TECHNICAL NOTE 1

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd

Re:	ST5074-10PD Land off Boscobel Lane, Bishops Wood
Date:	February 2025
Subject:	Response to the LHA Consultation Comments dated 10th September 2024 (Rev C)
Client:	Boningale Homes

1.0 Introduction

1.1 An Outline Planning Application (reference 24/00467/OUTM) was submitted to South Staffordshire Council for up to 100 residential dwellings and a local Use Class E (a) shop on land off Boscobel Lane in Bishops Wood, South Staffordshire. This was supported by a Transport Assessment (TA) that was prepared in April 2024.

1.2 Following the submission of the application, the Local Highway Authority (LHA) provided consultation comments on 10th September 2024 in relation to the live application, with a request for further information. The comments raised are summarised as follows:

1) *"……the Highway Authority would raise concern in regard to the intensification of use of the Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road crossroads junction as a result of the development which affords substandard visibility on both side arms and excessive 85th percentile speeds on Boscobel Lane (Major arm) which evidently exceed the 30mph speed limit. The Highway Authority consider the crossroads junction to be critical in terms of highway safety and its operation therefore would require full assessment to be undertaken."*

2) *The site is therefore not considered to be a sustainable location in transport terms with very limited opportunities available to undertake journeys sustainably……..The Highway Authority would therefore welcome a discussion with the applicant in the first instance to discuss Bus service improvements for employment and education commuters in Bishops Wood."*

3) *Access strategy and geometry of Site access is acceptable as per drawing no. ST5074-4PD-001 however 2 m footway widths must be provided in accordance with Manual for Streets recommendations. ATC Speed Survey Data has not been provided.*

4) *The proposed pedestrian facilities as shown on Drawing Number ST5074-4PD-001 are appropriately located along pedestrian desire lines. Connectivity to St Johns church has not been considered therefore would require this to be addressed…..footway widths should follow manual for streets recommendations therefore the scheme will need to be revised to reflect this…….demonstrate….. adequate visibility at*

proposed tactile pedestrian crossings are available within highway/ land under the applicant's control for highway safety reasons.

5) *the proposed scope of 30mph gateway and traffic calming features are not considered to be sufficient to provide an appropriate road environment to safely accommodate major residential development particularly non-motorised users. It is recommended that the scope of Traffic Calming measures along the site frontage of Boscobel Lane are revisited to meaningfully reduce 85th percentile speeds to the 30mph speed limit to support the development.*

6) *At this stage I would note that a s.106 Travel Plan Monitoring fee would be required which will be between £3000-£10000 dependant on impact*

1.3 Whilst a response was being prepared in SDD in relation to the above comments, a Decision Notice was issued (dated 9th October 2024). Within this Decision Notice, there was one highways related Reasons for Refusal as follows:

Reason for Refusal 4:

> *"Insufficient information has been provided by way of an acceptable Transport Assessment and a Travel Plan to demonstrate that the proposal would not result in a risk to highway safety due to the history of speeding along Boscobel Lane and the position close to the crossroad junction, resulting in substandard visibility."*

1.4 As such, this note has been prepared to address the above comments from the LHA dated 10th September 2024, whilst also acknowledging the highways related Reason for Refusal.

1.5 For clarity, the following section sets out each outstanding LHA comment in '*italics*' with SDD's response provided below to address them, providing sufficient additional information where required.

2.0 Response to the Local Highway Authority's Comments (10th September 2024)

Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road crossroads junction

> *"LHA: the Highway Authority would raise concern in regard to the intensification of use of the Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road crossroads junction as a result of the development which affords substandard visibility on both side arms and excessive 85th percentile speeds on Boscobel Lane (Major arm) which evidently exceed the 30mph speed limit. The Highway Authority consider the crossroads junction to be critical in terms of highway safety and its operation therefore would require full assessment to be undertaken."*

2.1 In order to address the above concern, a PICADY 9 model was created to confirm how the proposed residential site access would operate once fully operational (including the local shop trips). The standard measurement of capacity at a non-signalised junction is the Ratio of Flow to Capacity (RFC). Typically, a value of 0.85 is seen to represent a practical operational capacity with results higher than this more likely to experience congestion and delay.

2.2 Noting the proposed development trip generation was accepted by the LHA, these have been utilised for the purpose of this modelling exercise. A manual classified turning count survey was then undertaken at the junction on Tuesday 24th September 2024 with the results shown at **Appendix A.**

2.3 TEMPro growth factors were utilised as set out in the Transport Assessment (April 2024), given no concern was raised by this in the LHA response.

2.4 The results of the PICADY assessment are summarised in **Table 1**, with full copies of the output data contained at **Appendix B**. The PICADY model demonstrated that the junction would operate satisfactorily in the '2029 Opening Year + Proposed Development' scenario. The arm closest to capacity would be Arm D-ABC during the AM Peak, which could operate at a maximum RFC of 0.14 with a maximum queue length of 0.2 vehicles.

	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2029 + Proposed Development	**AM Peak**			**PM Peak**		
Arm B-ACD	0.1	9.54	0.13	0.1	8.18	0.10
Arm A-BCD	0.1	5.97	0.07	0.0	5.18	0.04
Arm D-ABC	0.1	8.57	0.11	0.2	8.64	0.14
Arm C-ABD	0.0	5.57	0.02	0.0	5.40	0.02

Table 1. Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road PICADY Results

2.5 The above information demonstrates that the access has ample spare capacity and therefore no further assessment should be required to be undertaken.

2.6 From a safety perspective, a Stage 1 Road Safety Audit (RSA) has been commissioned which includes a review of the proposed site access and all off-site infrastructure improvements (including a review of the Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road junction. The RSA is included at **Appendix C**, with a Designer's Response included at **Appendix D.** Whilst the issue of pedestrian infrastructure is addressed at a later stage in this Technical Note, the RSA raised no concern in relation to traffic safety at this junction, which is also supported by the review of PIA data within the Transport Assessment.

2.7 Noting the proposals would give rise to an additional 55 two-way vehicle trips during any given peak period, and that these would be 'straight ahead' movements along Boscobel Lane, we would maintain our position that the proposed development would not give rise to a safety or capacity concern at this location.

Sustainability

> *LHA: The site is therefore not considered to be a sustainable location in transport terms with very limited opportunities available to undertake journeys sustainably……..The Highway Authority would therefore welcome a discussion with the applicant in the first instance to discuss Bus service improvements for employment and education commuters in Bishops Wood".*

2.8 In order to address the wider concern relating to the sustainability credentials of the site, a standalone Sustainability Statement has been prepared by Marrons. This should be read in conjunction with this Highways Technical Note.

2.9 Whilst we endeavoured to meet with the LHA to discuss bus service improvements, the Decision Notice for the application was issued prior to DLP having the opportunity. Nevertheless, discussions are ongoing with local bus operators, and we have also approached community service bus providers. Whilst these discussions are ongoing, the applicant has confirmed that they are willing to provide financial contributions to support public transport options.

Access & Pedestrian Facilities

> *LHA: Access strategy and geometry of Site access is acceptable as per drawing no. ST5074-4PD-001 however 2 m footway widths must be provided in accordance with Manual for Streets recommendations…..it is imperative that the proposals demonstrate the road environment is suitable to accommodate an increase of pedestrians…… adequate visibility at proposed tactile pedestrian crossings are available….*

2.10 The LHA have requested that ATC speed survey data is provided to confirm 85th percentile speeds. These were included at Appendix C of the Transport Assessment however are once again contained at **Appendix E** of this Technical Note.

2.11 As part of the Transport Assessment (April 2024) it was stated that 1.8m footways would be provided along Boscobel Lane to the north of the site. The LHA comments state that a 2m wide footway should be provided in line with DfT Manual for Streets (MfS) guidance. However, paragraph 6.3.22 of MfS states that, "*the minimum unobstructed width for pedestrians should generally be 2 m*". As such, 2m is therefore considered to be a recommendation and not a prescriptive requirement.

2.12 In addition to this, paragraph 6.3.23 of MfS goes on to state that, "*Footway widths can be varied between different streets to take account of pedestrian volumes and composition".* This confirms that there is a level of flexibility in terms of footway width provision and where appropriate, a footway can deviate from the recommended 2m width.

2.13 In addition to this the 'Staffordshire Residential Design Guide' (2000)' states that a 1.8m wide footway can be provided for a number of different types of street types including residential spine roads, collector roads, connector roads, major and minor residential access roads, access ways and housing squares. This has been recognised locally as part of Application 24/00124/FULM that whilst refused (in the process of an Appeal) received positive recommendation from LHA on the basis of footways comprising 1.5m to 1.8m in width within the Staffordshire area

2.14 Paragraph 58 of the National Planning Policy Framework (December 2024) states that:

> *"Planning obligations must only be sought where they meet all of the following tests24:*
>
> *a) necessary to make the development acceptable in planning terms;*
>
> *b) directly related to the development; and*
>
> *c) fairly and reasonably related in scale and kind to the development."*

2.15 Given the development comprises 100 dwellings and 2021 Census 'Travel to Work' data for the Brewood area suggest 6% of all trips locally are via foot, it is anticipated that there would be a low number of pedestrian trips generated by the proposed development.

2.16 As such, it is considered that based on the guidance provided in MfS, a relaxation on the requirement for 2m (to 1.8m) for off-site footways should be acceptable.

2.17 Notwithstanding the above, the RSA undertaken in relation to the proposals did identify a concern in relation to pedestrian visibility at the proposed pedestrian crossing facilities at Offoxey Road and Tong Road. The Designer's Response (**Appendix D**) includes **Drawing Number ST5074-10PD-001 Rev P02** (**Appendix F**) which shows how the pedestrian crossing facilities have been amended at the Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road junction. This forms part of a key desire line for future residents to access the Village Hall and facilities within Bishops Wood such as the school.

2.18 In addition to the above, any vegetation within the public highway should be cut back / removed such that required visibility can be achieved.

2.19 The proposals also represent a betterment when compared to the existing situation whereby pedestrians accessing the Village Hall are required to step out into the carriageway with no formal provision.

2.20 At the Tong Road / Old Coach Road junction, the pedestrian access point at this location would be removed. In terms of access to local facilities, the removal of this eastern pedestrian access would have a negligible impact in terms of walking distance to the school and facilities in Bishops Wood from the centre of the site.

2.21 The applicant has accepted that a pedestrian crossing point could be provided to St Johns Church should the LHA require this. However, this would need to be developed in consultation with St Johns Church given it would require third party land under their control to deliver.

2.22 As part of the Detailed Design stage and S278 Agreement process, the preliminary pedestrian infrastructure improvements as shown, would be confirmed however the above has demonstrated that such improvements are achievable. This should now alleviate the LHA concerns in this regard.

Proposed Change to 30mph

"LHA: Traffic Calming measures along the site frontage of Boscobel Lane are revisited."

2.23 Within the Transport Assessment, it was stated that an improved gateway feature would be provided in support of the extension of the 30mph limit along Boscobel Lane. This feature would also allow for signage, a virtual narrowing and dragons teeth carriageway markings.

2.24 However, as part of the LHA consultation response, it is requested that the traffic calming measures along the site, road markings or a combination of both are revisited in order to reduce 85th percentile speeds to the 30mph speed limit.

2.25 It is reiterated, and acknowledged by the LHA, that the proposals relate to the extension of an existing speed limit as opposed to a new speed restriction. There are currently minimal features provided at the existing change in speed limit adjacent to the Village Hall, and the LHA inherently accept this position given there are no plans in the public domain to introduce further speed reduction measures. However, the presence of a new site access junction would encourage drivers to approach with more caution, anticipating vehicles manoeuvring in / out of the site access. Furthermore, the RSA raised no concern in relation to the package of traffic calming measures proposed.

2.26 The Department for Transport "Local Transport Note 1/07 Traffic Calming" (March 2007) document sets out a number of traffic calming measures and their effectiveness. Paragraph 9.3.1 states:

> *"…..found that the speed limit repeater signs reduced mean speeds of traffic as a whole by an average of between 3 and 9 mph, the higher reductions being where the speed limit had also been reduced by 10 mph. The vehicle activated junction and bend warning signs reduced mean speeds by up to 7 mph."*

2.27 In light of the above, there is opportunity to provide further traffic calming measures along the site frontage as now shown in **Drawing Number ST5074-10PD-001 Revision P02**. This includes the introduction of repeater signs and a Vehicle Activated Sign at the gateway entry, which is blank until a vehicle approaches at a speed above the pre-set speed. It is accepted that the precise extent of such measures could be agreed as part of the S278 Agreement; however there is ample opportunity to provide a package of measures.

