



TECHNICAL NOTE

RESPONSE TO LCC COMMENTS

**PROPOSED MIXED-USE DEVELOPMENT
STATION ROAD, MARKET BOSWORTH, LEICESTERSHIRE**

DOCUMENT CONTROL

project number: ADC3326 report reference: ADC3326-RP-H				
version	date	author	reviewer	comments
1		Keith Gamblen		internal draft
2	04/12/2024	Keith Gamblen	Matt Tatler	first issue to the client team
3	10/12/2024	Keith Gamblen		updated site layout

Introduction

1. A hybrid planning application (Ref: 24/00560/HYB) for the erection of 138 residential dwellings and 0.55ha of employment uses was submitted to Hinckley and Bosworth Borough Council (HBBC) in August 2024. To support the planning submission, ADC Infrastructure produced a Transport Assessment¹ and Travel Plans for the residential² and employment³ elements of the development.
2. Leicestershire County Council (LCC) as the local highways authority have provided highway comments for the development which are contained in **Appendix A**. In summary, LCC have provided the following information:
 - LCC are to provide further comments on the proposed site access on Station Road in due course.
 - LCC accept the trip rates for the residential and employment elements of the development.
 - LCC accept the trip distribution for the residential and employment elements of the development. However, due to the new one-way system being implemented in the centre of Market Bosworth, LCC have requested additional trip distribution analysis which considers the proposed one-way system and associated updated capacity assessments to reflect the arrangement.
 - LCC accepts the traffic growth factors and committed developments outlined as part of the Transport Assessment. However, LCC have brought to the attention a live planning application (ref: 24/00831/OUT) for a residential scheme of up to 100 dwellings on Shenton Lane. LCC have therefore advised that a sensitivity test should be undertaken within the capacity assessment to include the traffic generated by the development.
 - LCC welcome the proposed relocation of the existing weight restriction on Station Road. However, LCC have advised the location of the weight restriction should be to the immediate east of the proposed site access with associated HGV signage opposite the access.
 - LCC have accepted that an uncontrolled crossing point on Station Road is sufficient for crossing opportunities to the footway on the northern side of Station Road.
 - LCC have provided comments on the internal layout and this response addresses the comments made.
 - LCC welcome the proposals to extend the 153 bus service along Station Road to serve the site. LCC have requested indicative locations of the bus stops to be provided on Station Road.
3. Therefore, this Technical Note has been produced in response to LCC comments and to seek agreement on the outstanding highway matters.

Highway proposals on Station Road

4. As stated above, LCC are to provide further comments on the proposed site access and speed measures on Station Road in due course. LCC have provided initial comments of the site access proposals relating to the location of the weight limit restriction on Station Road. Therefore, in line with LCC's recommendation, the location of the weight limit restriction would be to the immediate east of the site access as shown in **Drawing ADC3326-DR-002-P6**. In addition, as advised by LCC, black HGV signage would be provided opposite the site access to direct drivers back to the A444.

¹ ADC Infrastructure Transport Assessment, July 2024 (ref: ADC3326-RP-B-v3)

² ADC Infrastructure Residential Travel Plan, July 2024 (ref: ADC3326-RP-D-v3)

³ ADC Infrastructure Employment Travel Plan, July 2024 (ref: ADC3326-RP-E-v3)

5. Regarding bus facilities, LCC welcome the extension of the 153 bus service to route along Station Road close to the site. Within the comments, it is stated Arriva have suggested relocating the existing bus stops to the east of the proposed access which are currently out of use. LCC have therefore requested indicative locations are shown for the relocated bus stops.
6. The indicative location of the bus stops are shown in **Drawing ADC3326-DR-002-P6**. The bus stops are shown approximately 100m east of the proposed site access, between the access to the Kyns Golf and Country Club and the Station Road/Godsons Hill junction. To the west of the site, it would not be possible to provide bus stops close to the access due to the proximity of the industrial accesses on the southern side of Station Road and the proposed traffic calming chicane. Due to the access proposals associated with the Kyns Golf and Country Club, it is considered the bus stops would need to be to east of the junction.

Trip distribution

7. Whilst LCC have accepted the trip distribution outlined in the Transport Assessment, due to the new one-way system which will be implemented in the centre of Market Bosworth, LCC have requested additional trip distribution analysis to consider the proposed arrangement. For reference, the proposal of the one-way system is contained in **Appendix B** and summarised in **Figure 1** below which shows Market Place and Main Street becoming a one-way arrangement.

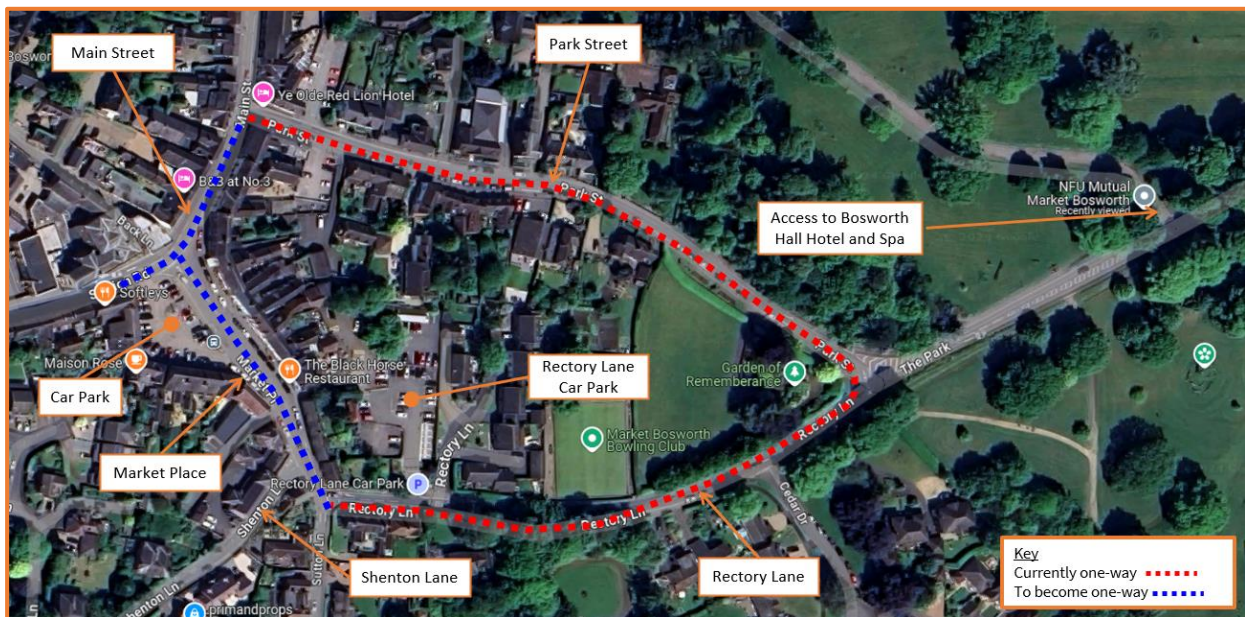


Figure 1: new one-way system in centre of Market Bosworth

8. In terms of the trip distribution for the centre of Market Bosworth, there is on-street parking is provided along Park Street whilst there is a car park on Rectory Lane and Market Place. Therefore, it is likely if a resident/employee from the development drives to work, they would park their car in one of those locations. In addition, the Bosworth Hall Hotel and Spa is a major employment use within the centre of Market Bosworth and is accessed via The Park. The trip distribution for the centre of Market Bosworth has therefore been split between the on-street parking on Park Street, the car parks on Rectory Lane and Market Place and Bosworth Hall.
9. As well as the local traffic within Market Bosworth, the routing to Shenton Lane would also need to be updated as a result of the one-way system. Currently, drivers can use the two-way section of Market Place but with revised to a one-way system, drivers from the west of Market Bosworth

would have to continue straight on along Main Street and then Park Street and Rectory Lane to access Shenton Lane.

10. The revised trip distribution for the study area junctions in the centre of Market Bosworth is shown in **Figures 2 and 3** for the residential and employment elements of the development respectively.

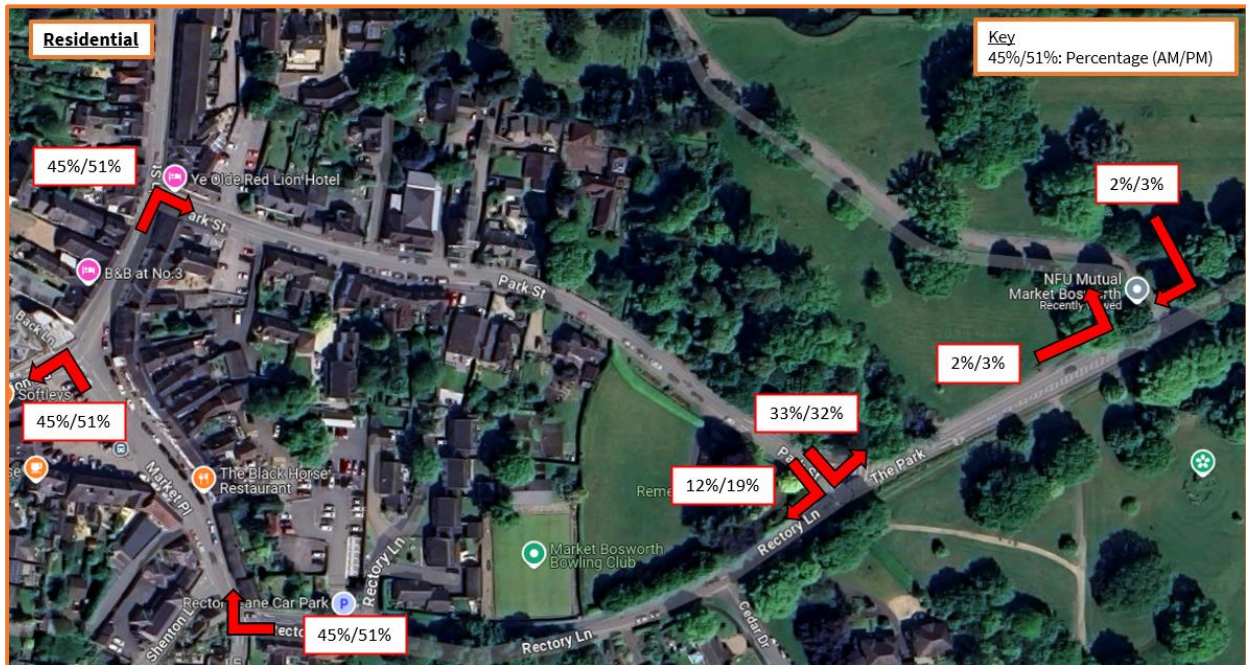


Figure 2: revised trip distribution in centre of Market Bosworth - residential



Figure 3: revised trip distribution in centre of Market Bosworth - employment

Committed developments

11. As part of LCC's scoping response prior to the Transport Assessment, it was requested that the following committed developments should be considered within the capacity assessments:
 - 19/01437/FUL – Erection of multi-purpose golf clubhouse, formation of new car parking areas and the erection of 6 golf holiday homes (north of Station Road).
 - 21/00379/FUL – Erection of 73 residential dwellings (south of Station Road).
 - 23/00667/FUL – Change of use from a dwelling to a Specialist Education Needs (SEN) school (land south of Rectory Lane).
12. As part of the highway comments of the Transport Assessment, LCC welcomed the inclusion of the above applications. However, LCC have brought to the attention a live planning application (ref: 24/00831/OUT) for a residential scheme of up to 100 dwellings on Shenton Lane. LCC have therefore advised that a sensitivity test should be undertaken within the capacity assessment to include the traffic generated by the development. The traffic flows associated with the development have therefore been extracted from the Transport Assessment which are contained in **Appendix C**.

