY

CLIENT: WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
JB	ML	JCB
PROJECT No:	SCALE @ A2:	DATE:
ITB16634	1:1000	07.02.22
DRAWING No:		REV:
ITB16634-GA-005		H

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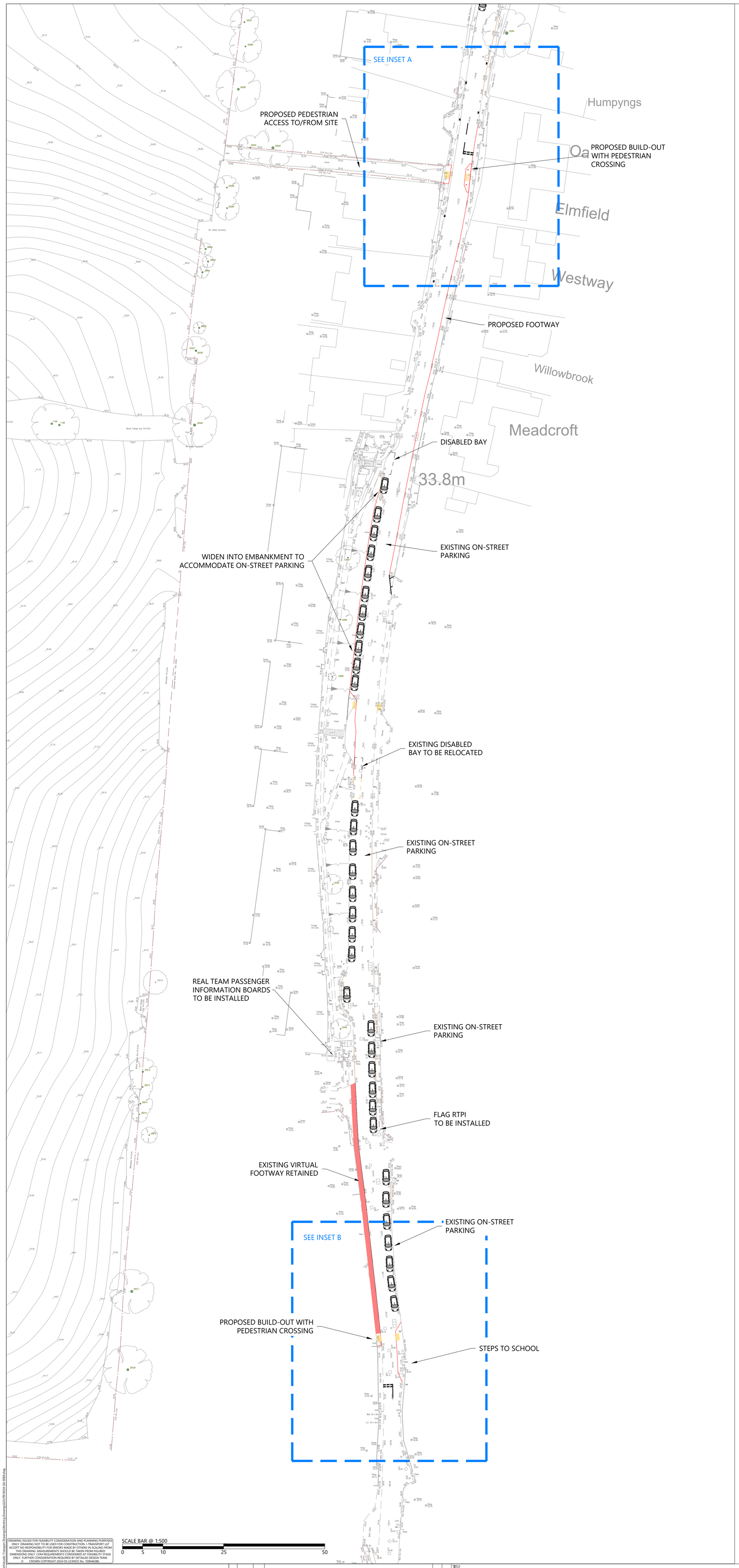

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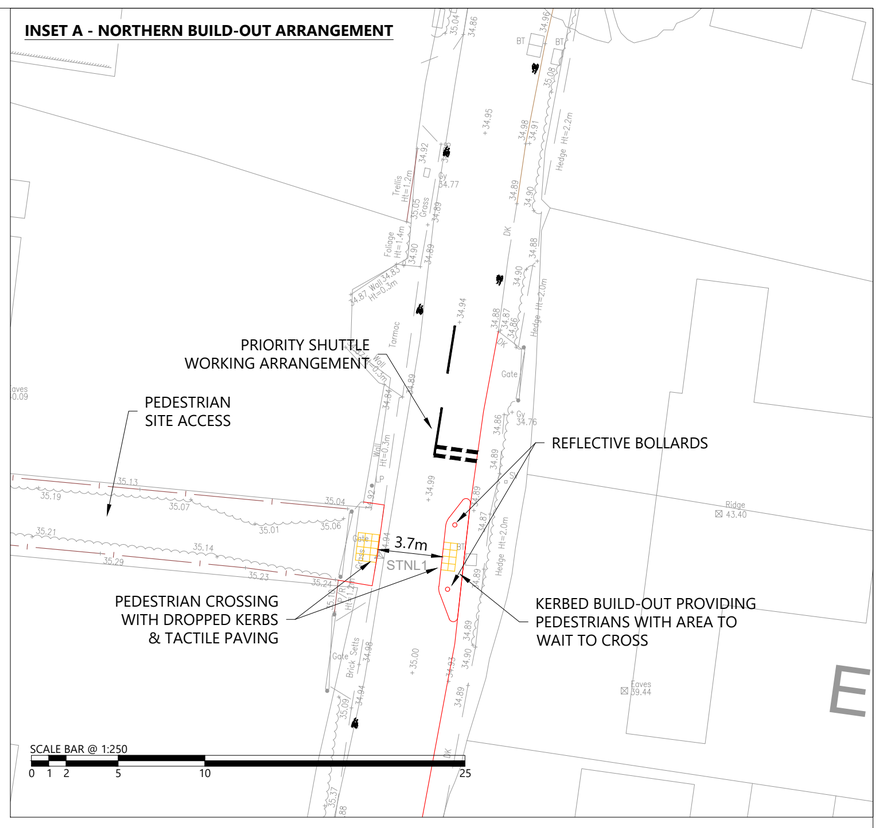
INSET A - NORTHERN BUILD-OUT ARRANGEMENT