Travel Plan

"LHA: review of the submitted Travel Plan has not been undertaken until these matters have been addressed. At this stage I would note that a s.106 Travel Plan Monitoring fee would be required….. "

2.28 This is accepted and any requirement for Travel Plan monitoring could be addressed by a suitably worded planning condition.

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Appendix A Traffic Count Survey

Road Data Services Ltd

Bishops Wood
Tuesday 24th September 2024
Junction: 1
Approach: Ivetsey Bank Road

	Left to Tong Road					Ahead to Boscobel Lane					Right to Offoxey Road				
TIME	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs
07:30 - 07:45	0	0	0	0	0.0	0	25	5	30	36.5	0	9	2	11	13.6
07:45 - 08:00	0	0	0	0	0.0	0	21	0	21	21.0	0	5	3	8	11.9
Hourly Total	**0**	**0**	**0**	**0**	**0.0**	**0**	**46**	**5**	**51**	**57.5**	**0**	**14**	**5**	**19**	**25.5**
08:00 - 08:15	0	0	0	0	0.0	0	35	1	36	37.3	0	8	0	8	8.0
08:15 - 08:30	0	0	0	0	0.0	0	26	0	26	26.0	0	3	0	3	3.0
08:30 - 08:45	0	1	0	1	1.0	0	19	3	22	25.9	0	3	0	3	3.0
08:45 - 09:00	0	1	0	1	1.0	0	22	2	24	26.6	0	3	0	3	3.0
Hourly Total	**0**	**2**	**0**	**2**	**2.0**	**0**	**102**	**6**	**108**	**115.8**	**0**	**17**	**0**	**17**	**17.0**
09:00 - 09:15	0	0	0	0	0.0	0	24	0	24	24.0	0	5	1	6	7.3
09:15 - 09:30	0	0	0	0	0.0	0	20	2	22	24.6	0	8	1	9	10.3
Hourly Total	**0**	**0**	**0**	**0**	**0.0**	**0**	**44**	**2**	**46**	**48.6**	**0**	**13**	**2**	**15**	**17.6**
TOTAL	**0**	**2**	**0**	**2**	**2.0**	**0**	**192**	**13**	**205**	**221.9**	**0**	**44**	**7**	**51**	**60.1**
16:30 - 16:45	0	0	0	0	0.0	0	27	0	27	27.0	0	6	0	6	6.0
16:45 - 17:00	0	2	0	2	2.0	0	18	0	18	18.0	0	3	0	3	3.0
Hourly Total	**0**	**2**	**0**	**2**	**2.0**	**0**	**45**	**0**	**45**	**45.0**	**0**	**9**	**0**	**9**	**9.0**
17:00 - 17:15	1	0	0	1	0.2	0	22	1	23	24.3	0	5	0	5	5.0
17:15 - 17:30	0	3	0	3	3.0	0	22	1	23	24.3	0	5	0	5	5.0
17:30 - 17:45	0	0	0	0	0.0	0	19	0	19	19.0	0	2	0	2	2.0
17:45 - 18:00	0	0	0	0	0.0	0	16	0	16	16.0	0	2	1	3	4.3
Hourly Total	**1**	**3**	**0**	**4**	**3.2**	**0**	**79**	**2**	**81**	**83.6**	**0**	**14**	**1**	**15**	**16.3**
18:00 - 18:15	0	0	0	0	0.0	0	17	1	18	19.3	0	2	0	2	2.0
18:15 - 18:30	0	0	0	0	0.0	0	19	1	20	21.3	1	1	0	2	1.2
Hourly Total	**0**	**0**	**0**	**0**	**0.0**	**0**	**36**	**2**	**38**	**40.6**	**1**	**3**	**0**	**4**	**3.2**
TOTAL	**1**	**5**	**0**	**6**	**5.2**	**0**	**160**	**4**	**164**	**169.2**	**1**	**26**	**1**	**28**	**28.5**

PCU Factors:	
CYCLE	0.2
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

Bishops Wood
Tuesday 24th September 2024
Junction: 1
Approach: Tong Road

	Left to Boscobel Lane					Ahead to Offoxey Road					Right to Ivetsey Bank Road				
TIME	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs
07:30 - 07:45	0	0	0	**0**	**0.0**	0	4	2	**6**	**8.6**	0	5	1	**6**	**7.3**
07:45 - 08:00	0	4	0	**4**	**4.0**	0	5	0	**5**	**5.0**	0	0	0	**0**	**0.0**
Hourly Total	**0**	**4**	**0**	**4**	**4.0**	**0**	**9**	**2**	**11**	**13.6**	**0**	**5**	**1**	**6**	**7.3**
08:00 - 08:15	0	2	0	**2**	**2.0**	0	13	0	**13**	**13.0**	0	1	0	**1**	**1.0**
08:15 - 08:30	0	1	0	**1**	**1.0**	0	6	0	**6**	**6.0**	0	1	0	**1**	**1.0**
08:30 - 08:45	0	0	0	**0**	**0.0**	0	6	0	**6**	**6.0**	0	0	1	**1**	**2.3**
08:45 - 09:00	0	3	0	**3**	**3.0**	0	2	0	**2**	**2.0**	0	0	0	**0**	**0.0**
Hourly Total	**0**	**6**	**0**	**6**	**6.0**	**0**	**27**	**0**	**27**	**27.0**	**0**	**2**	**1**	**3**	**4.3**
09:00 - 09:15	0	3	0	**3**	**3.0**	0	9	0	**9**	**9.0**	0	1	0	**1**	**1.0**
09:15 - 09:30	0	3	0	**3**	**3.0**	0	2	0	**2**	**2.0**	0	0	1	**1**	**2.3**
Hourly Total	**0**	**6**	**0**	**6**	**6.0**	**0**	**11**	**0**	**11**	**11.0**	**0**	**1**	**1**	**2**	**3.3**
TOTAL	**0**	**16**	**0**	**16**	**16.0**	**0**	**47**	**2**	**49**	**51.6**	**0**	**8**	**3**	**11**	**14.9**
16:30 - 16:45	0	2	0	**2**	**2.0**	0	6	0	**6**	**6.0**	0	0	0	**0**	**0.0**
16:45 - 17:00	0	1	0	**1**	**1.0**	0	8	0	**8**	**8.0**	0	1	0	**1**	**1.0**
Hourly Total	**0**	**3**	**0**	**3**	**3.0**	**0**	**14**	**0**	**14**	**14.0**	**0**	**1**	**0**	**1**	**1.0**
17:00 - 17:15	0	5	0	**5**	**5.0**	0	6	0	**6**	**6.0**	0	0	0	**0**	**0.0**
17:15 - 17:30	0	2	0	**2**	**2.0**	0	4	0	**4**	**4.0**	0	2	0	**2**	**2.0**
17:30 - 17:45	0	1	0	**1**	**1.0**	0	4	0	**4**	**4.0**	0	4	0	**4**	**4.0**
17:45 - 18:00	0	5	0	**5**	**5.0**	1	0	0	**1**	**0.2**	0	2	0	**2**	**2.0**
Hourly Total	**0**	**13**	**0**	**13**	**13.0**	**1**	**14**	**0**	**15**	**14.2**	**0**	**8**	**0**	**8**	**8.0**
18:00 - 18:15	0	3	0	**3**	**3.0**	0	5	0	**5**	**5.0**	0	0	0	**0**	**0.0**
18:15 - 18:30	0	0	0	**0**	**0.0**	0	1	0	**1**	**1.0**	0	1	0	**1**	**1.0**
Hourly Total	**0**	**3**	**0**	**3**	**3.0**	**0**	**6**	**0**	**6**	**6.0**	**0**	**1**	**0**	**1**	**1.0**
TOTAL	**0**	**19**	**0**	**19**	**19.0**	**1**	**34**	**0**	**35**	**34.2**	**0**	**10**	**0**	**10**	**10.0**

PCU Factors:	
CYCLE	0.2
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

Bishops Wood
Tuesday 24th September 2024
Junction: 1
Approach: Boscobel Lane

	Left to Offoxey Road					Ahead to Ivetsey Bank Road					Right to Tong Road				
TIME	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs	CYCLE	LIGHT	HEAVY	TOTAL	PCUs
07:30 - 07:45	0	0	0	**0**	**0.0**	0	11	2	**13**	**15.6**	0	1	0	**1**	**1.0**
07:45 - 08:00	0	1	0	**1**	**1.0**	0	16	1	**17**	**18.3**	0	1	0	**1**	**1.0**
Hourly Total	**0**	**1**	**0**	**1**	**1.0**	**0**	**27**	**3**	**30**	**33.9**	**0**	**2**	**0**	**2**	**2.0**
08:00 - 08:15	0	2	0	**2**	**2.0**	0	17	1	**18**	**19.3**	0	1	0	**1**	**1.0**
08:15 - 08:30	0	4	0	**4**	**4.0**	0	13	0	**13**	**13.0**	0	2	0	**2**	**2.0**
08:30 - 08:45	0	0	0	**0**	**0.0**	0	12	1	**13**	**14.3**	0	1	0	**1**	**1.0**
08:45 - 09:00	0	1	0	**1**	**1.0**	0	19	1	**20**	**21.3**	0	3	0	**3**	**3.0**
Hourly Total	**0**	**7**	**0**	**7**	**7.0**	**0**	**61**	**3**	**64**	**67.9**	**0**	**7**	**0**	**7**	**7.0**
09:00 - 09:15	0	1	0	**1**	**1.0**	0	9	1	**10**	**11.3**	0	0	0	**0**	**0.0**
09:15 - 09:30	0	2	0	**2**	**2.0**	0	10	0	**10**	**10.0**	0	3	0	**3**	**3.0**
Hourly Total	**0**	**3**	**0**	**3**	**3.0**	**0**	**19**	**1**	**20**	**21.3**	**0**	**3**	**0**	**3**	**3.0**
TOTAL	**0**	**11**	**0**	**11**	**11.0**	**0**	**107**	**7**	**114**	**123.1**	**0**	**12**	**0**	**12**	**12.0**
16:30 - 16:45	0	4	0	**4**	**4.0**	0	19	1	**20**	**21.3**	0	1	0	**1**	**1.0**
16:45 - 17:00	0	2	0	**2**	**2.0**	0	21	0	**21**	**21.0**	0	4	0	**4**	**4.0**
Hourly Total	**0**	**6**	**0**	**6**	**6.0**	**0**	**40**	**1**	**41**	**42.3**	**0**	**5**	**0**	**5**	**5.0**
17:00 - 17:15	0	5	0	**5**	**5.0**	0	26	1	**27**	**28.3**	0	3	0	**3**	**3.0**
17:15 - 17:30	0	0	0	**0**	**0.0**	0	24	1	**25**	**26.3**	0	1	0	**1**	**1.0**
17:30 - 17:45	0	0	0	**0**	**0.0**	0	20	1	**21**	**22.3**	0	1	0	**1**	**1.0**
17:45 - 18:00	0	1	0	**1**	**1.0**	0	16	0	**16**	**16.0**	1	1	0	**2**	**1.2**
Hourly Total	**0**	**6**	**0**	**6**	**6.0**	**0**	**86**	**3**	**89**	**92.9**	**1**	**6**	**0**	**7**	**6.2**
18:00 - 18:15	0	1	0	**1**	**1.0**	0	17	3	**20**	**23.9**	0	0	0	**0**	**0.0**
18:15 - 18:30	0	0	1	**1**	**2.3**	0	10	0	**10**	**10.0**	0	2	0	**2**	**2.0**
Hourly Total	**0**	**1**	**1**	**2**	**3.3**	**0**	**27**	**3**	**30**	**33.9**	**0**	**2**	**0**	**2**	**2.0**
TOTAL	**0**	**13**	**1**	**14**	**15.3**	**0**	**153**	**7**	**160**	**169.1**	**1**	**13**	**0**	**14**	**13.2**