Internal layout

13. LCC have provided comments on the internal layout following a layout produced by Nineteen47 (Drawing number 008 Rev A) which was submitted as part of the planning application. From reviewing the layout, LCC "*advises that the internal access roads are currently not suitable for adoption*".

Pedestrian link to Heath Road

14. LCC firstly state the secondary pedestrian link to Heath Road does not provide connection to an established footway and falls outside of the applicants red line boundary. Therefore, as shown in the updated layout contained in **Appendix D**, the routing of the pedestrian link has been amended so that it would fall within the applicants red line boundary. In terms of connectivity to an established footway, there is an existing footway which terminates outside of 81 Heath Road. Hence, an uncontrolled pedestrian crossing point would be provided with tactile paving and dropped kerbs to provide connectivity with the proposed pedestrian link.

Turning head on employment access road

15. Regarding the employment access road, LCC have stated the access road is in accordance with Part 3 of LCC's Highway Design Guide (HDG). However, the turning head at the proposed limit of the road is not in accordance with Figure DG4c of the LCC's HDG. Figure DG4c of LCC's HDG provides guidance on turning heads for use on industrial and commercial estate roads. The turning head has been designed for use by the residential development and not the employment element of the development. If a driver of a vehicle associated with the employment development needs to turn within the site, they would be able to enter the employment development and make an appropriate turning manoeuvre before exiting in a forward gear. Given the employment development is seeking outline consent, details of the internal layout including appropriate turning provision for the employment development will be provided as part of any reserved matters application.
16. It is considered the largest vehicle to use the turning head is a refuse vehicle which would service the residential development. As part of the Transport Assessment, a swept path assessment was

undertaken of the turning head using a refuse vehicle (Drawing ADC3326-DR-005-P4) which demonstrates the turning head could accommodate turning manoeuvres of a refuse vehicle.

Speed control features

17. LCC have stated speed control is not in accordance with Table DG8 of LCC's HDG. Table 8 of LCC's HDG states the maximum road length for speed control based on a 20mph design speed is 60 metres. From reviewing the layout, it is noted the distance between the site access and the first internal bend adjacent to the junction with the employment access road is approximately 80m and, hence, more than the recommended 60m. Therefore, speed control measures have been considered. Given the development may accommodate a bus in future and the employment development which would generate occasional HGV traffic, it is not considered appropriate to have vertical speed control features such as speed humps.
18. Horizontal features have also been considered such as road narrowing and chicanes but given the occasional HGV traffic generated by the employment development and a potential for a bus route in future, it is not considered a horizontal speed feature would be suitable either. Hence, no speed control feature is proposed between the site access and first internal bend.
19. Due to the site access, it is considered drivers would not be driving above 20mph as they are entering the site whilst there is good visibility to the first internal bend so it is unlikely drivers would excessively pick up their speed given they would soon have to reduce their speed as they negotiate the bend.
20. In addition, it is noted there is a gap of around 73m from the east of the 'Lane 2' junction and the bend in the southeast corner of the site. However, there is only a 40m straight section of carriageway from the 'Lane 2' junction before the carriageway begins to deviate towards the bend in the southeast corner of the site. Hence, because of this and the built up nature of this section of carriageway, it is not considered a requirement to provide a speed control feature for this section.
21. The rest of the speed control features are less than 60m apart and hence additional speed control features are proposed.

Internal visibility

22. LCC have stated the visibility splays included within the layout provided by Nineteen47 does not have dimensions. Dimensions have not been included because ADC Infrastructure have produced an internal visibility assessment that accompanied the Transport Assessment. Following the updated layout, the internal visibility assessment has been revised based on the new layout and is shown in **Drawing ADC3326-DR-004-P5**.
23. As shown, all internal junctions have visibility splays of 2.4 x 25m which is equivalent to a 20mph design speed. All of the forward visibility envelopes are 17m which is in accordance with a design speed of 15mph. Given the bend, it is unlikely drivers would be travelling more than 15mph when they are negotiating the bend. All of the junction and forward visibility splays are achievable within the footway network of the development.

Vehicle accesses in proximity with internal junction

24. LCC have made comment on the private drives that are within 10m from the radii of a junction which could increase the chance of conflict with turning vehicles and crossing points. The layout

has been amended to reduce the number of instances where a private drive is within 10m from the radii of a junction.

25. From reviewing the updated layout, there are 3 instances where a private drive is within 10m from the radii of a junction which consist of access to Plots 55/56, 68 and 100/101. There are instances where accesses are directly opposite an internal junction. However, it is interpreted that the comment relates to accesses either side of the radii of a junction.
26. Therefore, a visibility and swept path assessment has been undertaken of the affected accesses to determine the suitability of the location of the accesses. The assessment is shown in **Drawing ADC3326-DR-007-P1** and demonstrates a car would be able to sufficiently enter and exit the private drives whilst there would be sufficient visibility for a driver exiting the respective accesses. Therefore, the location of the private drives are suitable and would not introduce a highway safety concern.

Updated capacity assessments

27. As stated above, LCC have requested updated capacity assessments to incorporate the Shenton Lane committed development and new one-way system in the centre of Market Bosworth. Therefore, the junctions that have been reassessed are shown in **Figure 4** below. The junctions have been tested using 2029 traffic flows which are contained in **Appendix E**.

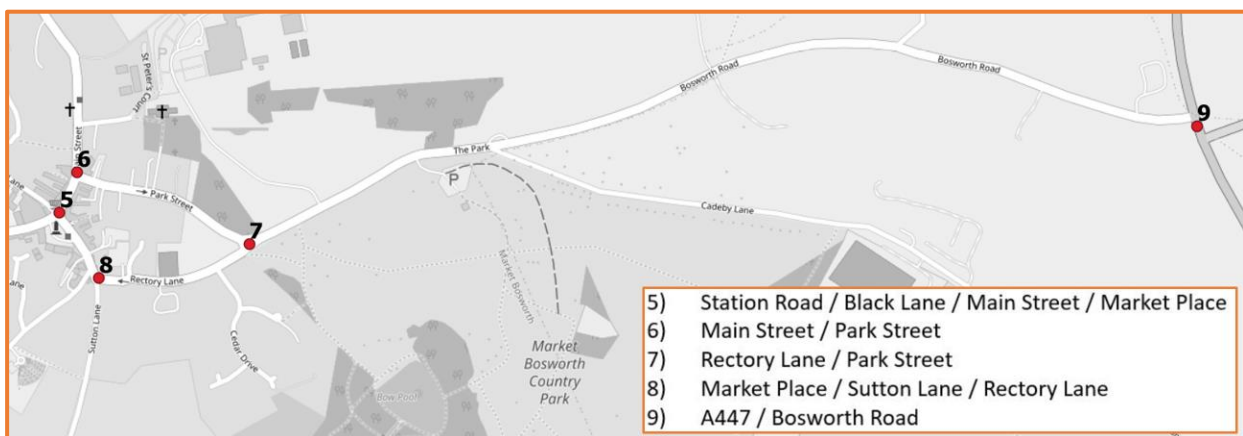


Figure 4: location of reassessed junctions

Junction 5 – Station Road / Black Lane / Main Street / Market Place crossroads

28. **Figure 5** shows the revised arrangement of the Station Road/Back Lane/Main Street/Market Place crossroads. A model of the junction was built using Junctions 9 PICADY software and tested using the 2029 background traffic flows which includes traffic associated with the Shenton Lane development as well as the 2029 with development traffic flows. The results are summarised in the table below and the PICADY outputs are in **Appendix F**.

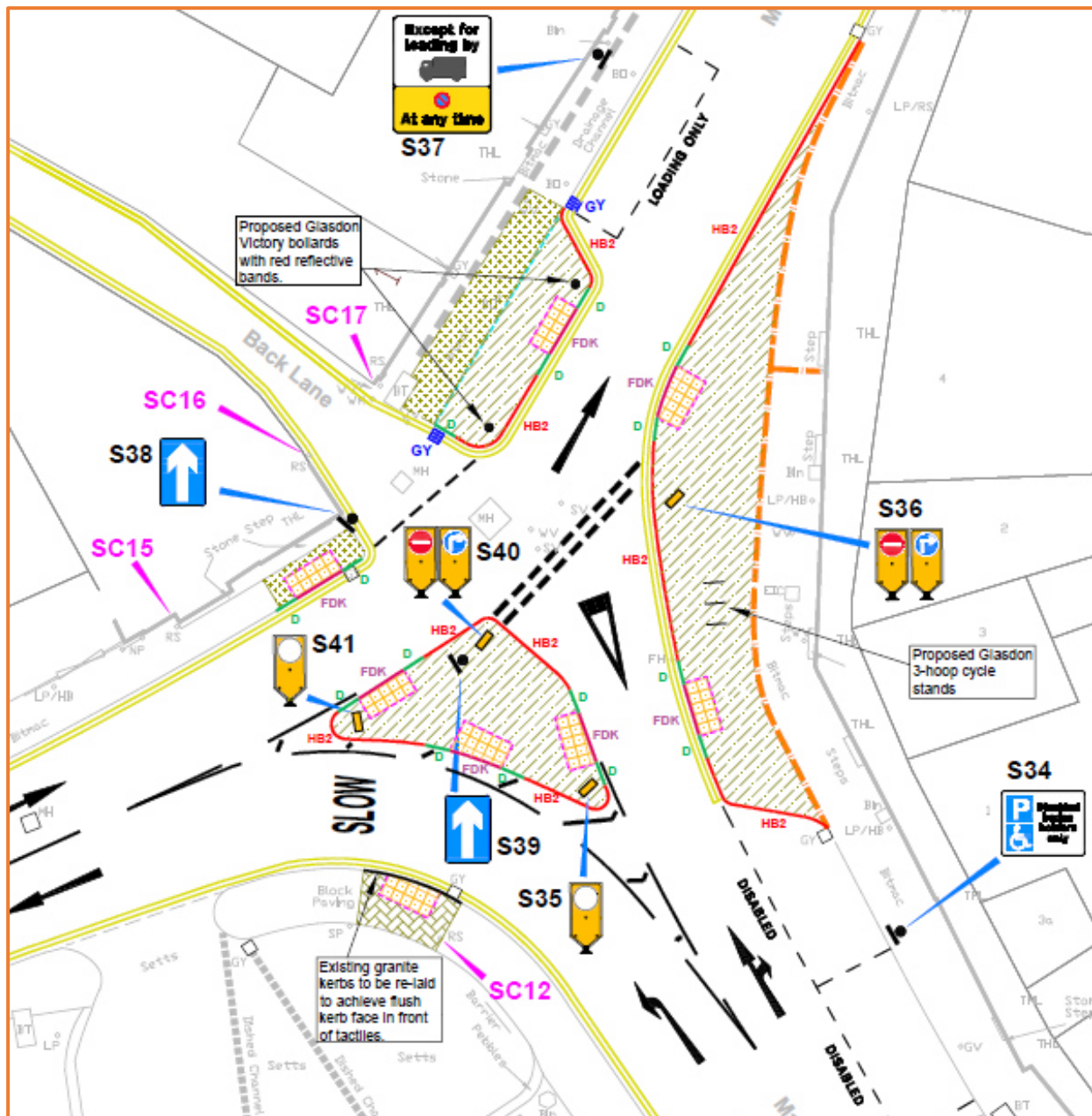


Figure 5: revised arrangement of the Market Place crossroads

	AM Peak			PM Peak		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2029 Background						
Market Place	0.5	11.33	35%	0.3	10.19	26%
Main Street	Entry only					
Back Lane	Entry only					
Station Road	0.0	0.0	0.0	0.0	0.00	0.00
2029 With Development						
Market Place	0.5	11.45	35%	0.4	10.25	26%
Main Street	Entry only					
Back Lane	Entry only					
Station Road	0.0	0.0	0.0	0.0	0.00	0.00

29. As shown in the table above, the junction is forecast to operate at 35% of capacity in the 2029 morning peak hour with the development. With the development in place, it is still forecast the junction would operate at 35%. Hence, the revised junction arrangement is suitable to accommodate the forecast traffic flows.