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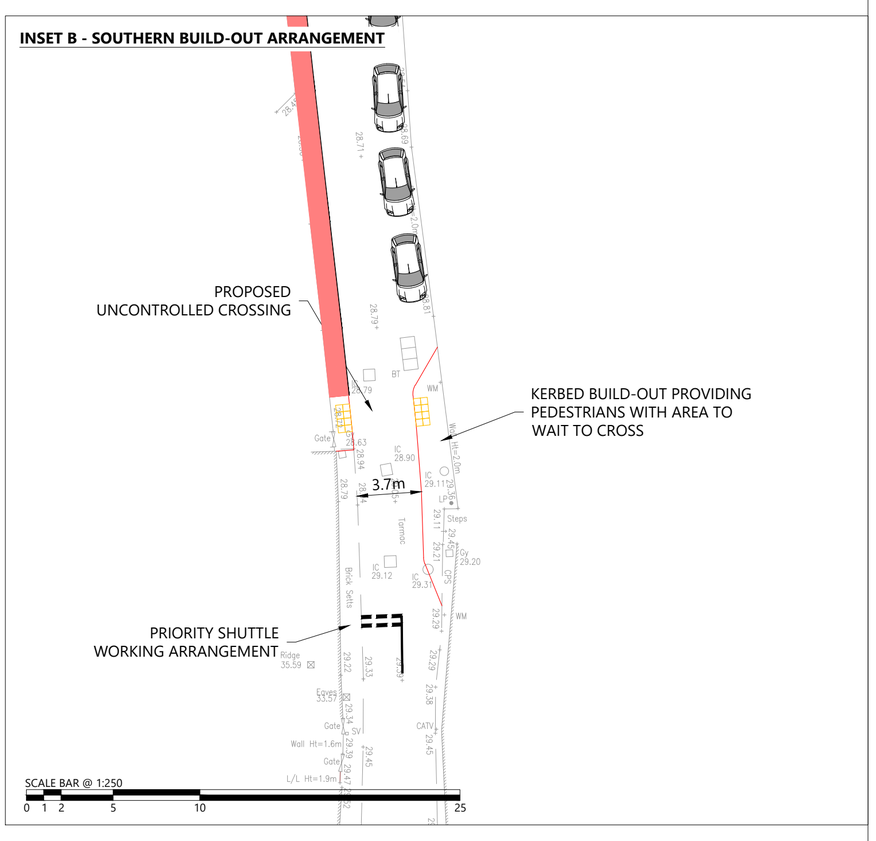
INSET B - SOUTHERN BUILD-OUT ARRANGEMENT



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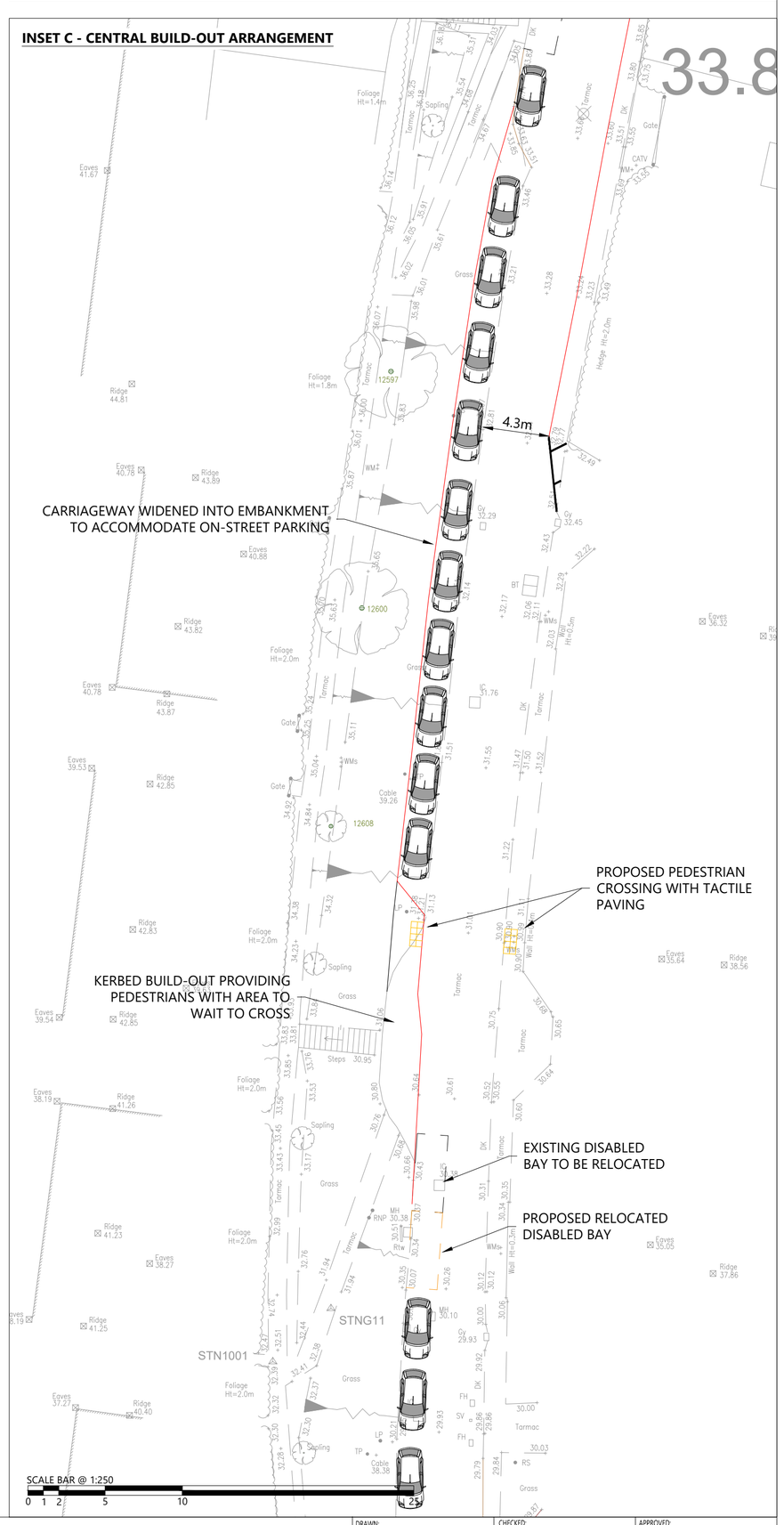
INSET C - CENTRAL BUILD-OUT ARRANGEMENT



SCALE BAR @ 1:250
0 1 2 5 10

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Tel: 01256 637940
www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
A	24.06.25	TA	FOOTWAY HAS BEEN UPDATED, TACTILE PAVING ADDED	DS	DS

STATUS: FOR INFORMATION

TITLE: THE STREET IMPROVEMENTS - OPTION 2

PROJECT: LAND WEST OF BOLNEY

CLIENT: WATES

DRAWN:	CHECKED:	APPROVED:
JB	ML	DS
PROJECT No:	SCALE @ A1:	DATE:
ITB16634	1:500/1:250	18.01.24
DRAWING No:		REV:
ITB16634-GA-008		A

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APPENDIX A. WSCC RESPONSE

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Mid Sussex District Council FAO: Joanne Fisher
FROM:	WSCC – Highways Authority
DATE:	12th June 2025
LOCATION:	Land At Foxhole Farm Foxhole Lane Bolney West Sussex
SUBJECT:	DM/25/1129 Outline application (appearance, landscaping, layout and scale reserved), for the erection of up to 200 residential dwellings, including affordable housing; a community building (use class F1) encompassing land for education provision, together with associated access, ancillary parking and landscaping; the creation of a vehicular access point from the A272 Cowfold Road, and pedestrian and cycle only access to The Street; and creation of a network of roads, footways, and cycleways through the site; together with the provision of countryside open space, children's play areas, community orchard, and allotments; sustainable drainage systems and landscape buffers.
DATE OF SITE VISIT:	11th June 2025
RECOMMENDATION:	More Information

Background
WSCC in its role of Local Highway Authority (LHA) has been consulted on the proposals for highway safety, capacity and access.