PCU Factors:	
CYCLE	0.2
LIGHT	1.0
HEAVY	2.3

Road Data Services Ltd

Bishops Wood
Tuesday 24th September 2024
Junction: 1
Approach: Offoxey Road

	Left to Ivetsey Bank Road					Ahead to Tong Road					Right to Boscobel Lane				
TIME	CYCLE	LIGHT	HEAVY	**TOTAL**	**PCUs**	CYCLE	LIGHT	HEAVY	**TOTAL**	**PCUs**	CYCLE	LIGHT	HEAVY	**TOTAL**	**PCUs**
07:30 - 07:45	0	4	1	**5**	**6.3**	0	5	0	**5**	**5.0**	0	1	0	**1**	**1.0**
07:45 - 08:00	0	1	0	**1**	**1.0**	0	2	0	**2**	**2.0**	0	0	0	**0**	**0.0**
Hourly Total	**0**	**5**	**1**	**6**	**7.3**	**0**	**7**	**0**	**7**	**7.0**	**0**	**1**	**0**	**1**	**1.0**
08:00 - 08:15	0	2	1	**3**	**4.3**	0	6	0	**6**	**6.0**	0	2	0	**2**	**2.0**
08:15 - 08:30	0	7	0	**7**	**7.0**	0	9	1	**10**	**11.3**	0	1	0	**1**	**1.0**
08:30 - 08:45	0	3	0	**3**	**3.0**	0	6	0	**6**	**6.0**	0	4	0	**4**	**4.0**
08:45 - 09:00	0	1	0	**1**	**1.0**	0	4	0	**4**	**4.0**	0	1	0	**1**	**1.0**
Hourly Total	**0**	**13**	**1**	**14**	**15.3**	**0**	**25**	**1**	**26**	**27.3**	**0**	**8**	**0**	**8**	**8.0**
09:00 - 09:15	0	3	0	**3**	**3.0**	0	5	0	**5**	**5.0**	0	3	0	**3**	**3.0**
09:15 - 09:30	0	1	0	**1**	**1.0**	0	3	0	**3**	**3.0**	0	0	0	**0**	**0.0**
Hourly Total	**0**	**4**	**0**	**4**	**4.0**	**0**	**8**	**0**	**8**	**8.0**	**0**	**3**	**0**	**3**	**3.0**
TOTAL	**0**	**22**	**2**	**24**	**26.6**	**0**	**40**	**1**	**41**	**42.3**	**0**	**12**	**0**	**12**	**12.0**
16:30 - 16:45	0	6	0	**6**	**6.0**	0	9	0	**9**	**9.0**	0	2	0	**2**	**2.0**
16:45 - 17:00	0	5	0	**5**	**5.0**	0	6	0	**6**	**6.0**	0	3	1	**4**	**5.3**
Hourly Total	**0**	**11**	**0**	**11**	**11.0**	**0**	**15**	**0**	**15**	**15.0**	**0**	**5**	**1**	**6**	**7.3**
17:00 - 17:15	0	5	0	**5**	**5.0**	0	3	0	**3**	**3.0**	0	1	0	**1**	**1.0**
17:15 - 17:30	0	6	0	**6**	**6.0**	0	5	0	**5**	**5.0**	0	3	0	**3**	**3.0**
17:30 - 17:45	0	4	0	**4**	**4.0**	0	2	0	**2**	**2.0**	0	4	0	**4**	**4.0**
17:45 - 18:00	0	3	0	**3**	**3.0**	0	5	0	**5**	**5.0**	0	0	1	**1**	**2.3**
Hourly Total	**0**	**18**	**0**	**18**	**18.0**	**0**	**15**	**0**	**15**	**15.0**	**0**	**8**	**1**	**9**	**10.3**
18:00 - 18:15	0	2	0	**2**	**2.0**	0	4	0	**4**	**4.0**	0	1	0	**1**	**1.0**
18:15 - 18:30	0	3	0	**3**	**3.0**	0	1	0	**1**	**1.0**	0	0	1	**1**	**2.3**
Hourly Total	**0**	**5**	**0**	**5**	**5.0**	**0**	**5**	**0**	**5**	**5.0**	**0**	**1**	**1**	**2**	**3.3**
TOTAL	**0**	**34**	**0**	**34**	**34.0**	**0**	**35**	**0**	**35**	**35.0**	**0**	**14**	**3**	**17**	**20.9**

PCU Factors:	
CYCLE	0.2
LIGHT	1.0
HEAVY	2.3

TECHNICAL NOTE 1

SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix B PICADY output

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013

Filename: Bishops Wood Crossroads.j9
Path: \\25.48.244.42\Job Files\$SDD\Staffordshire\ST5074(10)PD Boscobel Lane (Post App)\z SDD\Project Data\Junction Modelling
Report generation date: 16/12/2024 17:35:28

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	2024 Base					
Stream B-ACD	0.1	9.44	0.11	0.1	8.16	0.08
Stream A-BCD	0.1	5.96	0.06	0.0	5.20	0.03
Stream D-ABC	0.1	8.30	0.10	0.1	8.15	0.12
Stream C-ABD	0.0	5.59	0.01	0.0	5.40	0.02
	2029 Future Year					
Stream B-ACD	0.1	9.52	0.12	0.1	8.21	0.09
Stream A-BCD	0.1	5.96	0.07	0.0	5.20	0.04
Stream D-ABC	0.1	8.35	0.10	0.1	8.21	0.12
Stream C-ABD	0.0	5.59	0.01	0.0	5.39	0.02
	2029 + Proposed Development					
Stream B-ACD	0.1	9.54	0.13	0.1	8.18	0.10
Stream A-BCD	0.1	5.97	0.07	0.0	5.18	0.04
Stream D-ABC	0.1	8.57	0.11	0.2	8.64	0.14
Stream C-ABD	0.0	5.57	0.02	0.0	5.40	0.02

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

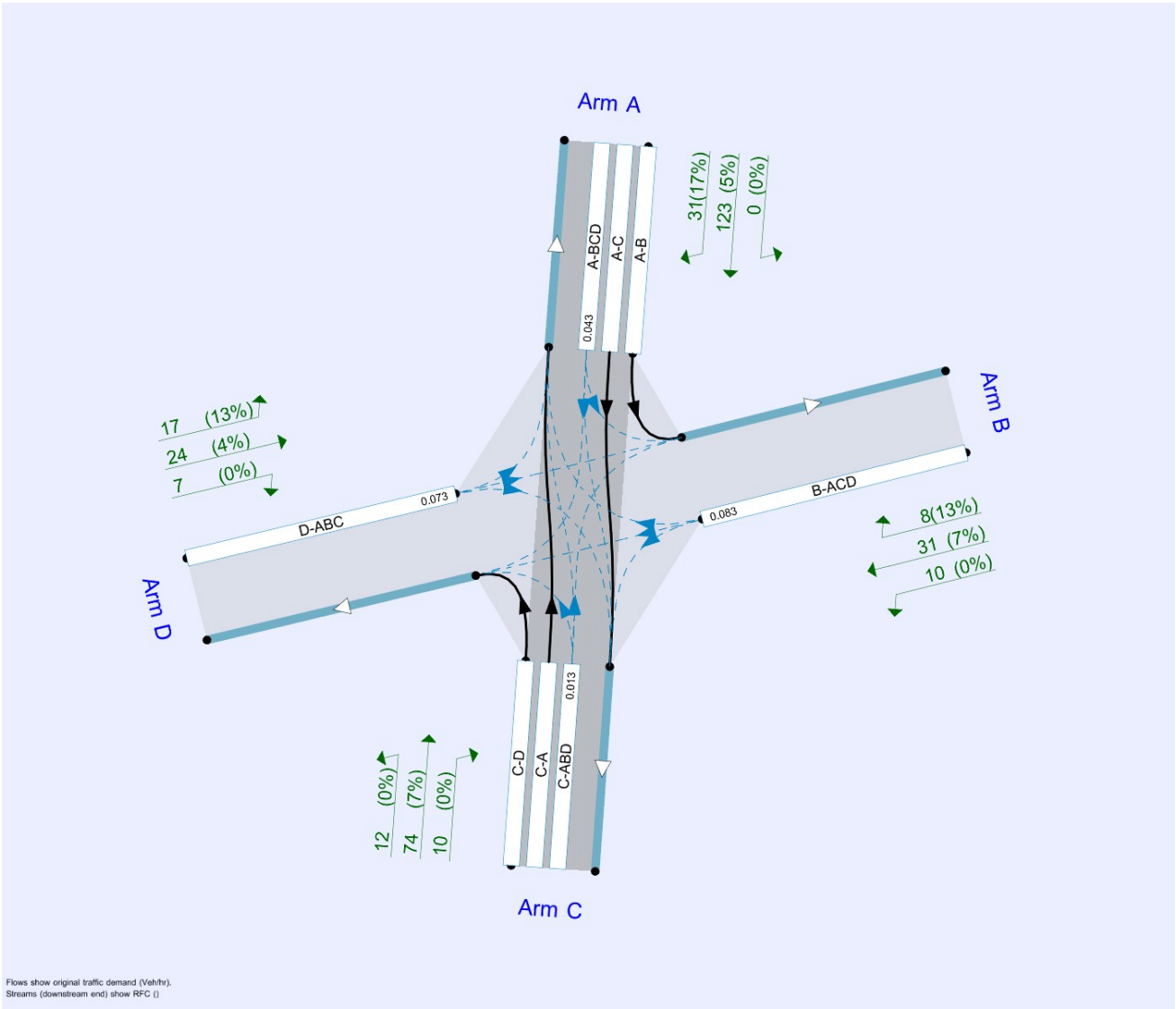
File summary

File Description

Title	Boscobel Lane
Location	Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road
Site number	ST5074-10PD
Date	27/11/2024
Version	
Status	Existing
Identifier	
Client	Boningale Homes
Jobnumber	ST5074-10PD
Enumerator	DLP\William.Leighton
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	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2024 Base	AM	ONE HOUR	07:15	08:45	15	✓		
D2	2024 Base	PM	ONE HOUR	16:15	17:45	15	✓		
D3	Proposed Development	AM	ONE HOUR	07:15	08:45	15			
D4	Proposed Development	PM	ONE HOUR	16:15	17:45	15			
D5	2029 Future Year	AM	ONE HOUR	07:15	08:45	15	✓	Simple	(D1 * G1)
D6	2029 Future Year	PM	ONE HOUR	16:15	17:45	15	✓	Simple	(D2 * G2)
D7	2029 + Proposed Development	AM	ONE HOUR	07:15	08:45	15	✓	Simple	(D1 * G1) + D3
D8	2029 + Proposed Development	PM	ONE HOUR	16:15	17:45	15	✓	Simple	(D2 * G2) + D4

Growth Factors

ID	Description	Use TEMPRO	Growth Factor
G1	2024 - 2029 AM		1.0322
G2	2024 - 2029 PM		1.0313

Growth factors are only active if the Demand Set references them in a Relationship.