Junction 6 – Park Street / Main Street T-junction

30. As shown in **Figure 6**, the Park Street/Main Street junction is a priority-controlled simple T-junction, and the arrangement would be unaltered as a result of the proposed one-way system. A model of the junction was built using Junctions 9 PICADY software and tested using the 2029 background traffic flows which includes traffic associated with the Shenton Lane development as well as the 2029 with development traffic flows. The results are summarised in the table below and the PICADY outputs are in **Appendix G**.

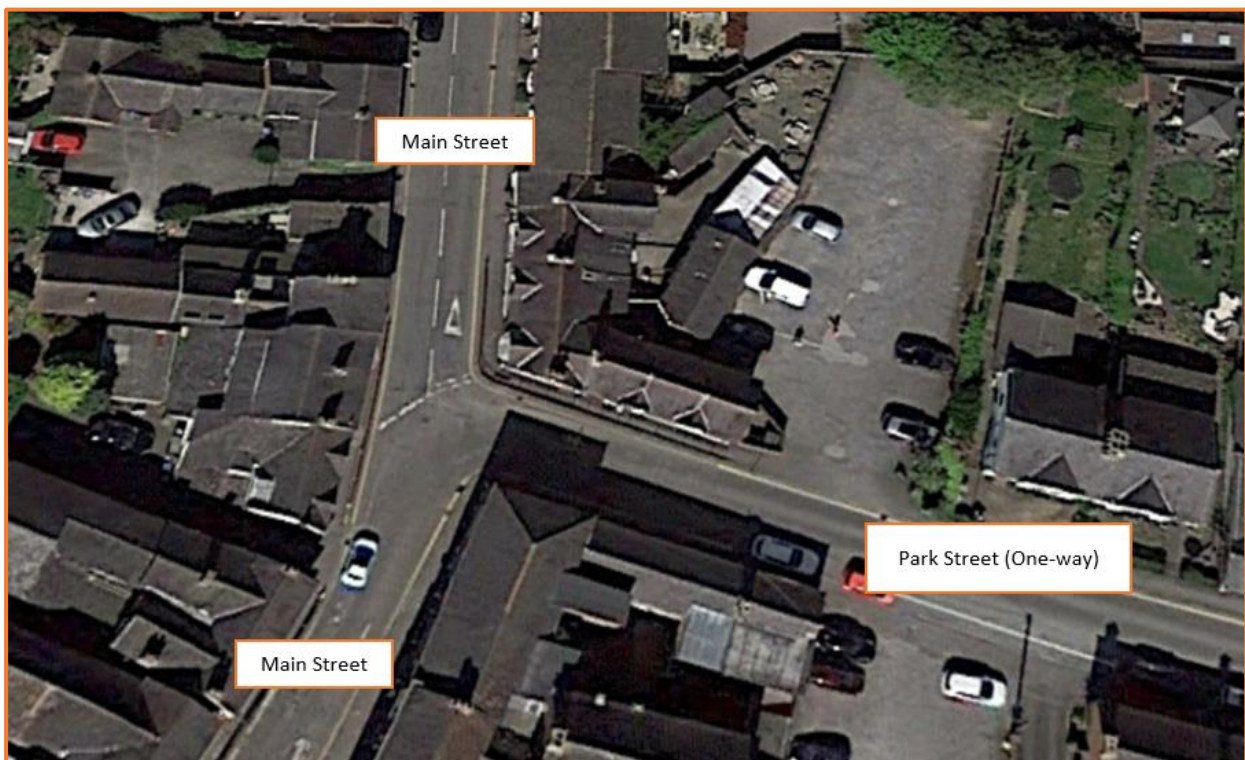


Figure 6: Park Street/Main Street priority-controlled simple T-junction

	AM Peak			PM Peak		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2029 Background						
Main Street (N)	0.8	12.46	43%	0.3	8.62	21%
Park Street	Entry only					
2029 With Development						
Main Street (N)	0.8	12.83	44%	0.3	8.73	21%
Park Street	Entry only					

31. As shown in the table above, the junction is forecast to operate at 43% of capacity in the 2029 morning peak hour with the development. With the development in place, it is still forecast the junction would operate at 44%. Therefore, the junction is suitable to accommodate the forecast traffic flows.

Junction 7 – Park Street / The Park / Rectory Lane T-junction

32. As shown in **Figure 7**, the Park Street/The Park/Rectory Lane junction is a priority-controlled simple T-junction, and the arrangement would be unaltered as a result of the proposed one-way system. A model of the junction was built using Junctions 9 PICADY software and tested using the 2029 background traffic flows which includes the Shenton Lane development as well as the proposed Specialist Education Needs school on land south of Rectory Lane (ref: 23/00667/FUL) which LCC requested to be included as part of the Transport Assessment capacity assessment. The model has also been tested with the 2029 with development traffic flows. The results are summarised in the table below and the PICADY outputs are in **Appendix H**.



Figure 7: Park Street/The Park/Rectory Lane priority-controlled simple T-junction

	AM Peak			PM Peak		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2029 Background						
Park Street (right turn)	1.4	20.64	59%	0.4	11.20	29%
The Park	0.0	0.00	0.00	0.0	0.00	0.00
2029 With Development						
Park Street (right turn)	1.5	21.75	61%	0.4	11.54	30%
The Park	0.0	0.00	0.00	0.0	0.00	0.00

33. As shown in the table above, the junction is forecast to operate at 59% in 2029, without the development and 61% with the development in place. Hence, the junction can accommodate the forecast traffic flows.

Junction 8 – Market Place / Sutton Lane/ Rectory Lane T-junction

34. **Figure 8** shows the revised arrangement of the Market Place/Sutton Lane/Rectory Lane priority-controlled T-junction. Currently, the Rectory Lane arm gives way to traffic on Market Place and Sutton Lane. However, a change of priority is proposed so that the Sutton Lane arm give way to traffic turning right from Rectory Lane. A model of the junction was built using Junctions 9 PICADY software and tested using the 2029 background traffic flows which includes traffic associated with the Shenton Lane development as well as the 2029 with development traffic flows. The results are summarised in the table below and the PICADY outputs are in **Appendix I**.

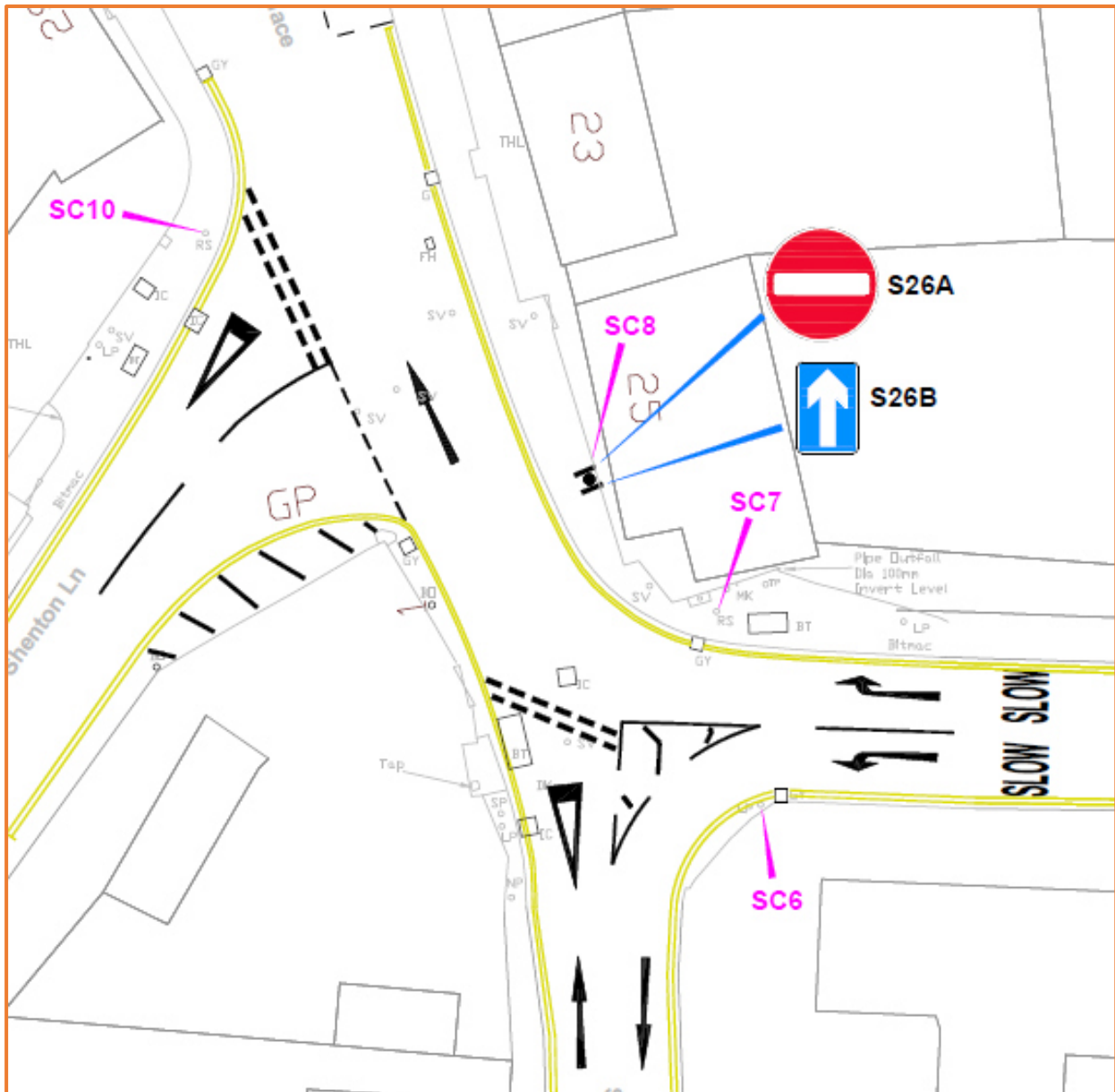


Figure 8: revised arrangement of Market Place/Sutton Lane/Rectory Lane junction

	AM Peak			PM Peak		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2029 Background						
Sutton Lane	0.00	5.99	0%	0.0	0.00	0%
Market Place	One way					
2029 With Development						
Sutton Lane	0.0	6.00	0%	0.0	5.87	0%
Market Place	One way					

35. As shown in the table above, the change of priority and the low traffic levels on Sutton Lane means the junction would have ample spare capacity and minimal delays in 2029 with and without the development. Therefore, the junction can accommodate the forecast traffic flows.