The proposals are for Outline consent for 200 dwellings. The site has a draft allocation for 200 dwellings in the Mid Sussex Regulation 19 District Plan. The site is located in the village of Bolney, within the boundary of Mid Sussex, c.7km to the east of the town of Haywards Heath, c.6.5km northwest of Burgess Hill and c.13km south of Crawley (distances measured at the crow flies from the centre of the site). The site lies directly in between The Street and Foxhole Lane and to the west of the A23, which runs between Crawley and Brighton.

The proposals will be accessed for vehicles from the A272 (Cowfold Road) which in this location is subject to a 40-mph speed limit. The site will have a pedestrian access point onto Foxhole Lane and two pedestrian accesses onto The Street although the detail of the pedestrian access points is a matter for a later reserved matters application. In addition, the applicant proposes a suite of off-site highway works to improve connectivity along The Street.

The LHA has previously undertaken pre-application discussions with the applicant in 2021 with the applicant's Transport Consultant this involved the access strategy and

consultation for up to 100 homes at the site. The accompanying Transport Assessment (TA) dated 28th April 2025 incorporates comments and advice from the initial pre-app. The LHA undertook a site inspection on the 11th June 2025 between 5/6 pm.

Access and Visibility
The application will result in a new 5.5m wide access with right turn facility provided directly from Cowfold Road. The access will have 6m radii allowing large vehicles to be able to manoeuvre in and out of the access easily. A separate 2m wide footway will be provided into the site providing safe access for pedestrians. The works for the access would be subject to a Section 278 Agreement with the LHA's Highway Agreements Team. A speed survey has been undertaken in November 2023 with 8th percentile speeds of:

- 38.9 mph eastbound
- 40.6 mph westbound

The TA has demonstrated (drawing ITB16634-GA-017) that visibility splays of 2.4 metres x 120 metres to the west and splays of 2.4 by 105 metres, these would be in line with the posted speed limit (40 mph) and standards within Design Manual for Roads and Bridges (DMRB). The LHA has reviewed the most recently available accident data for this stretch of Cowfold Road and there have not been any recorded road traffic collisions within the immediate vicinity of the proposed point of access.

The proposed RED high friction surface proposed is noted, we would recommend that BUFF colouring is employed as it has a more sustained visual impact. However, the proposed red surfacing is accepted where used as eyebrows to highlight terminal/roundel locations.

A separate crossing point along Cowfold Road is proposed east of the propose point of access. Tactile paving will be provided to allow crossing to the footways on the southern side of Cowfold Road. There will be the relocation of the signalised crossing 25m to the west of its current position to facilitate the introduction of the ghost island right turn lane.

In terms of servicing delivery, refuse and deliveries will take place from on-site and an internal turning area will be provided to allow access and egress the site in a forward gear.

In terms of the new access, we would not foresee any specific issue with its proximity to Foxhole Lane/Bolney Chapel Road crossroad or the proposed location of the signals. The operational performance of the junction is commented on later in this response.

Contribution towards Highway Improvements
The Road Safety Group (RSG) are currently in the early stages of a route study investigation along the A272 from Buckbarn to Bolney which would include the Foxhole Lane junction. As part of the route study, Foxhole Lane and Bolney Chapel Road junctions will likely receive treatment to ensure consistency across all junctions along the route. Improvements may include a reduced speed limit (30mph) through the more developed section, review of signage and lining, possible surface treatment and we will be evaluating the iRAP countermeasures to reduce risk. Given the application site will be in close proximity to these works, the LHA would request a contribution from the applicant for these works. The exact figure can be discussed in due course.

Stage 1 Road Safety Audit (RSA)
The TA states that an RSA has been undertaken and signed off by the LHA on the access strategy. As outlined above the LHA has held discussions with the applicant on the access strategy. However, within the TA there is no evidence of the RSA undertaken and confirmation that it is the access as proposed within this TA. This will need to be provided for clarity.

Technical Review of Right Turn Lane (Design Audit)

A Design Audit (in line with CD123 parameters) should be prepared outlining the proposed access arrangements and right turn lane. This will be reviewed by the LHA's Highway Design Project Manager.

Off Site Highway Improvements
The LHA has considered the mitigation measures put forward within Section 6A of the TA and has some additional recommendations of localised improvement.

Option 1-is illustrated on Drawing ITB16634-GA-007. The improvement includes the addition of two uncontrolled pedestrian crossings in the form of kerbed builds outs with a one-way shuttle working arrangement, acting as a traffic calming feature

Option 2-is shown on drawing ITB16634-GA-008 and includes the two pedestrian crossings identified in Option 1 along with a more comprehensive scheme of improvements to the central section of The Street, comprising: • Carriageway widening to accommodate on-street parking. • Kerbed build-out and additional uncontrolled crossing with dropped kerbs and tactile paving. • Relocation of the existing disabled parking bay.

The LHA would have a preference to Option 2 with some further consideration from the applicant on the following points along The Street:

- The Street, northern build out and tactile paving–this provides a means of providing tactile paving for people to cross The Street and access the virtual footway. It could be further improved by extending the actual footway to the build out rather than having a virtual footway in this location. See image below:

- Dropped kerb/tactile paving at the junction of the Street/Paynesfield should be provided. This is to ensure accessible access to the bus stop on the northern side of the junction and the village hall.
- Consider the need for bus stop improvements with Real Time Information on the nearby bus stops/shelters on The Street.

Trip Generation/ Distribution / Assignment
The TRICS database has been utilised to establish that the residential element of the development is predicted to generate 124 AM peak two-way vehicle trips and 126 PM peak two-way vehicle trips.

Junction Modelling
The applicant has tested the capacity of the following junctions via Junctions 11 software:

- Site Access
- A272 Cowfold Lane/The Street
- A272 Cowfold Lane/London Road
- A272 Cowfold Lane/Foxhole Lane
- A272 Bolney Road/ A281
- A281/A272 Station Road
- London Road/A23 Slip Roads
- A272 Cowfold Road/Bolney Road/A23 Slip roads

The information within the TA demonstrates that all junctions in the study area are forecast to operate within capacity in the '2030 Base' scenario and continue to do so in the '2030 Base + Development' scenario, with the exception of the London Road right turn with the A272 but the additional traffic is not considered 'severe' in line with paragraph 116 of the National Planning Policy Framework. The applicant should note that there is a committed development scheme (DM/18/5114) under the 'Northen Arc' development for the signalisation of this junction to mitigate development impacts.

Parking

As the proposals are outline (except for access) no formal parking or layout has been provided at this stage, however the following would be advised for any Reserved Matters (RM) submission:

- Internal plans supported by Swept Path Analysis (SPA).
- A RM application should include SPA diagrams for the internal access roads and turning areas. This should include a refuse vehicle and fire tender.
- Confirmation if the internal roads will be offered for adoption under a Section 38 Agreement.
- Internal layouts should be designed in accordance with Manual for Streets (MfS) parameters with a mix of shared surface and footways. Minimum dimensions of footways should be 1.8 metres.
- Forward visibility splays should be shown at internal junctions and these areas are to be free of any obstruction. The splays shown should be in accordance with the likely design speed of up to 15/20 mph respectively.
- Drainage of the site should be considered. Is the drainage part of a S104 agreement or will surface water be discharged into swales within the site?
- For applications within Mid Sussex any parking provision should be provided in line with the LHA's parking standards (September) 2020.