Analysis Set Details

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

2024 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		3.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.15			194.0	✓	0.00
C	6.15			129.0	✓	0.00

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)
B	One lane	3.00	30	20
D	One lane	3.30	32	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	686	-	-	-	-	-	-	0.264	0.377	0.264	-	-	-
B-A	497	0.090	0.227	0.227	-	-	-	0.143	0.325	-	0.227	0.227	0.114
B-C	637	0.097	0.245	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	497	0.090	0.227	0.227	-	-	-	0.143	0.325	0.143	-	-	-
B-D, offside lane	497	0.090	0.227	0.227	-	-	-	0.143	0.325	0.143	-	-	-
C-B	649	0.250	0.250	0.357	-	-	-	-	-	-	-	-	-
D-A	654	-	-	-	-	-	-	0.252	-	0.100	-	-	-
D-B, nearside lane	511	0.147	0.147	0.334	-	-	-	0.234	0.234	0.093	-	-	-
D-B, offside lane	511	0.147	0.147	0.334	-	-	-	0.234	0.234	0.093	-	-	-
D-C	511	-	0.147	0.334	0.117	0.234	0.234	0.234	0.234	0.093	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	143	100.000
B		ONE HOUR	✓	45	100.000
C		ONE HOUR	✓	73	100.000
D		ONE HOUR	✓	43	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	0	113	30
	B	8	0	7	30
	C	61	5	0	7
	D	16	23	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	5	17
	B	13	0	0	7
	C	7	0	0	0
	D	13	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.11	9.44	0.1	A	41	62
A-BCD	0.06	5.96	0.1	A	33	50
A-B					0	0
A-C					98	147
D-ABC	0.10	8.30	0.1	A	39	59
C-ABD	0.01	5.59	0.0	A	5	8
C-D					6	10
C-A					56	83

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	34	8	447	0.076	34	0.0	0.1	8.716	A
A-BCD	26	7	630	0.041	26	0.0	0.1	5.961	A
A-B	0	0			0				
A-C	82	20			82				
D-ABC	32	8	494	0.065	32	0.0	0.1	7.780	A
C-ABD	4	1	649	0.006	4	0.0	0.0	5.577	A
C-D	5	1			5				
C-A	46	11			46				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	40	10	440	0.092	40	0.1	0.1	9.005	A
A-BCD	32	8	638	0.050	32	0.1	0.1	5.945	A
A-B	0	0			0				
A-C	96	24			96				
D-ABC	39	10	489	0.079	39	0.1	0.1	7.994	A
C-ABD	5	1	650	0.008	5	0.0	0.0	5.580	A
C-D	6	2			6				
C-A	54	14			54				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	50	12	431	0.115	49	0.1	0.1	9.432	A
A-BCD	41	10	650	0.063	41	0.1	0.1	5.917	A
A-B	0	0			0				
A-C	117	29			117				
D-ABC	47	12	481	0.098	47	0.1	0.1	8.295	A
C-ABD	6	2	650	0.010	6	0.0	0.0	5.584	A
C-D	8	2			8				
C-A	67	17			67				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	50	12	431	0.115	50	0.1	0.1	9.438	A
A-BCD	41	10	650	0.063	41	0.1	0.1	5.911	A
A-B	0	0			0				
A-C	117	29			117				
D-ABC	47	12	481	0.098	47	0.1	0.1	8.298	A
C-ABD	6	2	650	0.010	6	0.0	0.0	5.588	A
C-D	8	2			8				
C-A	67	17			67				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	40	10	440	0.092	41	0.1	0.1	9.015	A
A-BCD	32	8	638	0.050	32	0.1	0.1	5.928	A
A-B	0	0			0				
A-C	96	24			96				
D-ABC	39	10	489	0.079	39	0.1	0.1	8.001	A
C-ABD	5	1	650	0.008	5	0.0	0.0	5.587	A
C-D	6	2			6				
C-A	54	14			54				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	34	8	447	0.076	34	0.1	0.1	8.729	A
A-BCD	26	7	630	0.042	26	0.1	0.1	5.958	A
A-B	0	0			0				
A-C	82	20			82				
D-ABC	32	8	494	0.065	32	0.1	0.1	7.795	A
C-ABD	4	1	649	0.006	4	0.0	0.0	5.583	A
C-D	5	1			5				
C-A	46	11			46				

2024 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		2.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	116	100.000
B		ONE HOUR	✓	37	100.000
C		ONE HOUR	✓	113	100.000
D		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	6	91	19
	B	3	0	10	24
	C	93	9	0	11
	D	22	23	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	2	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.08	8.16	0.1	A	34	51
A-BCD	0.03	5.20	0.0	A	20	30
A-B					5	8
A-C					81	122
D-ABC	0.12	8.15	0.1	A	50	76
C-ABD	0.02	5.40	0.0	A	10	14
C-D					10	15
C-A					84	126

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	28	7	497	0.056	28	0.0	0.1	7.668	A
A-BCD	16	4	708	0.023	16	0.0	0.0	5.200	A
A-B	4	1			4				
A-C	67	17			67				
D-ABC	41	10	517	0.080	41	0.0	0.1	7.554	A
C-ABD	8	2	675	0.011	8	0.0	0.0	5.391	A
C-D	8	2			8				
C-A	69	17			69				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	33	8	491	0.068	33	0.1	0.1	7.868	A
A-BCD	19	5	713	0.027	19	0.0	0.0	5.192	A
A-B	5	1			5				
A-C	80	20			80				
D-ABC	49	12	511	0.097	49	0.1	0.1	7.797	A
C-ABD	9	2	681	0.014	9	0.0	0.0	5.360	A
C-D	10	2			10				
C-A	82	21			82				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	41	10	482	0.085	41	0.1	0.1	8.154	A
A-BCD	25	6	719	0.034	25	0.0	0.0	5.183	A
A-B	6	2			6				
A-C	97	24			97				
D-ABC	61	15	502	0.121	60	0.1	0.1	8.145	A
C-ABD	12	3	688	0.017	12	0.0	0.0	5.319	A
C-D	12	3			12				
C-A	101	25			101				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	41	10	482	0.085	41	0.1	0.1	8.156	A
A-BCD	25	6	719	0.034	25	0.0	0.0	5.187	A
A-B	6	2			6				
A-C	97	24			97				
D-ABC	61	15	502	0.121	61	0.1	0.1	8.148	A
C-ABD	12	3	688	0.017	12	0.0	0.0	5.321	A
C-D	12	3			12				
C-A	101	25			101				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	33	8	491	0.068	33	0.1	0.1	7.874	A
A-BCD	19	5	713	0.027	20	0.0	0.0	5.195	A
A-B	5	1			5				
A-C	80	20			80				
D-ABC	49	12	511	0.097	50	0.1	0.1	7.805	A
C-ABD	9	2	681	0.014	9	0.0	0.0	5.364	A
C-D	10	2			10				
C-A	82	21			82				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	28	7	497	0.056	28	0.1	0.1	7.677	A
A-BCD	16	4	708	0.023	16	0.0	0.0	5.204	A
A-B	4	1			4				
A-C	67	17			67				
D-ABC	41	10	517	0.080	41	0.1	0.1	7.570	A
C-ABD	8	2	675	0.011	8	0.0	0.0	5.395	A
C-D	8	2			8				
C-A	69	17			69				

2029 Future Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		3.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D5	2029 Future Year	AM	ONE HOUR	07:15	08:45	15	✓	Simple	(D1 * G1)

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	148	100.000
B		ONE HOUR	✓	46	100.000
C		ONE HOUR	✓	75	100.000
D		ONE HOUR	✓	44	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	0	117	31
	B	8	0	7	31
	C	63	5	0	7
	D	17	24	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	5	17
	B	13	0	0	7
	C	7	0	0	0
	D	13	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.12	9.52	0.1	A	43	64
A-BCD	0.07	5.96	0.1	A	34	51
A-B					0	0
A-C					101	152
D-ABC	0.10	8.35	0.1	A	41	61
C-ABD	0.01	5.59	0.0	A	5	8
C-D					7	10
C-A					57	86

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	35	9	446	0.078	35	0.0	0.1	8.754	A
A-BCD	27	7	631	0.043	27	0.0	0.1	5.956	A
A-B	0	0			0				
A-C	84	21			84				
D-ABC	33	8	494	0.068	33	0.0	0.1	7.814	A
C-ABD	4	1	650	0.007	4	0.0	0.0	5.578	A
C-D	5	1			5				
C-A	47	12			47				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	42	10	439	0.095	42	0.1	0.1	9.064	A
A-BCD	33	8	640	0.052	33	0.1	0.1	5.940	A
A-B	0	0			0				
A-C	99	25			99				
D-ABC	40	10	488	0.082	40	0.1	0.1	8.036	A
C-ABD	5	1	650	0.008	5	0.0	0.0	5.580	A
C-D	6	2			6				
C-A	56	14			56				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	51	13	429	0.119	51	0.1	0.1	9.511	A
A-BCD	43	11	652	0.065	42	0.1	0.1	5.912	A
A-B	0	0			0				
A-C	120	30			120				
D-ABC	49	12	480	0.102	49	0.1	0.1	8.350	A
C-ABD	6	2	651	0.010	6	0.0	0.0	5.585	A
C-D	8	2			8				
C-A	69	17			69				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	51	13	429	0.119	51	0.1	0.1	9.517	A
A-BCD	43	11	652	0.065	43	0.1	0.1	5.904	A
A-B	0	0			0				
A-C	120	30			120				
D-ABC	49	12	480	0.102	49	0.1	0.1	8.354	A
C-ABD	6	2	650	0.010	6	0.0	0.0	5.591	A
C-D	8	2			8				
C-A	69	17			69				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	42	10	439	0.095	42	0.1	0.1	9.076	A
A-BCD	33	8	640	0.052	33	0.1	0.1	5.923	A
A-B	0	0			0				
A-C	99	25			99				
D-ABC	40	10	488	0.082	40	0.1	0.1	8.041	A
C-ABD	5	1	650	0.008	5	0.0	0.0	5.590	A
C-D	6	2			6				
C-A	56	14			56				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	35	9	445	0.079	35	0.1	0.1	8.774	A
A-BCD	27	7	631	0.043	27	0.1	0.1	5.953	A
A-B	0	0			0				
A-C	84	21			84				
D-ABC	33	8	493	0.068	33	0.1	0.1	7.827	A
C-ABD	4	1	649	0.007	4	0.0	0.0	5.582	A
C-D	5	1			5				
C-A	47	12			47				

2029 Future Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		2.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D6	2029 Future Year	PM	ONE HOUR	16:15	17:45	15	✓	Simple	(D2 * G2)

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	120	100.000
B		ONE HOUR	✓	38	100.000
C		ONE HOUR	✓	117	100.000
D		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	6	94	20
	B	3	0	10	25
	C	96	9	0	11
	D	23	24	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	2	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.09	8.21	0.1	A	35	53
A-BCD	0.04	5.20	0.0	A	21	31
A-B					6	8
A-C					84	125
D-ABC	0.12	8.21	0.1	A	52	78
C-ABD	0.02	5.39	0.0	A	10	15
C-D					10	15
C-A					87	130

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	29	7	496	0.058	28	0.0	0.1	7.698	A
A-BCD	17	4	709	0.023	16	0.0	0.0	5.199	A
A-B	5	1			5				
A-C	69	17			69				
D-ABC	43	11	516	0.083	42	0.0	0.1	7.591	A
C-ABD	8	2	676	0.012	8	0.0	0.0	5.386	A
C-D	8	2			8				
C-A	71	18			71				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	34	9	489	0.070	34	0.1	0.1	7.907	A
A-BCD	20	5	713	0.028	20	0.0	0.0	5.191	A
A-B	5	1			5				
A-C	82	20			82				
D-ABC	51	13	510	0.100	51	0.1	0.1	7.845	A
C-ABD	10	2	682	0.014	10	0.0	0.0	5.354	A
C-D	10	3			10				
C-A	85	21			85				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	42	11	481	0.087	42	0.1	0.1	8.206	A
A-BCD	25	6	720	0.035	25	0.0	0.0	5.181	A
A-B	7	2			7				
A-C	100	25			100				
D-ABC	62	16	501	0.125	62	0.1	0.1	8.207	A
C-ABD	12	3	690	0.018	12	0.0	0.0	5.312	A
C-D	12	3			12				
C-A	104	26			104				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	42	11	481	0.087	42	0.1	0.1	8.207	A
A-BCD	25	6	720	0.035	25	0.0	0.0	5.183	A
A-B	7	2			7				
A-C	100	25			100				
D-ABC	62	16	501	0.125	62	0.1	0.1	8.211	A
C-ABD	12	3	690	0.018	12	0.0	0.0	5.316	A
C-D	12	3			12				
C-A	104	26			104				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	34	9	489	0.070	34	0.1	0.1	7.911	A
A-BCD	20	5	713	0.028	20	0.0	0.0	5.196	A
A-B	5	1			5				
A-C	82	20			82				
D-ABC	51	13	510	0.100	51	0.1	0.1	7.852	A
C-ABD	10	2	682	0.014	10	0.0	0.0	5.359	A
C-D	10	3			10				
C-A	85	21			85				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	29	7	496	0.058	29	0.1	0.1	7.710	A
A-BCD	17	4	709	0.023	17	0.0	0.0	5.203	A
A-B	5	1			5				
A-C	69	17			69				
D-ABC	43	11	516	0.083	43	0.1	0.1	7.607	A
C-ABD	8	2	676	0.012	8	0.0	0.0	5.390	A
C-D	8	2			8				
C-A	71	18			71				

2029 + Proposed Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		3.41	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D7	2029 + Proposed Development	AM	ONE HOUR	07:15	08:45	15	✓	Simple	(D1 * G1) + D3

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	154	100.000
B		ONE HOUR	✓	49	100.000
C		ONE HOUR	✓	96	100.000
D		ONE HOUR	✓	47	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	0	123	31
	B	8	0	10	31
	C	74	10	0	12
	D	17	24	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	5	17
	B	13	0	0	7
	C	7	0	0	0
	D	13	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.13	9.54	0.1	A	45	68
A-BCD	0.07	5.97	0.1	A	35	52
A-B					0	0
A-C					106	159
D-ABC	0.11	8.57	0.1	A	43	65
C-ABD	0.02	5.57	0.0	A	11	16
C-D					11	17
C-A					67	100