Junction 9 – A447 / Bosworth Road/ Bosworth Lane crossroads

36. As shown in **Figure 9**, the A447/Bosworth Road/Bosworth Lane junction is a priority-controlled staggered crossroads. A model of the junction was built using Junctions 9 PICADY software and tested using the 2029 background traffic flows which includes traffic associated with the Shenton Lane development and the development on land east of The Windmill Inn (ref: 22/00277/OUT) which LCC requested to be included as part of the Transport Assessment capacity assessment. The model has also been tested with the 2029 with development traffic flows.



Figure 9: A447/Bosworth Road/Bosworth Lane priority-controlled staggered crossroads

37. The traffic flows have been modelled as a flat profile. The reason for this is due to a review of the traffic count undertaken in November 2023 which the traffic flows are based on, the traffic flows are similar across the four 15-minute periods. This is demonstrated in the table below for the worst case morning peak hour for the respective approaches based on light vehicles.

Time period	A447 north	Bosworth Lane	A447 south	Bosworth Road
07:30-07:45	164	65	128	62
07:45-08:00	167	64	169	62
08:00-08:15	172	86	164	64
08:15-08:30	162	69	153	70

38. Therefore, given the profile of the traffic flows, it is considered suitable for a FLAT traffic profile to be used. The results are summarised in the table below and the PICADY outputs are in **Appendix J**.

	AM Peak			PM Peak		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2020 Background						
Bosworth Road – left turn	0.8	17.37	43%	1.0	20.40	51%
Bosworth Road – right turn	0.9	24.47	48%	1.2	25.86	54%
A447 (S)	0.2	9.07	19%	0.3	8.11	26%
Bosworth Lane – left turn	1.9	30.33	66%	0.7	13.58	41%
Bosworth Lane – right turn	0.7	26.73	43%	0.3	14.52	24%
A447 (N)	0.2	7.79	13%	0.1	7.82	11%
2029 With Development						
Bosworth Road – left turn	1.1	22.35	53%	1.2	22.12	54%
Bosworth Road – right turn	1.2	30.00	55%	1.2	27.56	56%
A447 (S)	0.3	9.27	21%	0.3	8.12	26%
Bosworth Lane – left turn	2.2	35.05	70%	0.7	14.27	43%
Bosworth Lane – right turn	0.9	30.66	47%	0.3	14.93	26%
A447 (N)	0.2	7.99	14%	0.1	7.84	11%

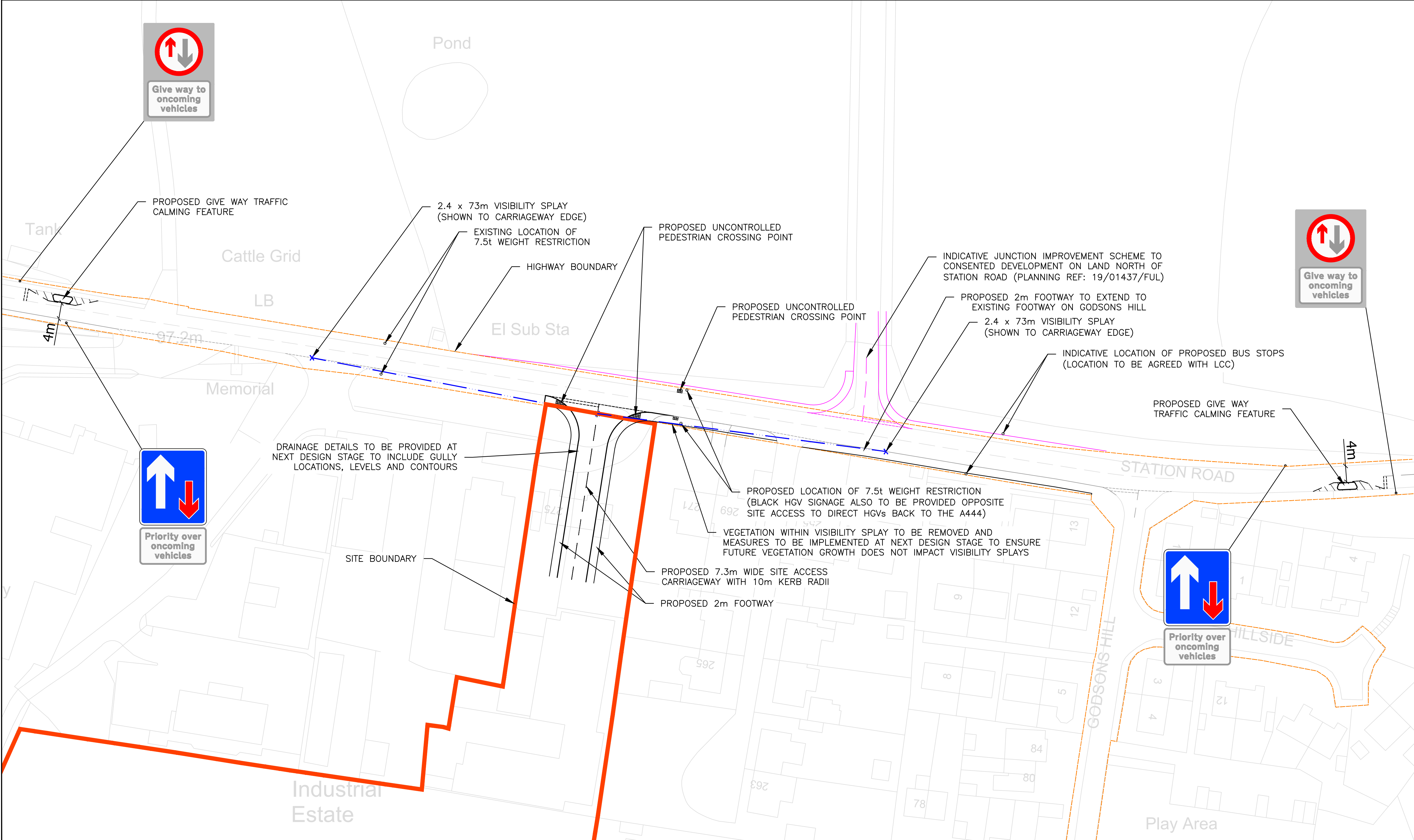
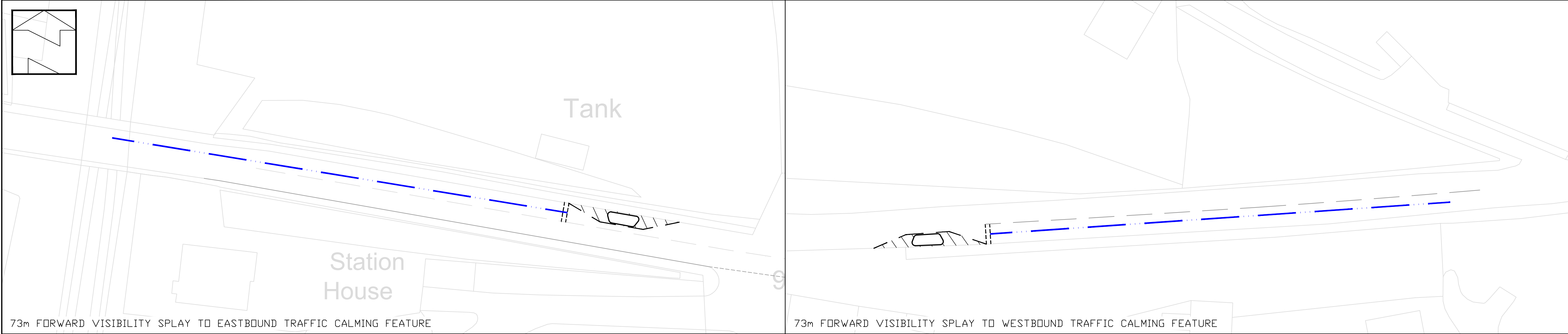
39. As shown in the table above, the junction is forecast to operate at 66% in 2029 without the development. With the development in place, the junction is forecast to operate at 70%. Hence, the junction can accommodate the forecast traffic flows of the development, and no mitigation measures are proposed.

Summary

40. This Technical Note has been produced in response to LCC's highway comments dated 28 October 2024.
41. The report includes an updated site access drawing on Station Road which shows the relocated weight restriction limit as requested by LCC as well as showing the indicative location of the proposed bus stops on Station Road.
42. This report addresses comments made by LCC related to the internal layout and demonstrates the updated layout is suitable for adoption.

43. Revised capacity assessments have been undertaken to include traffic associated with the proposed development on Shenton Lane as well as incorporating the one-way system proposed in the centre of Market Bosworth. The revised capacity assessments demonstrates the development would not have an adverse impact on the local highway network.

DRAWINGS



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

P6	02.12.24	Updated following initial highway comments from LCC	KG	MT
P5	15.07.24	Updated site boundary	KG	-
P4	14.05.23	Updated following Stage 1 RSA	KG	MT
P3	12.12.23	Updated highway boundary	AM	RL
P2	12.12.23	Updated following LCC comments	KG	RL
P1	07.11.23	First issue	KG	RL
Rev	Date	Description	Dr	Rev

Client:

Miller Homes

Project:

Land South of Station Road, Market Bosworth

Title:

Proposed Access Junction Layout

Drawn: K. Gamblen

Reviewed: R. Leconte

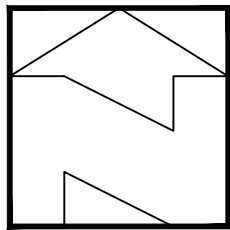
Size: A1

Scale: 1:500

Date: 07 / 11 / 2023

Status: PRELIMINARY ISSUE

Project Reference	Type	Number	Revision
ADC3326-DR-	002		P6



- Notes
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
 2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the engineer immediately.