Accessibility

The site is located within close proximity of bus stops serving the hourly service no 2 and 89 services which link to Burgess Hill and Horsham. Service 273 located from London Road to the east which provides onward connections to destinations such as Crawley and Brighton. Crawley and Brighton both have rail connections which links to Southampton, London Gatwick and London Victoria.

The TA identifies the potential for walking and cycling opportunities. Paragraph 2.22 of DfT document LTN 01/20 Cycle Infrastructure Design considers that two out of every three personal trips are less than 5 miles (or 8km) in length which is achievable for most people. Within Section 5 of the TA there are areas of employment, retail, health and leisure within achievable walking or cycling distance.

Links through the development to the PROW network would be a key consideration in any RM application as the majority of trips by sustainable modes would be southbound to the school and village centre.

Vision Led Approach to the TA

In line with paragraphs 115 and 118 of the National Planning Policy Framework (NPPF) a vision-led transport planning seeks to set out a preferred future in terms of how people will travel and cater for that vision, promoting active and sustainable travel. It seeks to move away from a Predict & Provide approach. Where future travel forecasts are predicated on historical travel data and the assumption that future travel habits will mirror those in the past. The Vision-led approach also incorporates more rigorous monitoring, and potentially additional mitigation, should the monitoring show that forecasts do not

materialise as envisaged at application stage. The LHA requires that Transport Assessment and Statements are taking a vision led approach, as is now required by the NPPF.

The LHA would therefore request some additional clarity from the applicant on the following matters:

- The applicant should demonstrate how the vision led approach has been adopted through the TA.
- Explicit vision and specific targets in the Travel Plan should be provided. It is noted that the standard target of 10% reduction in vehicle trips has been set within the Travel Plan. However, no vision is included and clarification should be provided as to whether additional targets are to be set.
- How will any additional mitigation be provided, if the target and vision isn't met? What form will this additional mitigation take?

Travel Plan
Notwithstanding the points above, the submitted travel plan is noted. The applicant should note that WSCC apply an auditing fee to all new travel plans. The travel plan and associated auditing fee would be secured via a s106 agreement. The Travel Plan auditing fees reflect the amount of local authority officer time required to evaluate the initial plan, assess the monitoring data and participate in on-going review and agreement to any amended plans in the future, including post planning once the development is built out and occupied. The costs have been benchmarked against fees charged by other Local Authorities and are considered to proportionate and reflective of the costs incurred

Conclusion
The LHA has considered the information within the TA and would request the following areas of information:

- Stage 1 RSA on the access
- Design Audit on the Right Turn Lane
- Consideration of a financial contribution to the road safety scheme
- TA updated to a Vision Led Approach
- Further consideration to the improvements on The Street (as outlined above)

Jamie Brown
West Sussex County Council – Planning Services

APPENDIX B. RSA AUDIT + GG119 RESPONSE

Road Safety Audit Report

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

Proposed Access off the A272 Cowfold Road Bolney

Client:
i-Transport

Client reference:
ITB16634

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Emmer Green
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RG4 8PH

E: office@fenley.co.uk
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Report Status 3

Job no	RSA-23-022	**Issue no**	3	**Date**	May 2023
Prepared by	JJF	**Verified by**	FB	**Approved by**	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-23/RSA-23-022-3				

1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	May 2023
Document reference and revision:	RSA-23-022-3
Prepared by:	Fenley Road Safety Limited
On behalf of the Overseeing Organisation:	West Sussex County Council
Design Organisation:	i-Transport LLP
Project Sponsor:	Wates Developments

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			28th April 2023
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	FB	JJF	9th May 2023
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			9th May 2023
3	Design Organisation Response incorporated	Michael Lancaster on behalf of i-Transport			15th June 2023

Contents:

Appendices:

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 works along the A272 Cowfold Road in Bolney. The proposals subject to this document include the provision of a simple priority access formed off the northern side of the carriageway that accommodates 6 metre corner radii and serves a development access that is to be 5.5 metres wide. As part of the works, a right turn lane along with a refuge island are to be provided through widening of the carriageway to the north. The scheme is to facilitate access to a residential development of 100 dwellings. The current scheme that is subject of this document, is a development of a scheme that was subject to a previous Stage 1 Road Safety Audit in August and October 2021, ref: RSA-21-078.

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 April and May 2023 in accordance with the Road Safety Audit Brief provided on the 29th March 2023 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, Wates Developments. 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. 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 / Highway Engineer

2.5 The site visit associated with this Road Safety Audit was undertaken during the afternoon of Monday 23rd August 2021 between 2:15pm and 2:55pm. The site visit involved walking and driving around the local highway network for a 40-minute period whilst observing local infrastructure and traffic conditions. The weather during the site visit sunny with scattered clouds, the road surface was dry and visibility was good. A number of pedestrians travelling along the footways and across the existing controlled crossing were observed during the site visits but no cyclists were present. Vehicular traffic to include cars, an agricultural vehicle, a refuse collection vehicle, light and heavy goods vehicles, was also observed. The traffic flow during the site visits was moderate and the road was observed to have recently been

resurfaced with no road markings apart from the zigzags and stop lines on each approach to the controlled crossing. It was noted that all road markings were in place when the Audit Team travelled through the Bolney on the A272 Cowfold Road more recently.

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:	Michael Lancaster
Position / Organisation:	Principal Consultant, i-Transport LLP

2.9 Any drawings or documents associated with the Design Organisation Response are listed at **Appendix A3,** if applicable.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

3.1 Fenley Road Safety Limited undertook a Stage 1 Road Safety Audit of a previous scheme to provide a simple priority access off the northern side of the A272 Cowfold Road at Bolney. That document raised a number of road safety concerns to include the achievable visibility splays, a pre-existing pedestrian and lack of dropped kerb crossing over the access road. The scheme has since been further developed through consultation with the County Highway Authority which is fully assessed within this Stage 1 Road Safety Audit.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

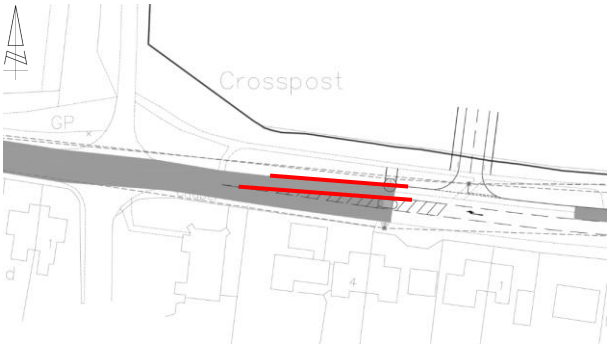
A.1	**LOCAL ALIGNMENT**
A.1.1	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	Proposed eastbound entry taper does not allow for a smooth path
Acc Type:	Loss of control type collisions

The A272 Cowfold Road is a single carriageway two-way road which is subject to a 40mph speed limit as it passes through the village of Bolney, although 85th percentile speeds of up to 52.1mph are observed. The proposals that are subject to this Stage 1 Road Safety Audit include the provision of a priority access off the northern side of the carriageway and a right turn lane through the widening of the existing carriageway to the north only. As part of the works, a refuge island is to be provided within the western taper of the right turn lane. Measurements have been taken off the scheme drawing provided with the Audit Brief and it appears that the eastbound entry taper associated with the proposed 3 metre wide right turn lane, measures circa 46 metres. It can therefore be determined that the taper is to be set at 1 in 15. The Audit Team have concerns that a taper of 1 in 15 will not provide a smooth alignment for eastbound traffic entering the through lanes and on approach to the refuge island which could lead to collisions with the island and loss of control type collisions.