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	37	9	450	0.083	37	0.0	0.1	8.717	A
A-BCD	27	7	630	0.043	27	0.0	0.1	5.967	A
A-B	0	0			0				
A-C	88	22			88				
D-ABC	36	9	488	0.073	35	0.0	0.1	7.945	A
C-ABD	8	2	656	0.013	8	0.0	0.0	5.558	A
C-D	9	2			9				
C-A	55	14			55				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	44	11	442	0.101	44	0.1	0.1	9.049	A
A-BCD	34	8	639	0.053	34	0.1	0.1	5.956	A
A-B	0	0			0				
A-C	104	26			104				
D-ABC	43	11	482	0.088	43	0.1	0.1	8.200	A
C-ABD	10	3	658	0.016	10	0.0	0.0	5.557	A
C-D	11	3			11				
C-A	65	16			65				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	54	14	432	0.126	54	0.1	0.1	9.532	A
A-BCD	43	11	651	0.066	43	0.1	0.1	5.928	A
A-B	0	0			0				
A-C	126	32			126				
D-ABC	52	13	472	0.110	52	0.1	0.1	8.566	A
C-ABD	13	3	660	0.020	13	0.0	0.0	5.557	A
C-D	13	3			13				
C-A	80	20			80				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	54	14	432	0.126	54	0.1	0.1	9.538	A
A-BCD	43	11	651	0.066	43	0.1	0.1	5.920	A
A-B	0	0			0				
A-C	126	32			126				
D-ABC	52	13	472	0.110	52	0.1	0.1	8.570	A
C-ABD	13	3	660	0.020	13	0.0	0.0	5.564	A
C-D	13	3			13				
C-A	80	20			80				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	44	11	442	0.101	45	0.1	0.1	9.059	A
A-BCD	34	8	639	0.053	34	0.1	0.1	5.938	A
A-B	0	0			0				
A-C	104	26			104				
D-ABC	43	11	481	0.088	43	0.1	0.1	8.208	A
C-ABD	10	3	658	0.016	10	0.0	0.0	5.568	A
C-D	11	3			11				
C-A	65	16			65				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	37	9	449	0.083	37	0.1	0.1	8.738	A
A-BCD	27	7	630	0.043	27	0.1	0.1	5.961	A
A-B	0	0			0				
A-C	88	22			88				
D-ABC	36	9	488	0.073	36	0.1	0.1	7.960	A
C-ABD	8	2	656	0.013	9	0.0	0.0	5.563	A
C-D	9	2			9				
C-A	55	14			55				

2029 + Proposed Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		2.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D8	2029 + Proposed Development	PM	ONE HOUR	16:15	17:45	15	✓	Simple	(D2 * G2) + D4

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	132	100.000
B		ONE HOUR	✓	43	100.000
C		ONE HOUR	✓	128	100.000
D		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	6	106	20
	B	3	0	15	25
	C	102	12	0	13
	D	23	24	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	2	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-ACD	0.10	8.18	0.1	A	40	59
A-BCD	0.04	5.18	0.0	A	21	32
A-B					6	8
A-C					94	141
D-ABC	0.14	8.64	0.2	A	58	86
C-ABD	0.02	5.40	0.0	A	13	20
C-D					12	18
C-A					92	137

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	32	8	504	0.064	32	0.0	0.1	7.626	A
A-BCD	17	4	712	0.024	17	0.0	0.0	5.176	A
A-B	5	1			5				
A-C	78	19			78				
D-ABC	47	12	503	0.094	47	0.0	0.1	7.881	A
C-ABD	11	3	678	0.016	11	0.0	0.0	5.394	A
C-D	10	2			10				
C-A	76	19			76				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	39	10	497	0.078	39	0.1	0.1	7.851	A
A-BCD	21	5	717	0.029	20	0.0	0.0	5.163	A
A-B	5	1			5				
A-C	92	23			92				
D-ABC	56	14	496	0.114	56	0.1	0.1	8.186	A
C-ABD	13	3	684	0.019	13	0.0	0.0	5.364	A
C-D	12	3			12				
C-A	90	22			90				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	48	12	488	0.097	47	0.1	0.1	8.175	A
A-BCD	26	7	725	0.036	26	0.0	0.0	5.148	A
A-B	7	2			7				
A-C	112	28			112				
D-ABC	69	17	486	0.142	69	0.1	0.2	8.629	A
C-ABD	17	4	692	0.024	17	0.0	0.0	5.324	A
C-D	14	4			14				
C-A	110	27			110				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	48	12	488	0.097	48	0.1	0.1	8.179	A
A-BCD	26	7	725	0.036	26	0.0	0.0	5.150	A
A-B	7	2			7				
A-C	112	28			112				
D-ABC	69	17	486	0.142	69	0.2	0.2	8.635	A
C-ABD	17	4	692	0.024	17	0.0	0.0	5.327	A
C-D	14	4			14				
C-A	110	27			110				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	39	10	497	0.078	39	0.1	0.1	7.857	A
A-BCD	21	5	717	0.029	21	0.0	0.0	5.169	A
A-B	5	1			5				
A-C	92	23			92				
D-ABC	56	14	496	0.114	57	0.2	0.1	8.196	A
C-ABD	13	3	684	0.019	13	0.0	0.0	5.371	A
C-D	12	3			12				
C-A	90	22			90				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	32	8	504	0.064	33	0.1	0.1	7.635	A
A-BCD	17	4	712	0.024	17	0.0	0.0	5.180	A
A-B	5	1			5				
A-C	78	19			78				
D-ABC	47	12	503	0.094	47	0.1	0.1	7.900	A
C-ABD	11	3	678	0.016	11	0.0	0.0	5.399	A
C-D	10	2			10				
C-A	76	19			76				

TECHNICAL NOTE 1

SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix C Stage 1 RSA

Midlands Road Safety Ltd

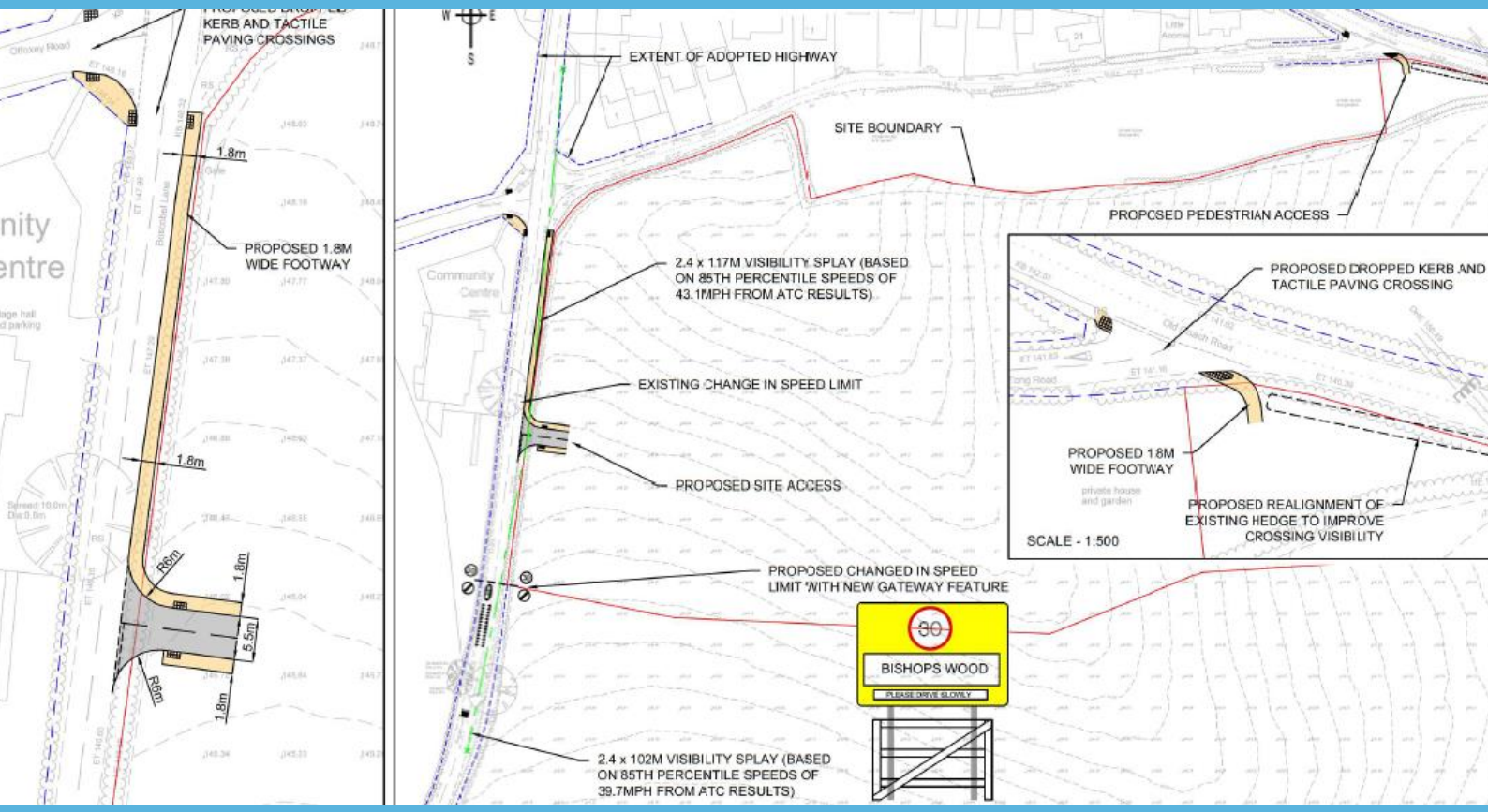
PROPOSED RESIDENTIAL DEVELOPMENT

BOSCOBEL LANE, BISHOPS WOOD

STAGE 1 – ROAD SAFETY AUDIT

NOVEMBER 2024

REPORT REF: 24-1806-RSA1



PROPOSED RESIDENTIAL DEVELOPMENT

BOSCOBEL LANE, BISHOPS WOOD

STAGE 1 ROAD SAFETY AUDIT

NOVEMBER 2024

REPORT REF: 24-1806-RSA1

CLIENT: DLP Planning Ltd

ENGINEER: Midlands Road Safety Ltd

TEL: 0779 112 1104

EMAIL: chris.berry@midlandsroadsafety.co.uk

Revision	Date of Issue	Author	Checked
-	07.11.2024	CB	SC
Draft (Internal)	05.11.2024	CB	SC

CONTENTS

APPENDICES

1. INTRODUCTION

1.1 This report comprises a Stage 1 Road Safety Audit (RSA) on the proposed priority junction and pedestrian connectivity improvements, on land to the east of Boscobel Lane, Bishops Wood, Staffordshire. The proposals include a new priority junction, relocation of the existing 30mph speed limit with gateway feature and new 1.8m eastern footway on Boscobel Lane. Dropped crossings at the Offoxey Road/Boscobel Lane and Tong Road/Old Coach Road junctions are also proposed. The works are arising from the development of up to 100 residential dwellings and a local shop. The report was requested by DLP Planning Ltd on behalf of Boningdale Homes. The Overseeing Organisation is Staffordshire County Council.

1.2 The Audit Team Membership was as follows:

Audit Team Leader

Chris Berry, MSc Transport Planning, MCIHT, MSoRSA, NH RSA Certificate of Competency

Audit Team Member

Sarah Cooke, BA (Hons)

1.3 A site inspection was carried out by the Audit Team together on Tuesday 29th October 2024 between the hours of 14:40 and 15:10. During the site visit the weather conditions were overcast and the road surface was damp. Traffic flows were observed as being light, with no pedestrians and no cycle movements being observed.

1.4 The audit also comprised of a desk-top study where all documents and plans provided by the Design Team were reviewed. A list of these can be found in Appendix A. The auditors have not been made aware of any departures from design standards.

1.5 The audit has been carried out in accordance with the principles of the National Highways document GG 119 'Road Safety Audit' (version 2). A formal Road Safety Audit Brief was not provided to the Audit Team. However, information regarding the site was provided via email alongside the relevant scheme documents and drawings. This was considered by the Audit Team to provide sufficient detail to undertake the appropriate stage of audit.