ALL VEHICULAR VISIBILITY SPLAYS ARE 25m (IN ACCORDANCE WITH A 20MPH DESIGN SPEED)

ALL FORWARD VISIBILITY ENVELOPES ARE 17m (IN ACCORDANCE WITH A DESIGN SPEED OF UP TO 15MPH)

P5	02.12.24	Updated layout	KG	-
P4	15.07.24	Updated layout	KG	-
P3	08.05.24	Change to layout adjacent to Plot 42	KG	MT
P2	08.05.24	Updated layout	KG	MT
P1	11.04.24	First issue	KG	RL
Rev	Date	Description	Dr	Rev

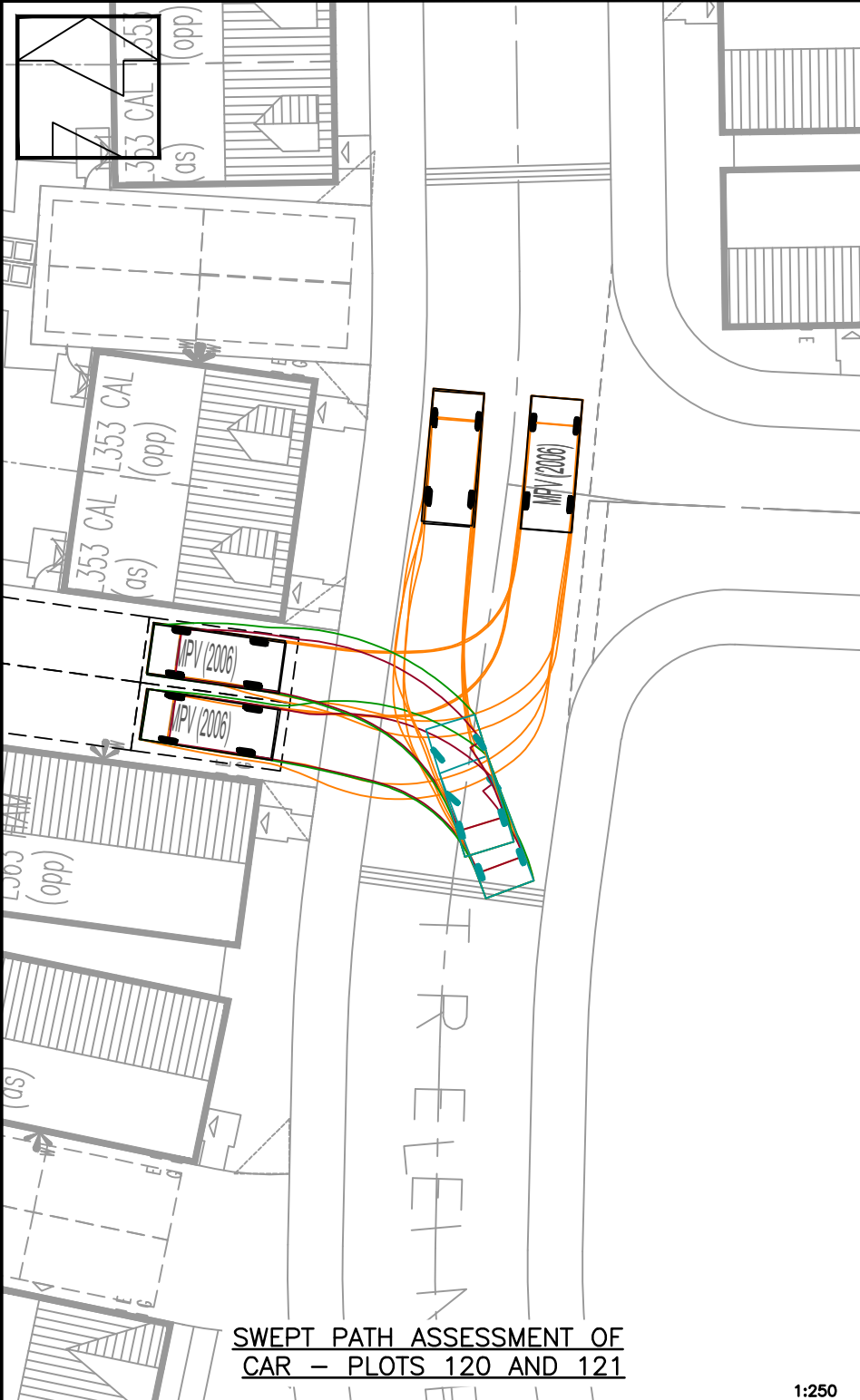
Client: Miller Homes

Project: Land South of Station Road, Market Bosworth

Title: Review of Internal Layout

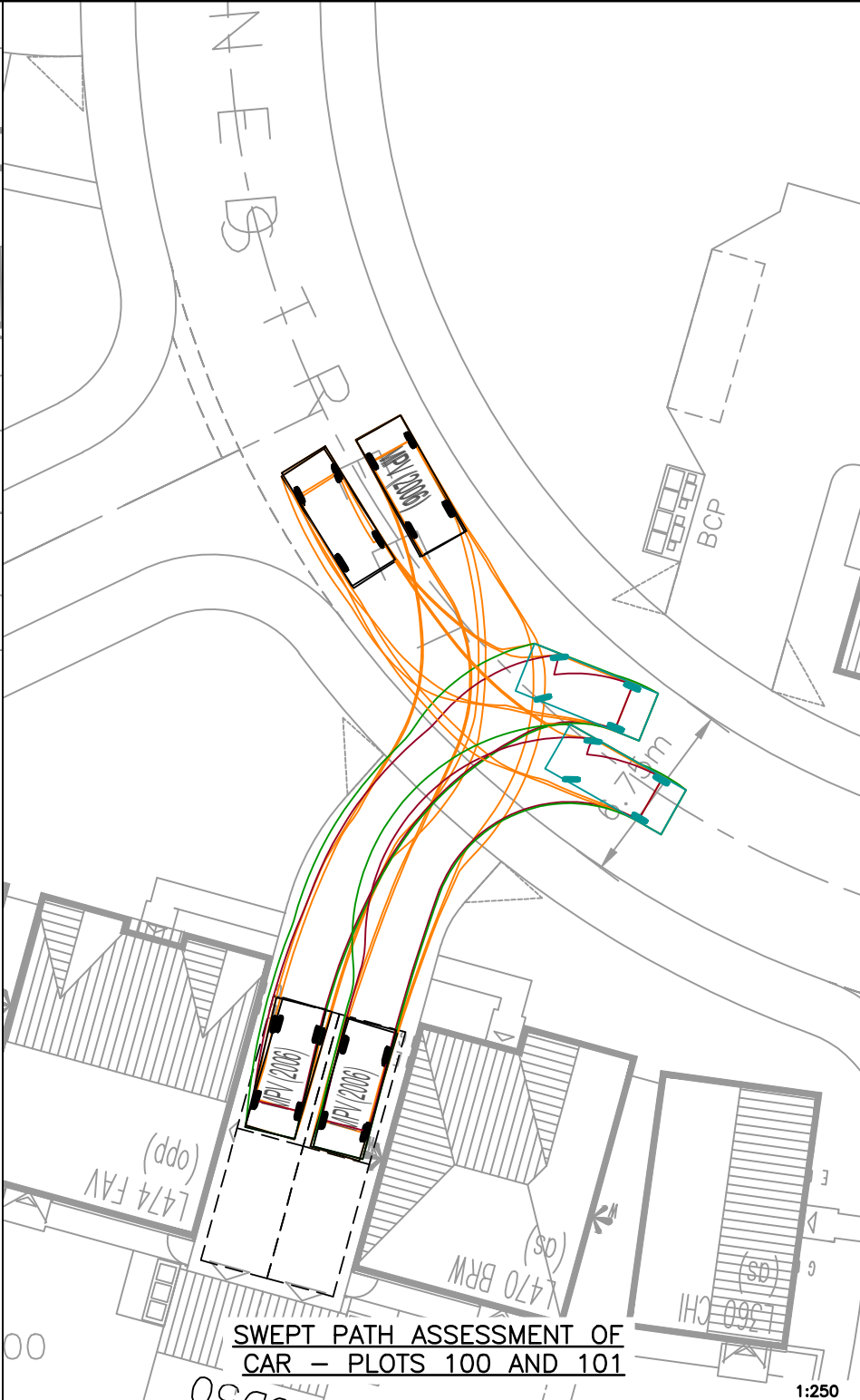


Drawn: K. Gamblen		Reviewed: R. Leconte	
Size: A1	Scale: 1:500	Date: 11 / 04 / 2024	
Status: PRELIMINARY ISSUE			
Project Reference	Type	Number	Revision
ADC3326-DR- 004			P5



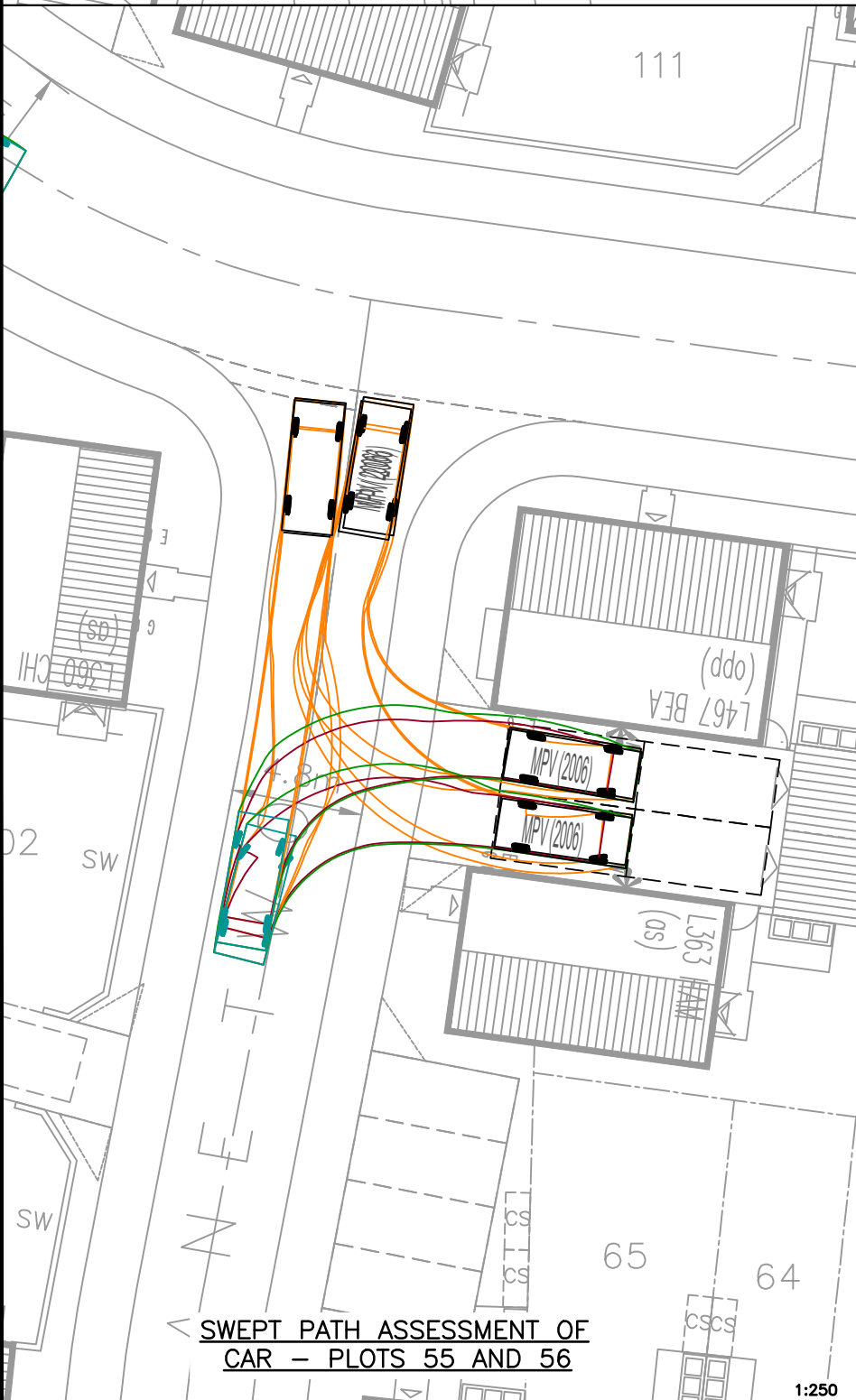
SWEPT PATH ASSESSMENT OF
CAR – PLOTS 120 AND 121