RECOMMENDATION:

It is recommended that the eastbound entry taper is set at an appropriate gradient.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.

Agreed – the eastbound entry taper is set at 1 in 20 in accordance with the 40mph speed limit. This can be determined from the level of deviation of the road centreline which equates to 2.27 metres for eastbound traffic. The scheme proposals enhance the existing traffic calming features along the A272 Cowfold Road through Bolney which will highlight the 40mph speed limit and assist in reducing 85th percentile speeds observed.

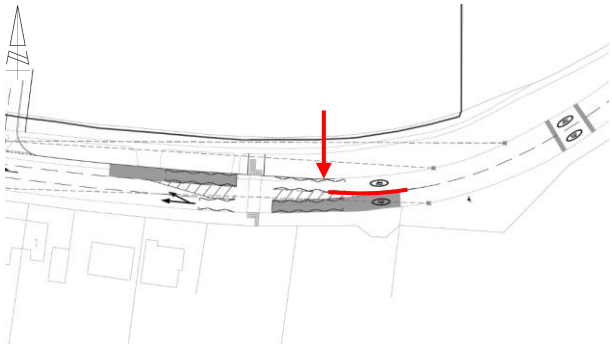
A.1.2	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	Proposed eastbound exit from the right turn lane junction does not allow for a smooth path
Acc Type:	Loss of control and sideswipe type collisions

The A272 Cowfold Road is a single carriageway two-way road which is subject to a 40mph speed limit as it passes through the village of Bolney. To the east of the village, the A272 Cowfold Road carriageway follows an 'S' bend formed with circa 50° corners with a road centreline radius of circa 108 metres. The proposals that are subject to this Stage 1 Road Safety Audit includes the provision of a right turn lane along the A272 Cowfold Road in the centre of Bolney that is to be provided through the widening of the existing carriageway to the north only. Measurements taken off the scheme drawing indicate that the eastbound nearside channel line is to transition back to the existing carriageway with a corner radius of 57 metres and road centreline radius of 73 metre. The Audit Team have concerns that whilst the existing centreline radius does not conform to standards and that the proposed centreline radius of 73 metres extends for a minimal distance, the proposals do not allow for a smooth alignment which could lead to collisions with the island and loss of control or sideswipe type collisions with opposing traffic.

RECOMMENDATION:

It is recommended that the road centreline and inside corner radii are increased to mimic the existing.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.

Agreed - the inside corner radii has been amended to 100m and the centreline is provided in accordance with the relevant design standards.

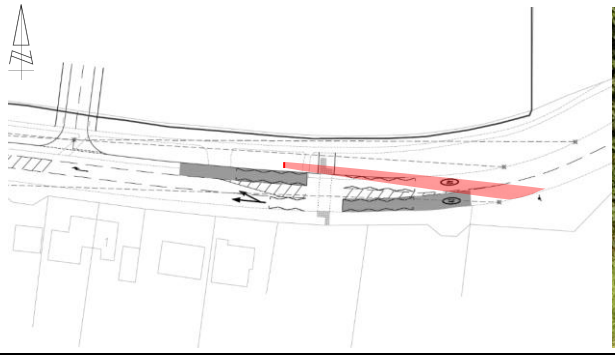
A.2	**GENERAL**
	No Road Safety Concerns in GENERAL have been raised at this stage
A.3	**JUNCTIONS**
A.3.1	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	An existing crossroads ahead advance direction sign may limit visibility
Acc Type:	Vehicle side impact collisions

The A272 Cowfold Road in proximity of the proposal, is subject to a 40mph speed limit and accommodates directional signage within the verge. The proposals that are subject to this Stage 1 Road Safety Audit include the provision of a priority access off the northern side of the carriageway as well as the widening of the carriageway to the north in order to provide a right turn lane and relocation of an existing signal-controlled crossing. The scheme drawing illustrates that visibility splays in accordance with the speed limit of the road are achievable, however, the Audit Team have concerns that an existing crossroads direction sign will restrict visibility for drivers of large vehicles particularly heavy goods vehicles. Restricted visibility from a priority access could lead to drivers attempting to manoeuvre when it is not safe to do so and side or rear impact collisions.

RECOMMENDATION:

It is recommended that the existing sign is relocated / raised to ensure adequate visibility for all drivers.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.

Agreed – the existing sign is situated immediately adjacent to the relocated controlled crossing and will therefore need to be relocated to ensure that it is clearly visible to approaching traffic. The location of the sign will be agreed as part of the signing and lining schedule at the S278 Detailed Design stage.

A.3.2	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	Visibility could become restricted by overgrown foliage within the verge
Acc Type:	Vehicle side impact collisions

The A272 Cowfold Road in proximity of the proposal, is subject to a 40mph speed limit, accommodates a grass verge as well as footway both sides of the carriageway. The proposals that are subject to this Stage 1 Road Safety Audit include the provision of a priority access off the northern side of the carriageway at a location where it is confirmed that visibility splays based on a speed survey, are achievable and where the existing grass verge between the carriageway and footway measures approximately 6 metres deep. The existing verge appears to be highway land and maintained, however during the site visit associated with this Audit and as confirmed by on Google Street View from numerous years, the verge does become overgrown. Should the foliage within the verge grow in excess of 500mm, there is a risk that the visibility splays illustrated will become limited which could lead to vehicles attempting to manoeuvre when it is not safe to do so and side or rear impact collisions. Furthermore, the canopies of the young trees may hang low and foliage on the trunk may extend into the splay limiting visibility.

RECOMMENDATION:

It is recommended that an adequate level of visibility remains clear at all times.

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.

Agreed – the visibility splay is located within the highway boundary. Maintenance of the highway is a statutory function of the highway authority, who is responsible for ensuring that the highway is clear of such obstruction. Maintenance of the verge will form part of WSCC's cyclical maintenance programme.

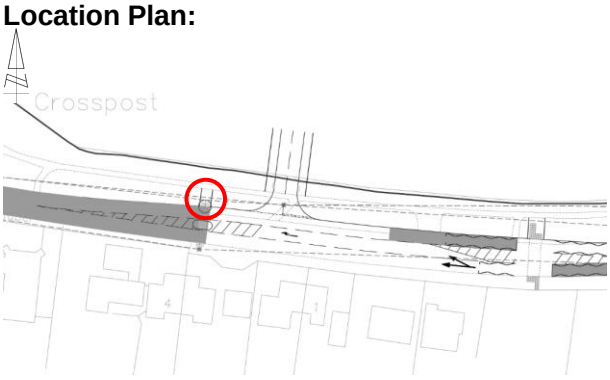
A.4	**WALKING CYCLING AND HORSE RIDING**
A.4.1	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	Visually impaired pedestrians may not become aware of the existing crossing
Acc Type:	Vehicle pedestrian collision

The A272 Cowfold Road is a two-way single carriageway road that is subject to a 40mph speed limit and accommodates a signal-controlled crossing. The proposals that are subject to this Stage 1 Road Safety Audit include the provision of a simple priority access off the northern side of the carriageway as well as a right turn lane (RTL) and relocates the controlled crossing to the east of the RTL. As part of the proposals, a refuge island is to be provided at an uncontrolled crossing point, within the taper of the RTL to the west of the proposed access which will allow pedestrians following a desire line from the associated development to the local convenience store. Tactile paving is to be accommodated at the proposed uncontrolled crossing, however just two rows equating to a depth of 800mm are to be accommodated on the northern side which is inline with the associated footway. Visually impaired pedestrians travelling walking towards the proposed uncontrolled crossing, could overstep the proposed two rows of tactile warning and entre the live carriageway unaware which could lead to a vehicle pedestrian collision.