1.6 The Audit Team have examined and reported solely on the road safety implications of the scheme as presented and not examined or verified the compliance to any alternate criteria.

1.7 All comments and recommendations in this report are referenced to the Audit Brief where provided, and detailed drawings supplied. Where appropriate a list of "Additional Observations" will follow from any safety problems raised. These are not identified safety problems but generalised observations, outside of the scope of the relevant stage of audit, that may highlight potential safety problems that could arise at future stages of the safety audit process.

1.8 Midlands Road Safety Ltd has ensured that this report has been carried out independently with no member of the Audit Team membership directly linked to the scheme design.

2. SAFETY PROBLEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

2.1. It is understood that no previous Road Safety Audits have been undertaken for the proposals subject to this report.

3. SAFETY PROBLEMS RAISED IN THIS ROAD SAFETY AUDIT

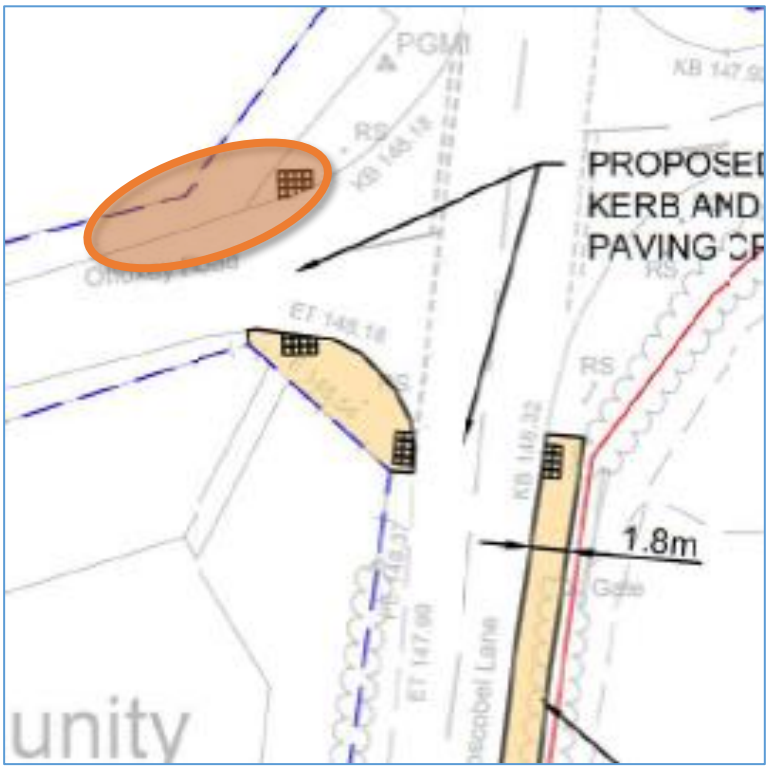
3.1. The Audit Team has identified three safety problems to be addressed.

3.2. **Problem 1**

Location: Offoxey Road pedestrian dropped crossing.

Summary: Restricted visibility risks vehicle to pedestrian collisions.

Pedestrians crossing Offoxey Road from the north and south have poor visibility of vehicles approaching from the west on Offoxey Road and from the south on Boscobel Lane due to the boundary treatment of the Community Centre, carriageway alignment and vegetation in the verge. This creates a risk of collisions between pedestrians crossing and vehicles approaching Boscobel Lane.



Recommendation:

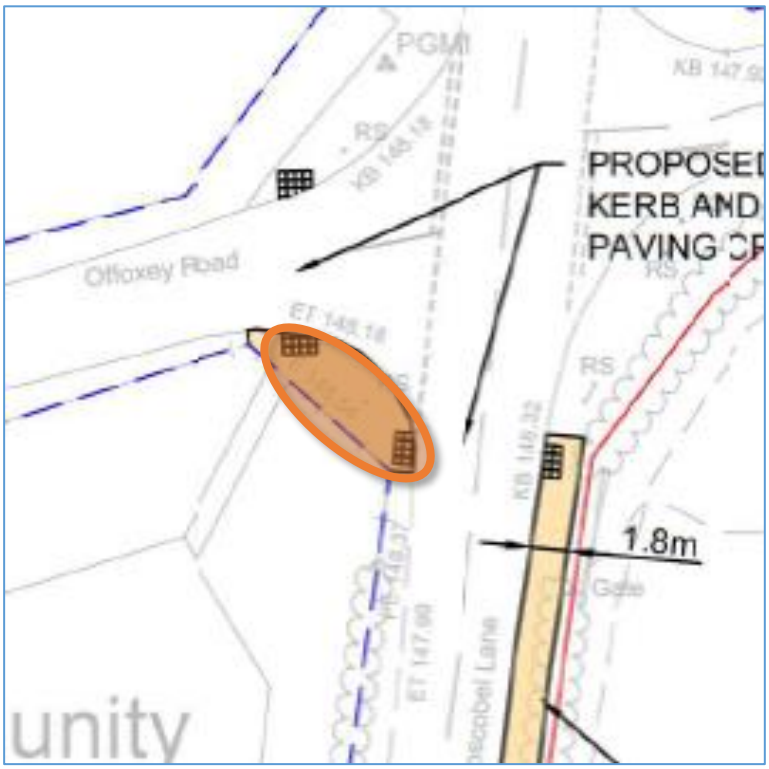
It is recommended that the vegetation is cut back / removed so that appropriate visibility splays for pedestrians waiting to cross Offoxey Road are provided.

3.3. Problem 2

Location: Offoxey Road pedestrian dropped crossing – southern side of the crossing.

Summary: Restricted visibility risks vehicle to pedestrian collisions.

Pedestrians crossing Offoxey Road from south to north have poor visibility of vehicles approaching from the south on Boscobel Lane and turning left into Offoxey Road due to the boundary treatment of the Community Centre. This creates a risk that pedestrians may enter the carriageway into the path of a turning vehicle.



Recommendation:

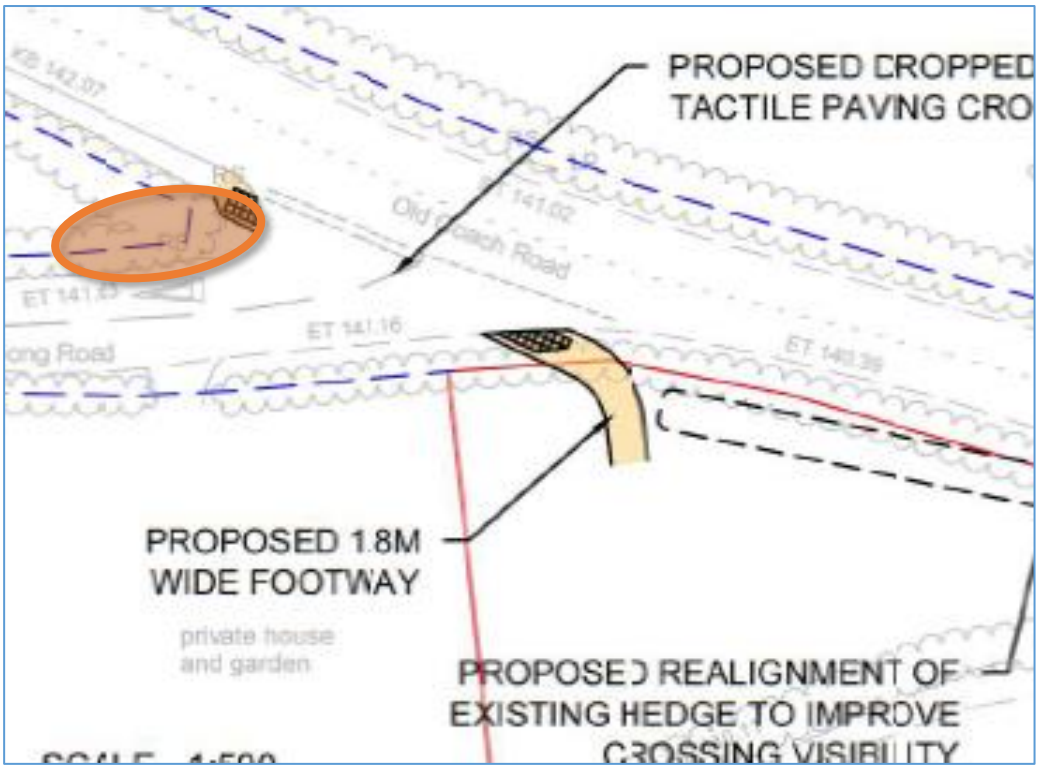
It is recommended that the crossing is located such that appropriate visibility of approaching vehicles, and for drivers of pedestrians waiting / starting to cross, is provided.

3.4. Problem 3

Location: Tong Road pedestrian dropped crossing

Summary: Restricted visibility risks pedestrian collisions with vehicles.

Pedestrians crossing Tong Road from the north-west have poor visibility of vehicles approaching from the west on Tong Road due to the carriageway alignment, whilst those crossing from the south-east have poor visibility of vehicles travelling north-wet on Kiddemore Green Road which may be turning left due to the existing hedgerow. This creates a risk of collisions between pedestrians crossing and vehicles approaching Boscobel Lane.



Recommendation:

It is recommended that the crossing is relocated to achieve appropriate visibility splays for pedestrians waiting to cross Tong Road.

End of the 'Safety Problems' in this Section of the Report

4. ADDITIONAL OBSERVATIONS

4.1. No Additional Observations have been raised at this stage in the audit process.

5. AUDIT STATEMENT

5.1. We certify that the terms of reference of the audit are as described in GG 119 and that no member of the Audit Team was directly linked to the scheme design.

5.2. **AUDIT TEAM LEADER:**

Chris Berry, MSc Transport Planning, MCIHT, NH RSA Certificate of Competency

Director

Midlands Road Safety Ltd

Signed: _____

Date: 07.11.2024

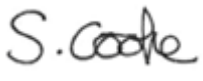
5.3. **AUDIT TEAM MEMBER:**

Sarah Cooke, BA (Hons)

Associate

Midlands Road Safety Ltd

Road Safety Consultant working on behalf of Midlands Road Safety Ltd



Signed: _____

Date: 07.11.2024

APPENDIX A

The following documents and drawings were provided for the purposes of this road safety audit.

Drawings

Number	Title	Rev
ST5074-4PD-002	Proposed Site Access- Swept Path Analysis	-
ST5074-4PD-001	Site Access Arrangement & Pedestrian Connectivity Improvements	-

Documents

Author	Title	Rev	Date
DLP	Road Safety Audit Brief / Details (by email)	-	21.10.2024
Crashmap.co.uk	Accident Details	-	05.11.2024
DLP	Transport Assessment	-	April 2024