1:250



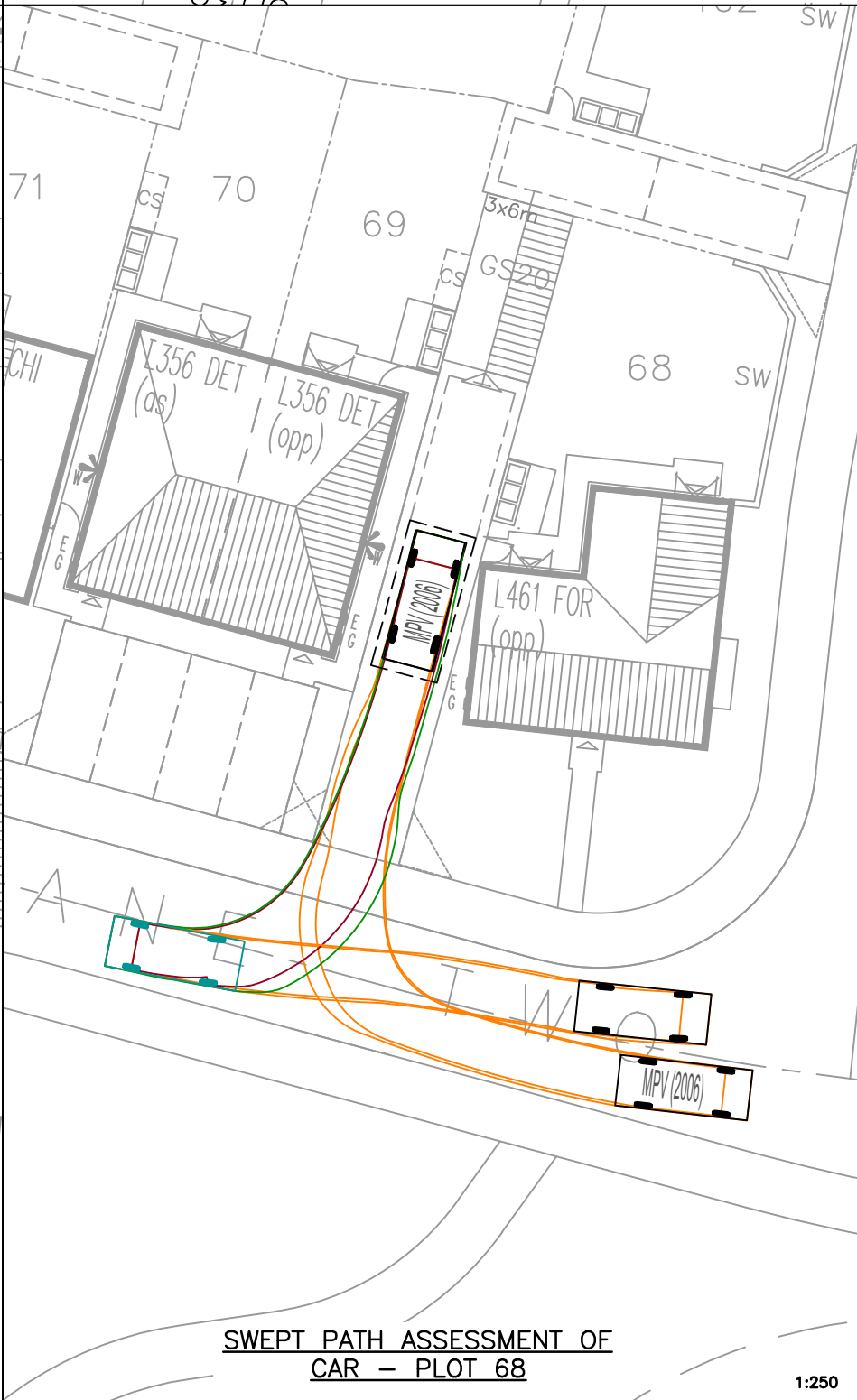
SWEPT PATH ASSESSMENT OF
CAR – PLOTS 100 AND 101

1:250



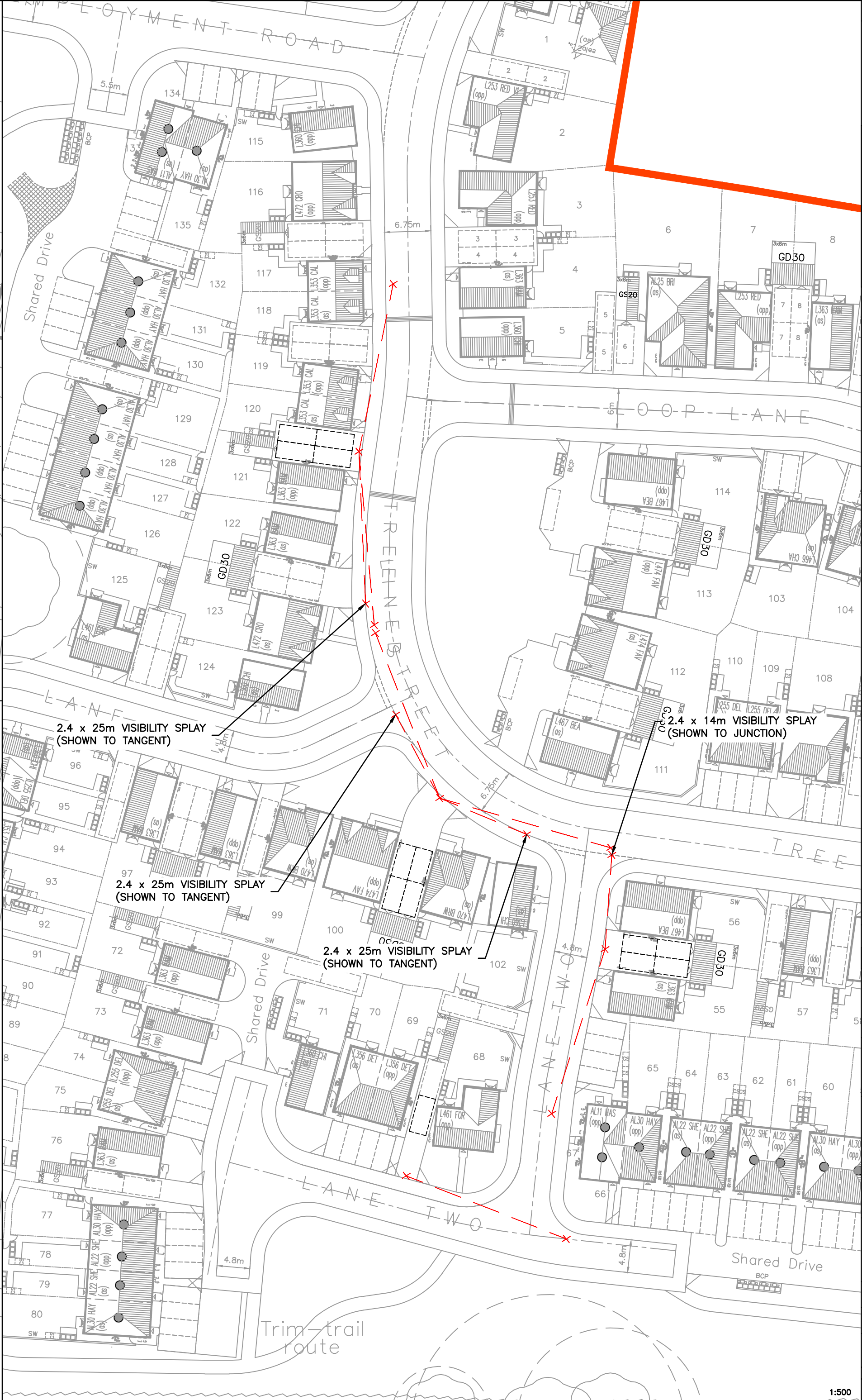
SWEPT PATH ASSESSMENT OF
CAR – PLOTS 55 AND 56

1:250



SWEPT PATH ASSESSMENT OF
CAR – PLOT 68

1:250



Notes

1. Do not scale this drawing. All dimensions must be checked/verified on site. If in doubt ask.

2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.

4. Any discrepancies noted on site are to be reported to the engineer immediately.

4.856m

1.860m

1.919m

0.300m

1.779m

4.00s

5.700m

MPV (2006)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

ALL VEHICULAR VISIBILITY SPLAYS ARE
25m UNLESS STATED (IN ACCORDANCE
WITH A 20MPH DESIGN SPEED)

P1	03.12.24	First issue	KG	MT
Rev	Date	Description	Dr	Rev
Client: Miller Homes				
Project: Land South of Station Road, Market Bosworth				
Title: Review of Private Drives in Vicinity of Internal Junctions				
ADC INFRASTRUCTURE				
Drawn: K. Gamblen		Reviewed: M. Tatler		
Size: A2	Scale: AS SHOWN	Date: 03 / 12 / 2024		
Status: PRELIMINARY ISSUE				
Project Reference		Type	Number	Revision
ADC3326-DR-		007	P1	

APPENDIX A

LCC HIGHWAY COMMENTS DATED 28 OCTOBER 2024

Substantive response of the Local Highway Authority to a planning consultation received under The Development Management Order.



Response provided under the delegated authority of the Director of Environment & Transport.

APPLICATION DETAILS

Planning Application Number: 24/00560/HYB

Highway Reference Number: 2024/0560/04/H

Application Address: Land Off Station Road Market Bosworth Leicestershire

Application Type: Hybrid

Description of Application: Hybrid planning application seeking full planning permission for residential development of 138 dwellinghouses along with landscaping, public open space, drainage infrastructure and new access following demolition of two existing dwellinghouses; and outline planning permission (all matters reserved except for point of access) for 0.55ha of employment uses (Classes E (g) (i, ii and iii), B2 and B8)

GENERAL DETAILS

Planning Case Officer: Tim Hartley

Applicant: Helen Dawkins

County Councillor: Bertie Harrison-Rushton

Parish: Market Bosworth

Road Classification: Class C

Substantive Response provided in accordance with article 22(5) of The Town and Country Planning (Development Management Procedure) (England) Order 2015:

The Local Highway Authority does not consider that the application as submitted fully assesses the highway impact of the proposed development and further information is required as set out in this response. Without this information the Local Highway Authority is unable to provide final highway advice on this application.