RECOMMENDATION:

It is recommended that the tactile warning is increased to a depth of 1200mm.

Location Plan:

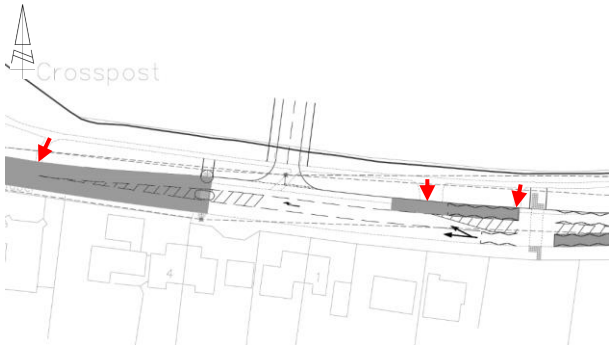


DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.

Agree – The scheme drawing has been updated to identify that 3 rows of tactile paving, totalling 1200mm, will be provided.

A.4.2	**PROBLEM**
Location:	A272 Cowfold Road
Summary:	Pedestrians may attempt to cross the carriageway where no crossing is provided
Acc Type:	Vehicle pedestrian collision

The A272 Cowfold Road benefits from a footway both side of the carriageway with the northern footway beyond a grass verge that accommodates a number of footway links which allow access to the carriageway to allow users to cross the road. The proposals that are subject to this Stage 1 Road Safety Audit include the provision of an uncontrolled crossing point that benefits from refuge island as well as the relocation of the existing signal-controlled crossing. The scheme drawing illustrates proposed infrastructure and illustrates that the existing links are to be retained. The Audit Team has concerns that pedestrians could utilise the existing links and attempt to cross

the A272 Cowfold Road carriageway where no crossing is provided which could lead to trips falls and personal injuries as well as vehicle top pedestrian collisions	
RECOMMENDATION:	
It is recommended that the redundant sections of footway are removed and grassed to encourage use of the proposed crossing facilities.	
Location Plan:  	
DESIGN ORGANISATION RESPONSE provided by i-Transport on the 5th June 2023 following formal issue of this Stage 1 Road Safety Audit on the 9th May 2023.	
Agree – All redundant sections of footway will be removed.	
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*

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 9th May 2023

Audit Team Member

Name: **Farouk Bhatti** *MCIHT*

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 9th May 2023

Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

Audit Stage	Doc. No.	Rev	Title
Stage 1	Email dated 29th M ar. '23		Road Safety Audit Brief
	ID05823		Cowfold ATC Site 1
	Traffic Flows		2021 Base plus Development
	ITB16634-005		Further Transport Information
	Dwg No.	Rev	Title
	ITB16634-GA-005	B	Initial Site Access Arrangement

Appendix A2

Item Location Plan


Scheme
A.3.2
A.1.2
A.3.1
A.4.2
A.4.1
A.1.1
A.4.2
GP
Diamond
Brookside

Appendix A3

Drawings associated with the Design Organisation Response

Audit Stage	Dwg No.	Rev	Title
Stage 1			


fenley

i-Transport LLP
Building 1000 Lakeside North Harbour
Western Road, Portsmouth PO6 3EZ

Tel: 03316 300366

Technical Note

Project No: ITB16634
Project Title: Land at Foxhole Farm, Bolney
Title: Stage 1 Road Safety Audit – Design Organisation Response
Ref: DS/ML/ITB16634-011 TN
Date: 20 June 2023

SECTION 1 SUMMARY

1.1.1 Wates Developments has appointed i-Transport LLP to develop an access strategy for Land at Foxhole Farm, Bolney. The site is allocated for the development of 200 new homes in the Mid Sussex District Council Local Plan as site DPH18.

1.1.2 Access to the site is proposed via the introduction of a new priority junction arrangement with ghost right hand turn lane from the A272 Cowfold Road.

1.1.3 In accordance with the WSCC Road Safety Audit (RSA) Policy, a Stage 1 RSA has been undertaken by an independent Auditor. The matters raised by the Auditor are summarised within this Technical Note along with a Design Team response, in accordance with Appendix F of document GG 119.

SECTION 2 ROAD SAFETY AUDIT RESPONSE

2.1 Project Details

Table F.1: Project Details

Report Title:	Stage 1 Road Safety Audit
Date:	May 2023
Document Reference and Revision:	RSA-23-022-3
Prepared by:	Fenley
On behalf of:	West Sussex County Council

2.2 Authorisation Sheet

Table F.2: Authorisation Sheet

Project:	Land at Foxhole Farm, Bolney
Report Title:	RSA Response Summary
Prepared by (Design Organisation)	
Name:	Dominic Smith
Position:	Associate Partner
Signed:	
Organisation:	i-Transport LLP
Date:	20/06/2023
Approved by (Overseeing Organisation)	
Name:	
Position:	
Signed:	
Organisation:	West Sussex County Council
Date:	22 August 2023

Key Personnel

Table F.3: Key Personnel

Overseeing Organisation:	West Sussex County Council (WSCC)
RSA Team:	Fenley
Design Organisation:	i-Transport LLP

Road Safety Audit Decision Log

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
A.1.1: The proposed eastbound entry taper may not allow for a smooth path	It is recommended that the eastbound entry taper is set at an appropriate gradient.	Agree – the eastbound entry taper is set at 1 in 20 in accordance with the 40mph speed limit. This can be determined from the level of deviation of the road centreline, which equates to 2.27m for eastbound traffic. The scheme proposals enhance the existing traffic calming features along Cowfold Road which highlight the 40mph speed limit.	The taper gradient change will be subject to a review in terms of technical acceptability, this will be done at post planning technical approval stage for the s278 agreement works. Any response presently is given purely in terms of acceptability for the purpose of the RSA rather than providing technical approval	Agreed – exact taper can be reviewed at technical approval stage under the s278 agreement post planning
A.1.2: Proposed eastbound exit from the right turn lane junction does not allow for a smooth path	It is recommended that the road centreline and inside corner radii are increased to mimic the existing.	Agreed – the inside corner radii has been amended to 100m and the centreline is provided in accordance with the relevant design standards.	This will be checked at post planning technical approval stage for the s278 agreement works. Any response presently is given purely in terms of acceptability for the purpose of the RSA rather than providing technical approval of the design	Agreed –can be reviewed at technical approval stage under the s278 agreement post planning