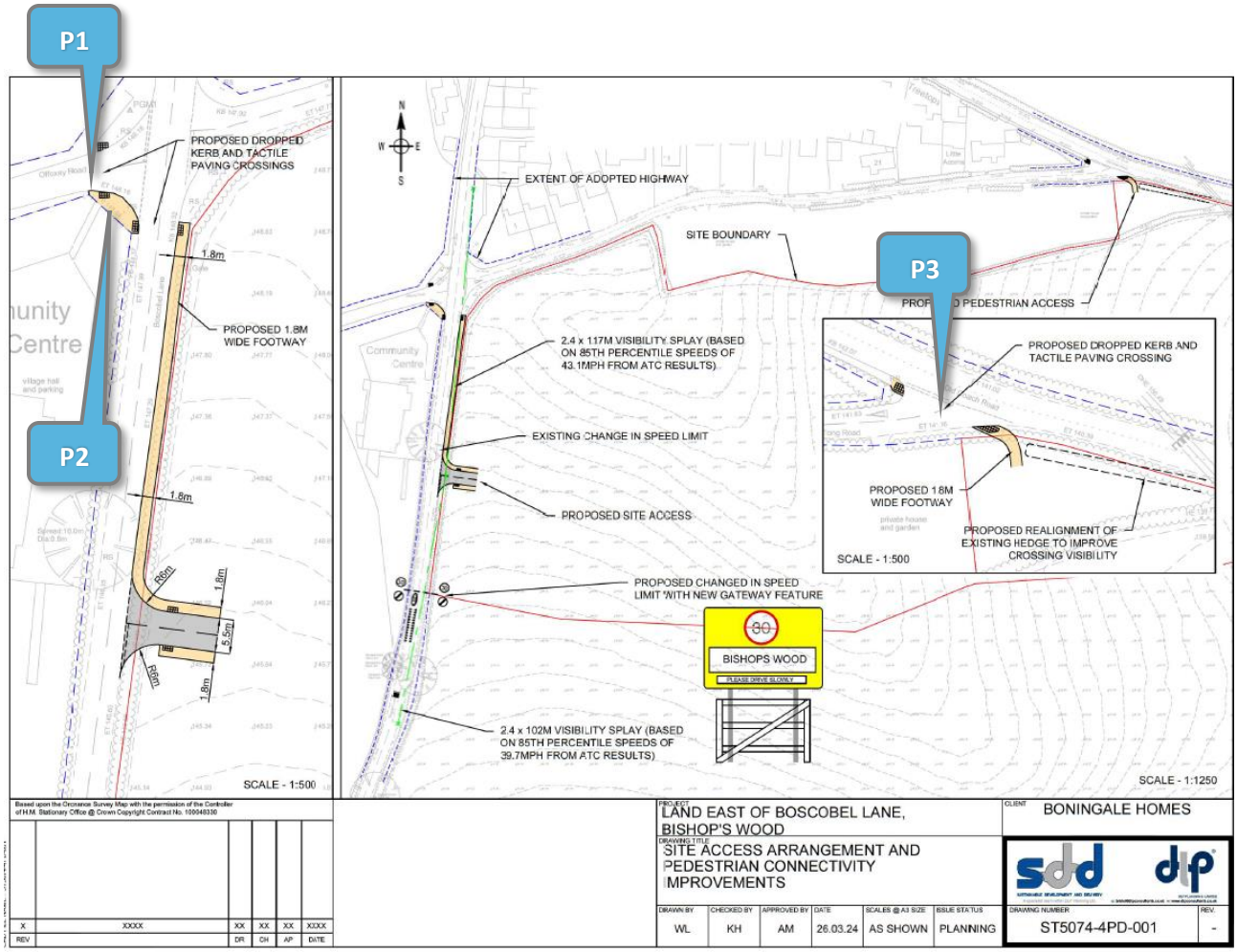
APPENDIX B

The location of any problems/observations that have been identified in Section 3 of this report can be seen on the extracts of the drawings supplied to the Audit Team, as listed in Appendix A.

Figure 1 – Site Location

[Mapping source; Google Maps]

Figure 2 – Problem Location Plan



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TECHNICAL NOTE 1

SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix D Designers Response

STAGE 1 RSA DESIGNERS RESPONSE

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd

Re: ST5074-10PD – Boscobel Lane, Bishops Wood, Staffordshire

Date: February 2025

Subject: Stage 1 RSA - Designers Response

1.0 INTRODUCTION

1.1 This Designer's Response report has been prepared by DLP Planning's Sustainable Development and Delivery (SDD) Team following the completion of a Stage 1 Road Safety Audit (RSA) carried out in relation to the proposed access arrangement (and pedestrian infrastructure improvements) associated with the delivery of a new residential development on land off Boscobel Lane in Bishops Wood, Staffordshire.

1.2 As part of the application, Staffordshire County Council Highways provided consultation comments (dated 10th September 2024). Whilst no specific request was made for a Stage 1 RSA, comments were raised in relation to highway safety at the Boscobel Lane / Tong Road / Ivetsey Bank Road / Offoxey Road crossroads junction.

1.3 In light of the above, a Stage 1 RSA was commissioned and undertaken by Midlands Road Safety Ltd, with a site visit carried out on Tuesday 29th October 2024, with the RSA issued on 7h November 2024. The Audit Team were provided with a summary of the exiting conditions, proposed development, and were provided with the following drawings for consideration:

- ST5074-4PD-002 – Proposed Site Access – swept path analysis
- ST5075-4PD-001 Site Access Arrangement & Pedestrian Connectivity Improvements

1.4 Midlands Road Safety Ltd had no involvement with the project prior to the audit work. A full copy of the Stage 1 RSA is provided at **Appendix A.**

1.5 The Auditors were:

- C Berry – Team Leader (MSc Transport Planning, MSoRSA, NH RSA Certificate of Competency)
- S Cooke – Team Member (BA (Hons)

1.6 The Audit assessed the proposed site access strategy, off-site pedestrian connections and traffic calming measures. A summary of the key matters raised in the RSA and the Design Team Response is provided in the following section.

2.0 ROAD SAFETY AUDIT DECISION LOG

SAFETY PROBLEMS RAISED IN THIS ROAD SAFETY AUDIT

PROBLEM 1
LOCATION: Offoxey Road pedestrian dropped crossing

SUMMARY:
Offoxey Road pedestrian dropped crossing

RECOMMENDATION:
It is recommended that the vegetation is cut back / removed so that appropriate visibility splays for pedestrians waiting to cross Offoxey Road are provided.

DESIGN TEAM RESPONSE
Recommendation accepted. **Drawing Number ST5074-10PD-001 Revision P02 (Appendix B)** has been updated to show that the proposed pedestrian crossing would be relocated further west along Offoxey Road, with an extended footway provided – in order to improve visibility.

Vegetation under the jurisdiction of the Local Highway Authority or third party land should be cut back and maintained.

This should now alleviate this concern.

PROBLEM 2
LOCATION: Offoxey Road pedestrian dropped crossing – southern side of the crossing.

SUMMARY:
Restricted visibility risks vehicle to pedestrian collisions

RECOMMENDATION:
It is recommended that the crossing is located such that appropriate visibility of approaching vehicles, and for drivers of pedestrians waiting / starting to cross, is provided.

DESIGN TEAM RESPONSE
Recommendation accepted. **Drawing Number ST5074-10PD-001 Revision P02** now shows the pedestrian crossing along Offoxey Road has been relocated further west in order to improve visibility.

PROBLEM 3
LOCATION: Tong Road pedestrian dropped crossing

SUMMARY:
Restricted visibility risks pedestrian collisions with vehicles.

RECOMMENDATION:
It is recommended that the crossing is relocated to achieve appropriate visibility splays for pedestrians waiting to cross Tong Road.

STAGE 1 RSA DESIGNERS RESPONSE

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd

DESIGN TEAM RESPONSE
Recommendation accepted. As part of the proposals this dedicated pedestrian access will now be removed.

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd

3.0 CONCLUSIONS

3.1 This Designer's Response has been prepared following the completion of a Stage 1 Road Safety Audit (RSA) on the new vehicular and pedestrian access associated with the delivery of a new residential development on land located off Boscobel Lane, Bishops Wood.

3.2 All comments raised by the RSA have been suitable addressed through the Design Team Responses such that there are no outstanding issues.

STAGE 1 RSA DESIGNERS RESPONSE

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd

Appendix A Stage 1 Road Safety Audit (Midlands Road Safety Ltd)

STAGE 1 RSA DESIGNERS RESPONSE

SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix B SDD Drawings

TECHNICAL NOTE 1

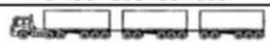
SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix E ATC survey

CHARGE SURVEYS

SITE: Boscobe Lane (52.680182, -2.243356)

Class		Axles	Groups	Description	Parameters	Dominant Vehicle	Aggregate
1	SV	2	1 OR 2	Short - Car, light Van	d(1)>=1.7m, d(1)<=3.2m & axles=2		Light
2	SVT	3, 4 OR 5	3	Short Towing - Trailer, Caravan, Boat, etc.	groups=3, d(1)>=2.1m, d(1)<=3.2m, d(2)>=2.1m & axles=3,4,5		
3	TB2	2	2	Two axle truck or Bus	d(1)>3.2m & axles=2		Medium
4	TB3	3	2	Three axle truck or Bus	axles=3 & groups=2		
5	T4	>3	2	Four axle truck	axles>3 & groups=2		
6	ART3	3	3	Three axle articulated vehicle or Rigid vehicle and trailer	d(1)>3.2m, axles=3 & groups=3		Heavy
7	ART4	4	>2	Four axle articulated vehicle or Rigid vehicle and trailer	d(2)<2.1m or d(1)<2.1m or d(1)>3.2m axles = 4 & groups>2		
8	ART5	5	>2	Five axle articulated vehicle or Rigid vehicle and trailer	d(2)<2.1m or d(1)<2.1m or d(1)>3.2m axles = 5 & groups>2		
9	ART6	>=6	>2	Six (or more) axle articulated vehicle or Rigid vehicle and trailer	axles=6 & groups>2 or axles>6 & groups=3		
10	BD	>6	4	B-Double or Heavy truck and trailer	groups=4 & axles>6		
11	DRT	>6	5	Double road train or Heavy truck and two trailers	groups=5,6 & axles>6		
12	TRT	>6	>6	Triple road train or Heavy truck and three (or more) trailers	groups>6 & axles>6		
14	M/C	2	1 OR 2	Motorcycle	d(1)>=1.18m, d(1)<=1.7m & axles=2		Light
15	CYCLE	2	1 OR 2	Cycle	d(1)<1.18 & axles=2		

	Northbound	Southbound
Total	**5972**	**6323**
Mean Speed	**33.3**	**37**
85%	**39.7**	**43.1**

SITE: Boscobe Lane, Brewood LOCATION: Attached to speed signs

GRID REFERENCE: 52.680182, -2.243356 DIRECTION: NORTHBOUND SPEED LIMIT: 30 / NSL

	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Averages	
	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	1-5.	1-7.
Hour									
0000-0100	9	3	1	2	2	8	4	3.4	4.1
0100-0200	1	2	0	1	2	0	1	0.8	1
0200-0300	1	2	1	0	0	1	0	0.4	0.7
0300-0400	0	1	0	1	2	0	1	0.8	0.7
0400-0500	0	0	3	0	3	1	0	1.4	1
0500-0600	3	1	5	8	3	2	3	4.2	3.6
0600-0700	5	5	15	24	20	13	18	18	14.3
0700-0800	30	15	54	55	51	55	48	52.6	44
0800-0900	22	16	**74**	**88**	**93**	**78**	48	76.2	59.9
0900-1000	49	37	54	59	58	49	55	55	51.6
1000-1100	59	63	42	39	49	41	50	44.2	49
1100-1200	**61**	**72**	45	39	46	41	**61**	46.4	52.1
1200-1300	82	**78**	56	60	68	61	68	62.6	67.6
1300-1400	**82**	70	43	64	65	56	63	58.2	63.3
1400-1500	79	54	61	55	68	52	48	56.8	59.6
1500-1600	72	43	57	73	87	70	90	75.4	70.3
1600-1700	56	54	**92**	78	**119**	88	**98**	95	83.6
1700-1800	52	40	73	**108**	90	**91**	76	87.6	75.7
1800-1900	38	27	74	45	43	57	74	58.6	51.1
1900-2000	38	29	43	51	62	46	42	48.8	44.4
2000-2100	18	10	21	20	27	27	21	23.2	20.6
2100-2200	22	13	14	10	16	22	12	14.8	15.6
2200-2300	17	9	4	11	9	20	20	12.8	12.9
2300-2400	11	3	5	10	7	5	5	6.4	6.6
Totals									
0700-1900	682	569	725	763	837	739	779	768.6	727.7
0600-2200	765	626	818	868	962	847	872	873.4	822.6
0600-0000	793	638	827	889	978	872	897	892.6	842
0000-0000	807	647	837	901	990	884	906	903.6	853.1
AM Peak	1100	1100	800	800	800	800	1100		
	61	72	74	88	93	78	61		
PM Peak	1300	1200	1600	1700	1600	1700	1600		
	82	78	92	108	119	91	98		