Advice to Local Planning Authority

Background

The Local Highway Authority (LHA) has been consulted by Hinckley & Bosworth Borough Council as the Local Planning Authority (LPA) on a hybrid planning application for a:

Residential development of 138 dwellinghouses along with landscaping, public open space, drainage infrastructure and new access following demolition of two existing dwellinghouses; and outline planning permission (all matters reserved except for point of access) for 0.55ha of employment uses (Classes E (g) (i, ii and iii), B2 and B8)

The site is located at land off Station Road, Market Bosworth. The LHA is aware the site is allocated for development in the LPA's Site Allocations and Development Management Policies DPD - adopted July 2016. The LHA has reviewed the following documents submitted by the Applicant in support of the proposals:

- Transport Assessment (authored by ADC Infrastructure and dated 17th July 2024)
- Framework Travel Plan (authored by ADC Infrastructure and dated 17th July 2024)
- Nineteen47 drawing number 008 Rev. A (Planning Layout)

The LHA undertook a site visit to Station Road on Thursday 19th September 2024 at approximately 09:00. The LHA are also aware of planning application reference 24/00831/OUT (100 Dwellings, land north of Shenton Lane, Market Bosworth). Both applications have been reviewed concurrently and a response to that application will be provided separately to the LPA by the LHA.

Site Access

The site would be accessed from Station Road, a C classified road subject to a 30mph speed limit. The Applicant is proposing a single point of access to serve both the residential and employment uses. Details of the site access are provided on ADC drawing number ADC3226-DR-002 Rev. P5, which is available in the TA. The LHA will provide further comments on the site access arrangements in due course.

The LHA note that a pedestrian link is proposed between the site and Heath Road. This is welcomed and encouraged by the LHA to improve permeability of the site with the surrounding area. Nineteen47 drawing number 008 Rev. A details this to be within third party land which is outside the Applicants red line boundary. To ensure this link can be delivered, the LHA advise it should fall within the Applicants red line boundary, or the link be amended to connect with the boundary of the adopted highway. The Applicant can obtain further information in respect of the highway boundary by contacting HRE@laies.gov.uk.

Highway Safety

The Applicant has obtained Personal Injury Collision (PIC) data from Leicestershire County Council for the five-year period between 1st January 2018 and 30th November 2023.

The Applicants study area is detailed in Figure 1 and their PIC analysis is within Paragraphs 2.9 – 2.25 of the TA.

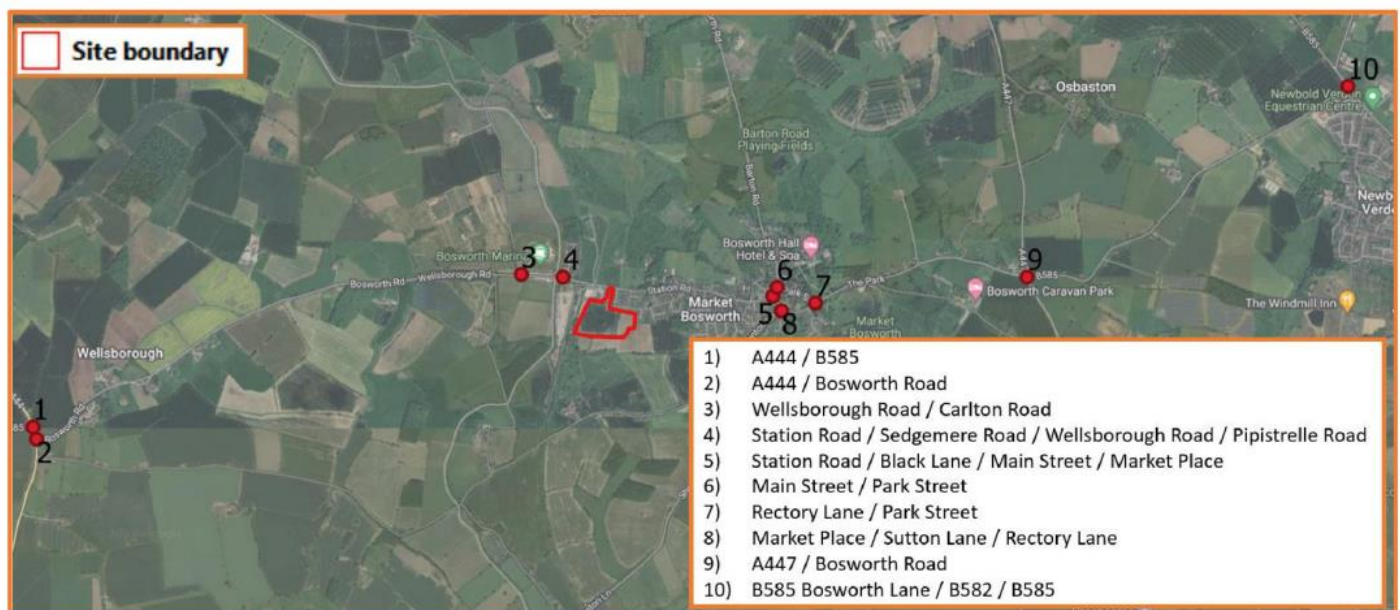


Figure 1: Applicants study area.

A total of 21 PIC’s were identified within the study area. There were 13 PICs which were recorded as slight and eight which were recorded as serious.

In addition to the PIC’s identified by the Applicant, the LHA is aware of three additional PIC’s which have occurred in the study area. All three were recorded as slight and occurred between April and July 2024. The first occurred on Park Street and involved a pedestrian and a bus, the second occurred at Junction 9 involving a collision between two vehicles and the third occurred on Bosworth Lane (B585) involving a single vehicle.

The LHA has reviewed the Applicants PIC analysis and notwithstanding the additional PIC’s outlined above, accept the Applicants conclusion that there are no specific trends within the PIC data which could reasonably be expected to be exacerbated by the proposed development.

Trip Generation and Distribution

Given there are existing businesses which would relocate because of the proposals, as well as two dwellings that would be demolished, the Applicant has considered the level of traffic which could be generated by both the existing use of the site and the proposed development.

Existing use trip generation

The Applicant has used their proposed trip rates for the residential development detailed in Table 4 further below to establish the level of trips the two existing dwellings could generate during peak hours. This is shown in Table 1 and accepted by the LHA.

existing vehicle trip rates and traffic generation		arrive	depart	two-way
trip generation (two dwellings)	AM peak hour	0	1	1
	PM peak hour	1	1	2

Table 1: Proposed trip generation – two dwellings.

The Applicant has also identified the red line of the site conflicts with two businesses, these being PH Components and Flying Spares. The Applicant states that the companies are linked. The Applicant has highlighted application reference 23/00947/FUL, where it was stated Flying Spares is proposing to re-locate to a new site elsewhere in the borough to make way for this development. That application would enable consolidation of the business from six individual units to a single location.

The Applicant has therefore used the accepted trip rates for the proposed new building, which were submitted as part of that application to demonstrate the level of trips the business could generate at the existing site. The total number of trips application reference 23/00947/FUL could generate are detailed in Table 2.

Site	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (17:00-18:00)			Weekday 12-hour (07:00-19:00)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Vehicle Trip Generation (3273sqm)	6	0	6	0	37	37	57	57	114

Table 2: Total vehicle trips, Flying Spares relocation.

The Applicant has calculated that the total floorspace of the existing PH Components and Flying Spares buildings to be demolished are 1,149sqm. On this basis, the Applicant has calculated trip

rates from Table 2 and applied these to a 1,149sqm floorspace to establish the level of trips PH Components and Flying Spares could generate, as shown in Table 3.

existing employment trip rates and traffic generation		arrive	depart	two-way
trip rates (per sqm)	AM peak hour	0.183	0.000	0.183
	PM peak hour	0.000	1.130	1.130
trip generation (1,149sqm)	AM peak hour	2	0	2
	PM peak hour	0	13	13

Table 3: Proposed existing trip rates/ vehicle trips, PH Components & Flying Spares.

The LHA considers the existing trip rates to be acceptable.

Proposed development trip generation

To establish the level of vehicular traffic the proposed dwellings could generate during the peak hours, the Applicant has reviewed several recent planning applications in the area to compare TRICs trip rates. The trip rates accepted by the LHA as part of application reference 21/00379/FUL (73 dwellings, Sedgemere, Station Road, Market Bosworth) have been selected given these are the highest. The trip rates and trip generation for 140 dwellings are detailed in Table 4.

development vehicle trip rates and traffic generation		arrive	depart	two-way
approved trip rates (per dwelling)	AM peak hour	0.178	0.446	0.624
	PM peak hour	0.277	0.257	0.535
trip generation (140 dwellings)	AM peak hour	25	62	87
	PM peak hour	39	36	75

Table 4: Proposed trip rates and approximate vehicular trip generation (140 dwellings).

The proposed trip rates are accepted by the LHA. It is noted that application reference 24/00831/OUT has used marginally different trip rates, however the LHA advise that there would be no difference in the anticipated level of trips regardless of which trip rate is used.

For the proposed employment use, the Applicant has used the TRICs database in order to establish the approximate level of light and HGV traffic which could be generated by a total of 1,926sqm floorspace e(g)(iii) light industrial use. The approximate level of light and HGV traffic which could be generated by the proposals during the peak hours is shown in Table 5.

Light industrial vehicle trip generation (1,926sqm)									
	AM Peak			PM Peak			Daily		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way	Arrive	Depart	Two-way
Light	10	4	14	5	12	17	64	57	121
HGV	0	0	0	0	0	0	5	5	5
Total	10	4	14	5	12	17	69	62	131

Table 5: Proposed approximate vehicular trip generation (1,926sqm light industrial).

The LHA accepts the proposed trip rates for the employment use.

Net traffic generation

When considering the net change in peak hour traffic associated with both the residential and employment elements of the development, the total net traffic generation is shown in Table 6.

total net traffic generation		arrive	depart	two-way
net traffic generation	AM peak hour	+33	+65	+98
	PM peak hour	+43	+34	+77

Table 6: Total net traffic generation.

The LHA accepts the Applicants trip generation analysis.

Trip Distribution

For the residential element of the proposals, the Applicant has based trip distribution analysis on the trip distribution pattern agreed by the LHA as part of application reference 21/00970/OUT (105 dwellings, land south of The Stables, Wharf Farm, Station Road, Market Bosworth).

For the employment element of the proposals, the Applicant has used 2011 Census data. The trip distribution analysis is accepted by the LHA.

Notwithstanding the Applicants trip distribution analysis, the LHA is aware that there are proposals to implement a new one-way system in the centre of Market Bosworth in 2025, which would include implementing one-way systems on Market Place and Main Street. The LHA will provide a drawing detailing the proposals to the LPA separately for information. On this basis, the LHA request the Applicant amends their proposed trip distribution for a scenario where the one-way scheme is implemented.

Junction Capacity Assessments

The Applicants study junctions are outlined in Figure 1 further above. In addition, the Applicant has considered the site access junction with Station Road.

In order to establish the baseline survey data, traffic surveys were undertaken at junctions 3 and 4 on Thursday 14th March 2024, whilst the remaining traffic counts were undertaken on Wednesday 15th November 2023.