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
A. 3.1: An existing crossroads ahead advance direction sign may limit visibility.	It is recommended that the existing sign is relocated/raised to ensure adequate visibility for all drivers.	Agreed – the existing sign is situated immediately adjacent to the relocated crossing and will therefore need to be relocated to ensure that it is clearly visible to approaching traffic. The location o the sign will be agreed as part of the signing and lining schedule at S278 detailed design.	The location of the sign will be agreed as part of the signing and lining schedule at S278 detailed design stage.	Agreed –can be reviewed at technical approval stage under the s278 agreement post planning
A.3.2: Visibility could become restricted by overgrown foliage within the verge.	It is recommended that an adequate level of visibility remains clear at all times.	Agreed – the visibility splay is located within the highway boundary, and maintenance is a statutory function of the local authority. Maintenance of the verge will form part of WSCC's cyclical maintenance programme.	The visibility splay to the east lies very close to the site boundary. It would also be a requirement of the developer as much as WSCC through cyclical maintenance to ensure that any planting within the site or boundary treatment doesn't restrict visibility also.	Agreed – the LHA will Condition the visibility splays to ensure as well as WSCC's maintenance program, any over hanging planting or boundary treatment in this area will be maintained in its entirety to ensure visibility splays are kept clear at all times.
A.4.1: Visually impaired users may not become aware of the existing crossing.	It is recommended that the tactile warning is increased to a depth of 1200mm.	Agreed – the scheme drawing has been updated to identify that 3 rows of tactile paving, totalling 1200mm, will be provided.	Agreed –can be reviewed at technical approval stage under the s278 agreement post planning	Agreed –can be reviewed at technical approval stage under the s278 agreement post planning

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
A.4.2: Pedestrians may attempt to cross the carriageway where no crossing is provided.	It is recommended that the redundant sections of footway are removed and grassed to encourage use of the proposed crossing facilities.	Agreed – all redundant sections of footway shall be removed.	This is agreeable to the LHA	Agreed – to be reviewed at technical approval stage under the s278 agreement post planning

2.3 Design Organisation and Overseeing Organisation Statements

Table F.5: Design Organisation Statement

On behalf of the Design Organisation I certify that: 1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.	
Name:	Dominic Smith
Signed:	
Position:	Associate Partner
Organisation:	i-Transport LLP
Date:	20/06/2023

Table F.6: Overseeing Organisation Statement

On behalf of the Overseeing Organisation I certify that: 1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and 2) The agreed RSA actions will be progressed.	
Name:	
Signed:	
Position:	
Organisation:	West Sussex County Council
Date:	22 August 2023

APPENDIX C. DESIGN AUDIT

i-Transport Project No: ITB16634
i-Transport Project Title: Land West of Bolney

Design Check Audit

Drawing No ITB16634-GA-005H

Junction Type Ghost Island Junction

Standards / Guidance DMRB CD123 Rev 2 and Manual for Streets 1 and 2

Stage 1 Road Safety Audit Yes

GG 101 - Verbal forms used in DMRB

"must" indicates a statutory or legislative requirement

"shall" indicates a requirement of the Overseeing Organisation

"should" indicates advice expressed as a recommendation

"may" indicates advice expressed as a permissible approach

Main Geometric Design Features	CD123 Rev 2	Standard	Proposed Measurement	Reason (if different from CD123 Rev 2)
Junction Visibility	3.1	On a minor road approach to a priority junction, there shall be unobstructed visibility of the junction from a distance corresponding to the desirable minimum SSD for the design speed of the minor road, including the 'give way' sign where present, as illustrated in Figure 3.1	120m SSD provided in accordance with DMRB CD109 for 70kph Design Speed	
	3.2	An approaching road user shall be able to clearly see the junction form from a minimum distance of 15 metres back along the centreline of the minor road, measured from the continuation of the line of the nearside edge of the running carriageway of the major road (as illustrated in Figure 3.2a and 3.2b).	15m achieved	
	3.4	X distance - shall	2.4m	
		Y distance corresponding to the desirable minimum SSD for the speed of the major road - shall	To the west - 40 mph speed limit & 38.9 mph 85th percentile observed speed - splay of 120m provided (speed limit)	
		Y distance corresponding to the desirable minimum SSD for the speed of the major road - shall	To the east - 40 mph speed limit & 40.6mph 85th percentile observed speed - splay of 105m provided (observed speed)	
	3.8	The minimum distances used to locate point X and therefore generating the visibility splay shall be:		Manual for 2 states that as a starting point for any scheme affecting non-trunk roads, deisgners should start with MfS - therefore, inline with MfS a 2.4m set back has been provided. The 'y' distance has been provided in accordance with DMRB CD109 for 70kph Design Speed, both vehicles exiting the junction and on the approaches.
		1) metres for direct accesses;	N/A	
		2) 2.4 metres for simple priority junctions; and	N/A	
		3) 4.5 metres for all other priority junctions.	2.4m used	
	3.8.1	The distances used to locate point X and therefore generating the visibility splay should be:		
		1) 4.5 metres for direct accesses; and	N/A	
		2) 9 metres for all priority junctions.	2.4m used	
	3.9	Where the line between points X and Y falls partially within the major road carriageway, an additional area shall be added to the visibility splay formed by drawing a line from X to a point tangential to the nearer edge of the major road running carriageway	N/A	
	3.10	Where a priority junction is located on the outside of a major road curve, an additional area shall be added to the visibility splay in the verge on the inside of the major road curve	N/A	
Geometric Design of Junctions	5.2	Allowance shall be made for the swept turning paths of the worst case design vehicle which is expected to use the priority junction, unless: 1) the design vehicle is expected to form only a very small percentage of the total number of vehicles that will use the junction; and 2) any swept path conflicts as a result of the design vehicle encroaching into other lanes will not occur on bends.	6m corner radii proposed - residential access	
	5.22	The minimum length of a nearside diverging taper or auxiliary lane or deceleration length shall be in accordance with table 5.22 70kph design speed - 40m deceleration length (including a 15m direct taper), along with a minimum 10m turning length	40m deceleration provided, 15m direct taper provided.	
	5.4	At new priority junctions, The minimum approach angle of the minor road approach, measured over 15 metres from the edge of the major road carriageway, shall be 70 degrees	90 degrees proposed	
	5.4.1	At new priority junctions, the minimum approach angle of the minor road approach, measured over 15 metres from the edge of the major road carriageway, should be 90 degrees	90 degrees proposed	
	5.6.3	At ghost island junctions where no diverge or merge tapers are provided the corner radii should be 15 metres followed by a corner taper of 1:6 over a distance of 30 metres.	No diverge or merge taper provided. The junction provides radii of 6.0m	
	5.6.4	At ghost island junctions where a diverge taper is provided the corner radii should be: 1) 15 metres followed by a corner taper of 1:6 over a distance of 30 metres at the merge. 2) a minimum of 40 metres at the end of the diverge taper where the major road design speed is greater than 85kph; 3) a minimum of 20 metres at the end of the diverge taper where the major road design speed is 85kph or less.	N/A	
Geometric Design of Major Road Central Treatments	6.1.1	Central treatments for SLD and ghost islands, on single carriageways, should be developed to their maximum width using the tapers shown in Table 6.1.1 70kph design speed = 1:20	1:20 provided	
	6.1.2	The tapers given in table 6.1.1 on single carriageway roads, should be developed: 1) symmetrically on straight sections of road; 2) asymmetrically towards the outside of the curve on curved sections of road; and 3) asymmetrically away from the climbing lane on climbing lane sections	Tapers provided are symmetrical	
	6.4	The turning length shall be a minimum of 10m	10m turning length provided.	
	6.5	Where capacity calculations indicate that for significant periods of time there can be vehicles queuing to turn right from the major road, the turning length shall be increased to accommodate the forecast maximum queue length	Not required - traffic modelling identifies no capacity constraints or significant delay, with waiting vehicles able to be retained in central resovoir	
	6.6	For right turning lanes, the direct taper length and the minimum deceleration length shall be provided in accordance with Table 5.22	Deceleration length provided 40m and direct taper 15m in accordance with Table 5.22	
	6.8	At ghost island junctions on roads other than WS2+1 roads, the through lane widths in each direction shall be a minimum of 3.0m and a maximum of 3.65m , exclusive of hard strips	3.0m	
	6.10	The width of the right turning lanes for new junctions, excluding WS2+1, shall satisfy either 3.5m or 3.0m for new junctions or 2.5m for improvements to existing junctions	3.0m	
	6.10.1	The width of the right turning lane at new and existing junctions should be 3.5m metres.	3.0m provided, this is to help achieve junction visibility and due to the existing road widths and land availability where the junction will require tying into A272 Cowfold Road	