SITE: Boscobe Lane, Brewood LOCATION: Attached to speed signs

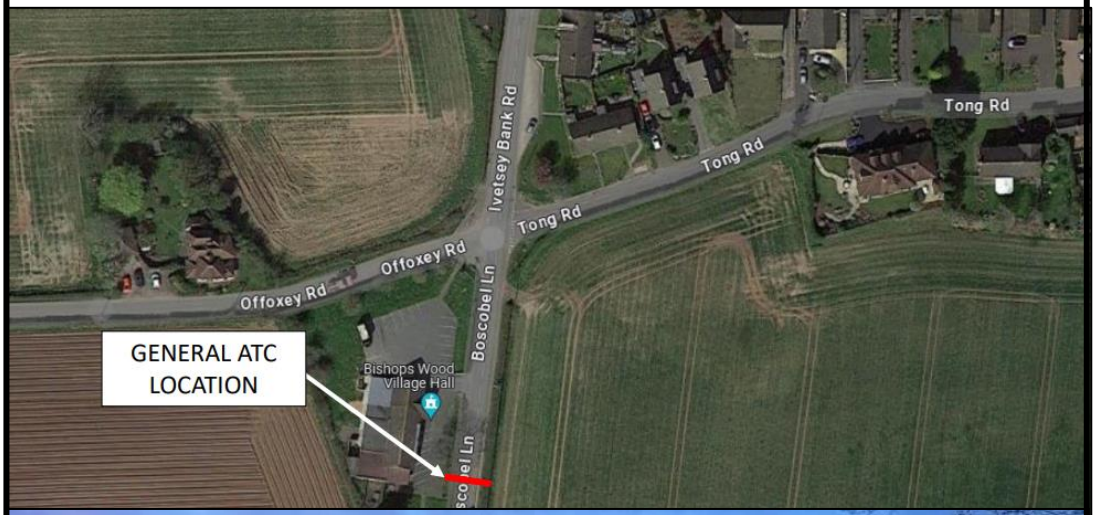
GRID REFERENCE: 52.680182, -2.243356 DIRECTION: SOUTHBOUND SPEED LIMIT: 30 / NSL

	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Averages	
	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	1-5.	1-7.
Hour									
0000-0100	6	5	0	1	0	3	0	0.8	2.1
0100-0200	1	3	0	0	3	1	2	1.2	1.4
0200-0300	2	2	0	1	2	1	1	1	1.3
0300-0400	0	0	0	0	2	1	1	0.8	0.6
0400-0500	6	2	3	1	3	2	0	1.8	2.4
0500-0600	3	1	8	9	8	7	9	8.2	6.4
0600-0700	7	7	20	24	22	24	21	22.2	17.9
0700-0800	23	9	85	90	89	92	78	86.8	66.6
0800-0900	59	38	**134**	**121**	**127**	**113**	**98**	118.6	98.6
0900-1000	58	33	70	77	80	69	65	72.2	64.6
1000-1100	89	62	39	65	53	45	59	52.2	58.9
1100-1200	**90**	**69**	48	49	55	68	57	55.4	62.3
1200-1300	**90**	63	49	49	66	60	65	57.8	63.1
1300-1400	70	**64**	54	50	63	39	52	51.6	56
1400-1500	71	49	51	52	62	53	66	56.8	57.7
1500-1600	53	50	79	77	86	73	81	79.2	71.3
1600-1700	47	56	73	**107**	**110**	**94**	**96**	96	83.3
1700-1800	51	45	**84**	61	84	67	84	76	68
1800-1900	47	31	43	55	49	56	51	50.8	47.4
1900-2000	26	18	31	33	28	27	34	30.6	28.1
2000-2100	22	27	25	17	20	24	20	21.2	22.1
2100-2200	8	13	13	4	13	10	19	11.8	11.4
2200-2300	9	4	5	6	6	7	16	8	7.6
2300-2400	9	1	1	4	3	3	8	3.8	4.1
Totals									
0700-1900	748	569	809	853	924	829	852	853.4	797.7
0600-2200	811	634	898	931	1007	914	946	939.2	877.3
0600-0000	829	639	904	941	1016	924	970	951	889
0000-0000	847	652	915	953	1034	939	983	964.8	903.3
AM Peak	1100	1100	800	800	800	800	800		
	90	69	134	121	127	113	98		
PM Peak	1200	1300	1700	1600	1600	1600	1600		
	90	64	84	107	110	94	96		

CHARGE SURVEYS

Survey Type: Automatic Traffic Counter

Location: Boscobe Lane, Brewood

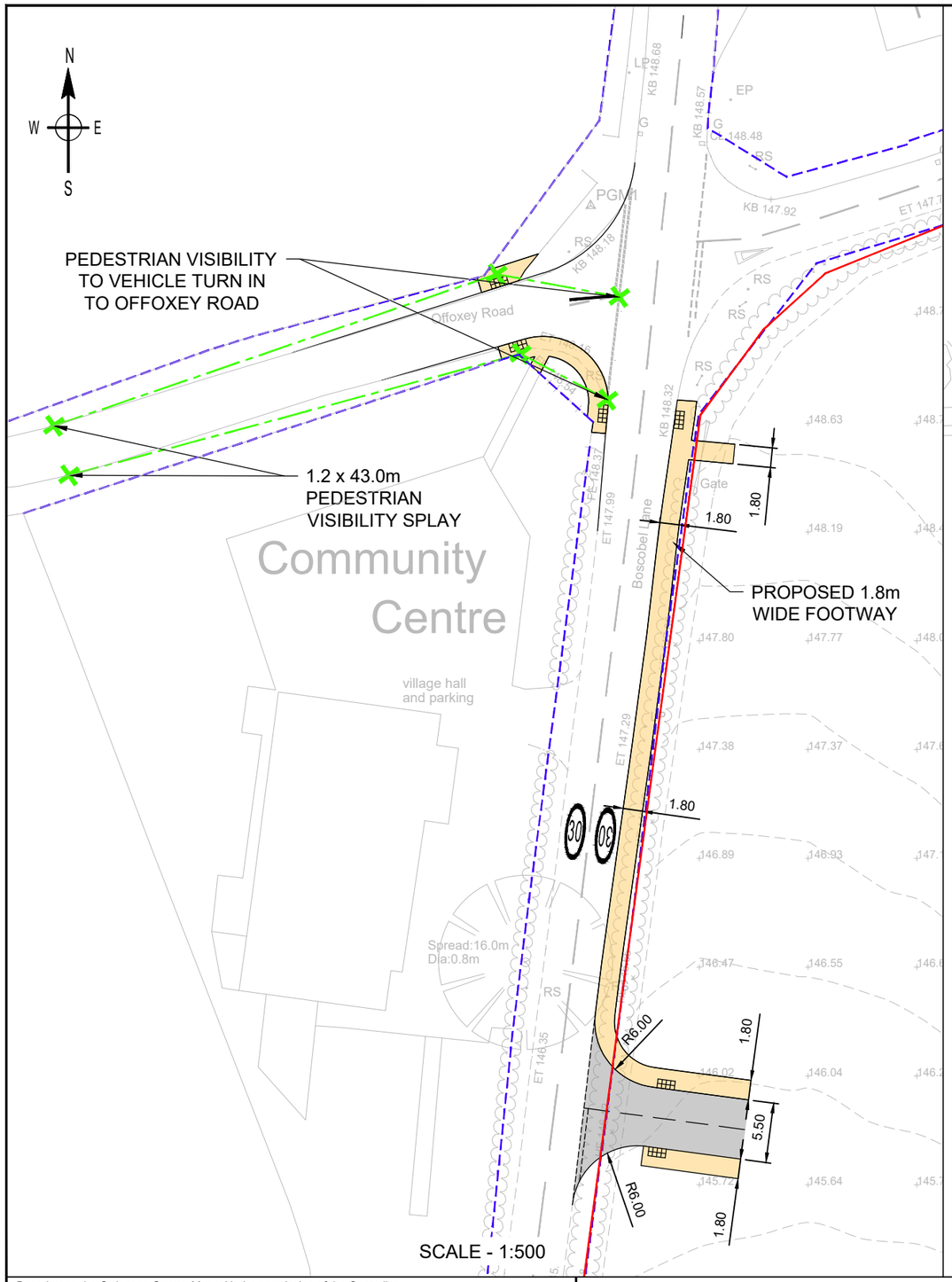


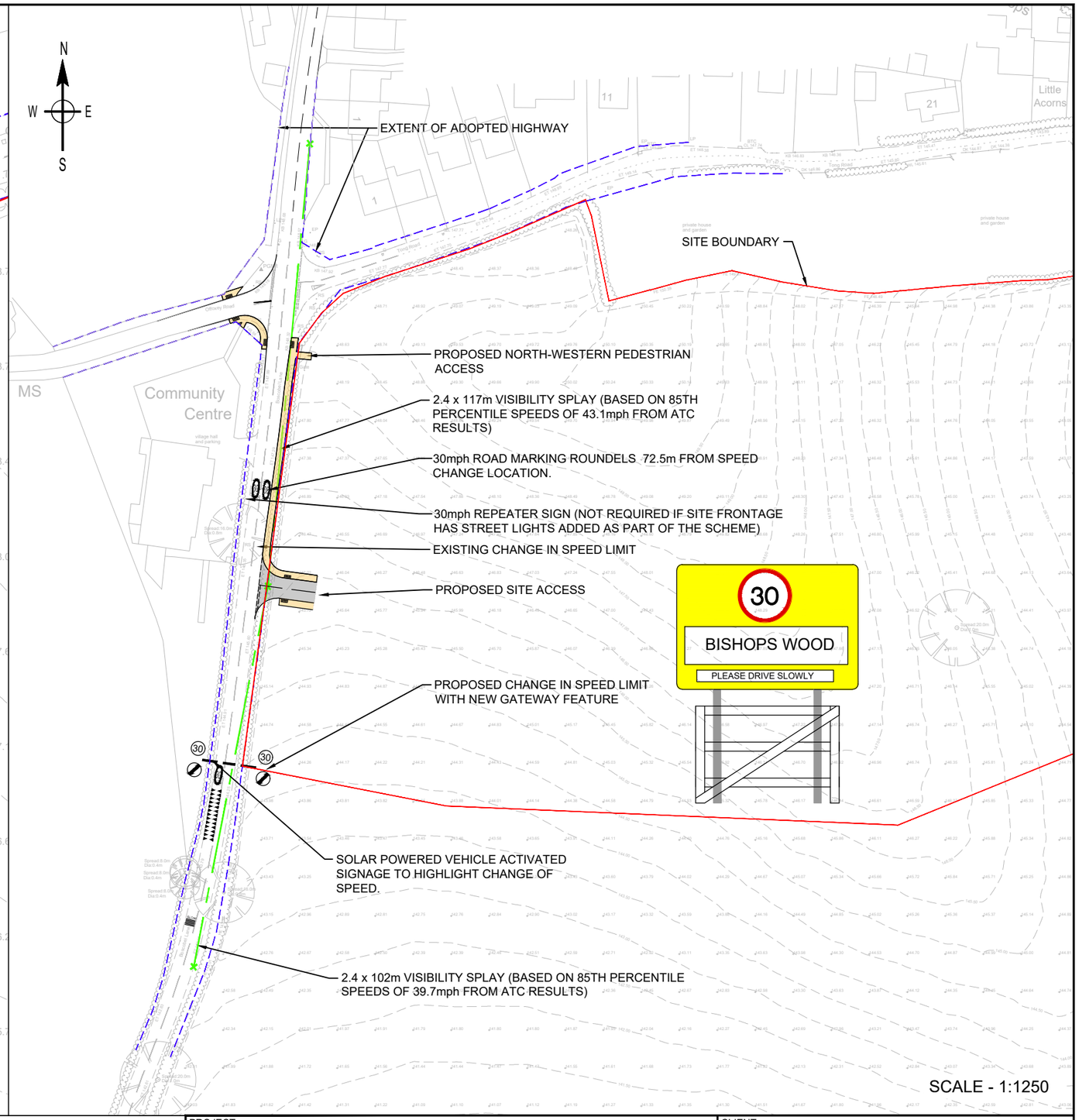
TECHNICAL NOTE 1

SUSTAINABLE DEVELOPMENT AND DELIVERY

A specialist team within DLP Planning Ltd

Appendix F SDD Drawings





10mm 0 -10mm

REV	DESCRIPTION	DR	CH	AP	DATE
P02	EMERGENCY ACCESS REMOVED	PD	KH	AM	11.12.24
P01	TRAFFIC CALMING MEASURES AND EMERGENCY ACCESS ADDED	PD	KH	AM	11.12.24

CAD FILE NAME : ST5074-10PD-001

PROJECT
LAND EAST OF BOSCOBEL LANE, BISHOP'S WOOD

CLIENT
BONINGALE HOMES

DRAWING TITLE
PROPOSED SITE ACCESS ARRANGEMENTS AND PEDESTRIAN CONNECTIVITY IMPROVEMENTS

SUSTAINABLE DEVELOPMENT AND DELIVERY
A specialist team within DLP Planning Ltd.
DLP PLANNING LIMITED
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DRAWN BY	CHECKED BY	APPROVED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS
BL	AM	AM	27.11.24	AS SHOWN	PLANNING

DRAWING NUMBER: ST5074-10PD-001
REV.: P02