APPENDIX D. JUNCTIONS OUTPUTS – SITE ACCESS

Junctions 11

PICADY 11 - Priority Intersection Module

Filename: Site Access.j11
Path: T:\Projects\16000 Series\16634ITB - Land West of Bolney\Tech\Junction Assessments\Picady
Report generation date: 02/07/2025 13:16:16

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2030 - Base + Dev					
Stream B-AC	0.9	33.80	0.49	0.5	29.27	0.36
Stream C-AB	0.1	9.77	0.12	0.2	9.98	0.18

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Site Access
Location	Bolney
Site number	
Date	06/12/2024
Version	
Status	Proposed
Identifier	
Client	Wates Developments
Jobnumber	ITB16634
Enumerator	DM
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	Base + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D2	2030	Base + Dev	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2030 | Base + Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A272 Cowfold Road (East) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.59	A

Arms

Arms

Arm	Name	Description	Arm type
A	A272 Cowfold Road (West)		Major
B	Site Access		Minor
C	A272 Cowfold Road (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A272 Cowfold Road (East)	5.98		✓	3.00	250.0	✓	9.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
Site Access	One lane	3.21	135	114

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	593	0.108	0.273	0.172	0.390
B-C	711	0.109	0.276	-	-
C-B	781	0.303	0.303	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	Base + Dev	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A272 Cowfold Road (West)		ONE HOUR	✓	1083	100.000
Site Access		ONE HOUR	✓	91	100.000
A272 Cowfold Road (East)		ONE HOUR	✓	1055	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A272 Cowfold Road (West)	Site Access	A272 Cowfold Road (East)
From	A272 Cowfold Road (West)	0	12	1071
	Site Access	14	0	77
	A272 Cowfold Road (East)	1008	47	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A272 Cowfold Road (West)	Site Access	A272 Cowfold Road (East)
From	A272 Cowfold Road (West)	0	0	6
	Site Access	0	0	0
	A272 Cowfold Road (East)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.49	33.80	0.9	D	84	125
C-AB	0.12	9.77	0.1	A	43	65
C-A					925	1387
A-B					11	17
A-C					983	1474

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	0.00	414	0.165	68	0.0	0.2	10.360	B
C-AB	35	9	0.00	534	0.066	35	0.0	0.1	7.209	A
C-A	759	190	0.00			759				
A-B	9	2	0.00			9				
A-C	806	202	0.00			806				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	0.00	346	0.236	81	0.2	0.3	13.579	B
C-AB	42	11	0.00	486	0.087	42	0.1	0.1	8.103	A
C-A	906	227	0.00			906				
A-B	11	3	0.00			11				
A-C	963	241	0.00			963				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	0.00	206	0.485	98	0.3	0.9	32.520	D
C-AB	52	13	0.00	420	0.123	52	0.1	0.1	9.764	A
C-A	1110	277	0.00			1110				
A-B	13	3	0.00			13				
A-C	1179	295	0.00			1179				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	0.00	206	0.486	100	0.9	0.9	33.800	D
C-AB	52	13	0.00	420	0.123	52	0.1	0.1	9.774	A
C-A	1110	277	0.00			1110				
A-B	13	3	0.00			13				
A-C	1179	295	0.00			1179				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	0.00	346	0.236	84	0.9	0.3	13.869	B
C-AB	42	11	0.00	486	0.087	42	0.1	0.1	8.114	A
C-A	906	227	0.00			906				
A-B	11	3	0.00			11				
A-C	963	241	0.00			963				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	0.00	414	0.165	69	0.3	0.2	10.435	B
C-AB	35	9	0.00	534	0.066	35	0.1	0.1	7.217	A
C-A	759	190	0.00			759				
A-B	9	2	0.00			9				
A-C	806	202	0.00			806				

2030 | Base + Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A272 Cowfold Road (East) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.15	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.15	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2030	Base + Dev	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A272 Cowfold Road (West)		ONE HOUR	✓	1030	100.000
Site Access		ONE HOUR	✓	62	100.000
A272 Cowfold Road (East)		ONE HOUR	✓	1100	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A272 Cowfold Road (West)	Site Access	A272 Cowfold Road (East)
From	A272 Cowfold Road (West)	0	13	1017
	Site Access	12	0	50
	A272 Cowfold Road (East)	1030	70	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A272 Cowfold Road (West)	Site Access	A272 Cowfold Road (East)
From	A272 Cowfold Road (West)	0	0	5
	Site Access	0	0	0
	A272 Cowfold Road (East)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.36	29.27	0.5	D	57	85
C-AB	0.18	9.98	0.2	A	64	96
C-A					945	1418
A-B					12	18
A-C					933	1400

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	0.00	406	0.115	46	0.0	0.1	9.994	A
C-AB	53	13	0.00	546	0.096	52	0.0	0.1	7.279	A
C-A	775	194	0.00			775				
A-B	10	2	0.00			10				
A-C	766	191	0.00			766				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	0.00	335	0.167	55	0.1	0.2	12.883	B
C-AB	63	16	0.00	501	0.126	63	0.1	0.1	8.217	A
C-A	926	231	0.00			926				
A-B	12	3	0.00			12				
A-C	914	229	0.00			914				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	0.00	191	0.357	67	0.2	0.5	28.656	D
C-AB	77	19	0.00	438	0.176	77	0.1	0.2	9.967	A
C-A	1134	284	0.00			1134				
A-B	14	4	0.00			14				
A-C	1120	280	0.00			1120				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	0.00	191	0.357	68	0.5	0.5	29.266	D
C-AB	77	19	0.00	438	0.176	77	0.2	0.2	9.981	A
C-A	1134	284	0.00			1134				
A-B	14	4	0.00			14				
A-C	1120	280	0.00			1120				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	0.00	334	0.167	57	0.5	0.2	13.038	B
C-AB	63	16	0.00	501	0.126	63	0.2	0.1	8.233	A
C-A	926	231	0.00			926				
A-B	12	3	0.00			12				
A-C	914	229	0.00			914				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	0.00	406	0.115	47	0.2	0.1	10.043	B
C-AB	53	13	0.00	546	0.096	53	0.1	0.1	7.295	A
C-A	775	194	0.00			775				
A-B	10	2	0.00			10				
A-C	766	191	0.00			766				