TEMPro traffic growth factors have been applied to the baseline counts to create forecast baseline traffic flows at the future year of 2029. Given the site is an allocated site, the Applicant has amended the TEMPro planning assumptions to avoid double counting the development as detailed within Paragraph 6.5 of the TA. The LHA accepts the Applicants traffic growth factors.

The Applicant has also included the following committed developments within their assessments:

- *19/01437/FUL - Erection of a multi-purpose golf clubhouse, formation of new car parking areas and access roads and the erection of 6 Golf holiday homes. Kyngs Golf and Country Club, Station Road, Market Bosworth.*
- *21/00379/FUL – 73 dwellings. Sedgemere, Station Road, Market Bosworth.*
- *23/00667/FUL – Change of use of dwelling to Special Educational Needs School. The Old Rectory, 8 Rectory Lane, Market Bosworth.*

Whilst the LHA accepts the committed developments which have been considered by the Applicant, as advised further above, the LHA is aware of live application reference 24/00831/OUT.

This application should be considered as part of a sensitivity test within the Applicants capacity assessments. Furthermore, given the proposed works to Market Place and Main Street, the Applicant should consider a scenario where these works have been completed, to demonstrate whether the proposed development would have a detrimental impact on the revised junction arrangements/ priorities.

Following the above, the LHA should be in a position to consider the Applicants capacity assessments further.

Off-Site Implications

All details of the Applicants proposed off-site works are shown on ADC drawing number ADC3226-DR-002 Rev. P5.

Proposed speed reducing measures

The LHA will provide further advice on the proposed speed reducing measures at the time it comments on the site access arrangements.

Weight restriction relocation

Currently, there is an existing 7.5 tonne (except for loading) weight restriction in force on Station Road immediately to the east of the existing industrial estate access. The Applicant is proposing to relocate the weight restriction to the east of the Kyngs Golf Club access and west of the junction of Godsons Hill with Station Road.

In order to restrict HGV's from accessing the proposed employment site through the centre of Market Bosworth and only access the site from the West/ A444, the LHA advise it is necessary for the Applicant to relocate the existing weight restriction. Whilst the LHA welcome the Applicants proposals, the LHA request the proposed weight restriction location is situated immediately to the east of the proposed site access, similar to the existing situation at the existing industrial estate access. In addition, positive black HGV signage should be installed opposite the proposed junction to direct HGVs back to the A444 when exiting the site.

The LHA advise the cost of the Traffic Regulation Order (TRO) associated with relocating the existing weight restriction will be approximately £7,500. This would be required as part of a Section 106 contribution in the event the proposals are granted planning permission by the LPA. In addition, the Applicant will be liable for all costs associated with the relocation/ installation of signage because of the proposals.

Consideration of pedestrian crossing facilities

Pedestrians leaving the site onto Station Road would need to cross the road, given there is no pedestrian footway on the southern site of Station Road up to Springfield Close. The Applicant has undertaken a PV² assessment to ascertain whether any formal pedestrian crossing facilities would be required on Station Road within the vicinity of the site access. The results of the assessment (included within Appendix H of the TA) have indicated that there is no justification for a formal pedestrian crossing facility to be installed as a result of the proposals. An uncontrolled pedestrian crossing point (dropped kerbs and tactile paving) has therefore been proposed on Station Road, which is considered acceptable to the LHA.

Internal Layout

The Applicant has applied for full planning permission for the residential element of the proposals only and at this stage, the layout of the employment element of the site is not to be determined. The LHA therefore provide internal layout comments in respect of the residential proposals only. In the event the hybrid planning application is granted planning permission by the LPA, the LHA would consider the parking provision for the employment site as part a future reserved matters application.

The acceptability of an adopted road layout is subject to a Section 38 agreement in accordance with the Highways Act (1980). For the site to be suitable for adoption, the internal layout must be designed fully in accordance with the Leicestershire Highway Design Guide ([LHDG] available at <https://resources.leicestershire.gov.uk/lhdg>).

After reviewing Nineteen47 drawing number 008 Rev. A (Planning Layout), the LHA advises that the internal access roads are currently not suitable for adoption. Whilst the road layout is not considered unsafe and adoptability is not a material planning consideration, the LHA advise the following amendments to the layout are required at the application stage prior to determination as plot layouts could be affected.

- There is pedestrian access to the development shown via Station Road which would accommodate the pedestrian desire line from the site to Market Bosworth village centre. A secondary pedestrian link to Heath Road does not provide connection to an established footway, due to the lack of pedestrian facilities within the turning head adjacent to No 81. The Applicant has shown an area to the west of the connection point as within the red line boundary which may provide a possible solution to the issue. The use of such a link would be limited, due to a lack of destination at Heath Road.
- The proposed width of 7.35m for the access road to the employment area is in accordance with Part 3, Table DG1 of the LHDG. The turning head geometry at the proposed limit of this road is not in accordance with Part 3, Figure DG4c of the LHDG.
- Speed control is not in accordance with Part 3, Table DG8 of the LHDG and should be amended.
- Visibility splays should be in accordance with LHDG Table DG1 and appropriate for the design speed of the roads. Visibility splays have been shown without dimension.
- Vehicle accesses should be located at least 10m from the radii of a junction to avoid conflict with turning vehicles and crossing points.

Additional Comments

- The Applicant should be advised that Leicestershire County Council will not maintain any of the green areas shown on the Planning Layout.
- Any shared private drive serving more than five but no more than 25 dwellings shall be a minimum of 4.8 metres wide for at least the first five metres behind the highway boundary and a drop crossing of a minimum size, as shown in Figure DG20 of the LHDG, at its junction with the adopted road carriageway.

- The Applicant should refer to LHDG Part 3 Section DG18 regarding the use of long private drives to ensure compliance with the requirements set out regarding refuse collection, turning heads and emergency vehicle access.
- Any roads which are proposed to be put forward as part of a Section 38 agreement should have gradients which conform to the standards set out in Part 3, Table DG1 of the LHDG.
- The LHA are unable to comment on drainage proposals as gully positions have not been shown. All drainage should be in accordance with LHDG Part 3 DG12. It must be ensured that surface water from private land does not run or pool in the public highway.

Parking provision

The LHA has reviewed the parking provision in respect of each plot and can confirm that the number of parking spaces per plot are acceptable, as well as the dimensions.

1.0 x 1.0m pedestrian visibility splays have also been shown where driveways meet the pedestrian footway. Pedestrian visibility splays will also need to be detailed where shared private drives meet the adopted highway. Garage dimensions, including the internal garage for the Litton plots are also considered to be in accordance with LHDG guidance and could therefore be considered as a usable parking space.

The LHA would however advise that the majority of four bed plots have parking in a tandem arrangement, which could lead to an increase in on-street parking. It is therefore requested that the Applicant reviews the tandem parking arrangements to reduce the number of plots where this could be an issue.

Finally, turning provision should be provided for the shared private drive connecting to the Employment Road, given the length of this road.

Transport Sustainability

The LHA has reviewed the Framework Travel Plan (FTP) and can advise currently, the following points:

- The Applicant should review the Travel Plan in consideration of these comments and also in line with the Leicestershire County Council (LCC) guidance www.choosehowyoumove.co.uk/wp-content/uploads/2019/12/writing-a-successful-travel-plan.pdf which must be followed for the plan to be approved and before being re-submitted.
- The plan should contain a comprehensive range of initiatives and SMART objectives that are clearly set out in the plan, with specific timescales of delivery and by whom over the life span of the plan to mitigate the impact on the local area and environment, set out clearly in an Action Plan.
- A suitably qualified professional will need to be appointed to the role of Travel Plan Co-ordinator (TPC) whose full name and contact details should be provided to LCC via s106monitoring@leics.gov.uk upon appointment. The TPC is responsible for:
 - Developing and leading initiatives to promote sustainable travel awareness and sustainable modes used amongst all regular travellers to and from the site and be proactive in this role for the life span of the plan.

- Research and promote the introduction/retention of suitable, practical, affordable alternatives to car-based travel for the site – including negotiations with delivery partners.
 - Liaise with relevant bodies: Local Authority, transport providers, specialist transport consultancies etc and convene and administer any internal steering group sessions.
 - Manage day-to-day operational and implementation requirements of the agreed travel plan and its initiatives and incentives.
- It is requested that the FTP, once approved, is implemented and monitored for no less than five years after occupation.
 - The preferred system for monitoring is MODESHIFT STARS – the TPC can register at Modeshift.org.uk, with the Travel Plan Monitoring Fee required for this site being £11,337.50.

The Applicant has liaised with Arriva with regards to extending the route of the existing 153 bus service along Station Road to serve the site, as detailed within Paragraphs 3.29 and 3.30 of the TA. The LHA welcome the extension of the bus service as this would considerably reduce walking distances for residents/ employees, who would otherwise have to walk approximately 1.4km to/ from the centre of Market Bosworth to catch the bus. The LHA advise that necessary extension of the service would need to be delivered at the full expense of the Applicant and would seek to secure this in the event it is mindful to advise no objection to the proposals in the future.

It is noted that Arriva has suggested the existing bus stops (ATCO codes: 260011003 & 260011004) close to the proposed site access would need to be relocated. The LHA advise that relocated stops should be equipped with a pole, flag, timetable case, bus stand road markings and raised kerbs. It would be beneficial for an indicative location of the proposed bus stops to be provided at this stage. Bus stops would be subject to traffic management assessments.

The FTP also references that there may be a phase 2 for this site and Arriva has indicated they would consider routing their 153 service into the development. In this case, the road width within the site needs to be a minimum of 6.75m to accommodate bus vehicles. Infrastructure for bus stops will also need to be installed within the site. The Applicant may wish to future proof the current development for this option, however additional carriageway widths over and above those required by the LHA for the current phase of development may be liable to a commuted sum.

The Applicant would be required to provide a travel pack per dwelling/ employee (currently £52.85 per pack, if supplied by LCC) which contains an application form for two (residential) / one (employment) six-month bus pass(es) in order to encourage sustainable travel to and from the site. Currently, the cost of a bus pass for an Arriva service is £510 per pass.

Construction Traffic

Construction traffic and how HGV's/ construction vehicles would access the site is not a material planning consideration. The LHA would not be able to seek to resist the proposals based on construction traffic, the type of vehicles used, or the route HGVs would take to access the site. Nevertheless, the LHA advise that in the event it is mindful to advise approval of the proposals to the LPA in the future, it would request a condition that a Construction Management Plan which includes details of the routing of construction traffic, along with details of parking and wheel washing facilities would be required as a condition. The LHA would require the details to be approved by the LPA prior to construction commencing on-site.

Closing

The LHA requires the Applicant to submit additional information to the LPA in respect of the following points for further consideration by the LHA:

- Confirmation the pedestrian access onto Heath Lane will not pass through third party land;
- Additional trip distribution analysis considering a scenario where the new one-way system is implemented in the centre of Market Bosworth;
- Updated capacity assessments to reflect a scenario where the new one-way system is implemented in the centre of Market Bosworth;
- Consideration of application 24/00831/OUT as a sensitivity test within the updated capacity assessments;
- Amendments to the location of the proposed weight restriction;
- Amendments to the internal layout as detailed further above; and
- Provision of indicative bus stop locations close to the site access on Station Road.

Date Received
30 August 2024

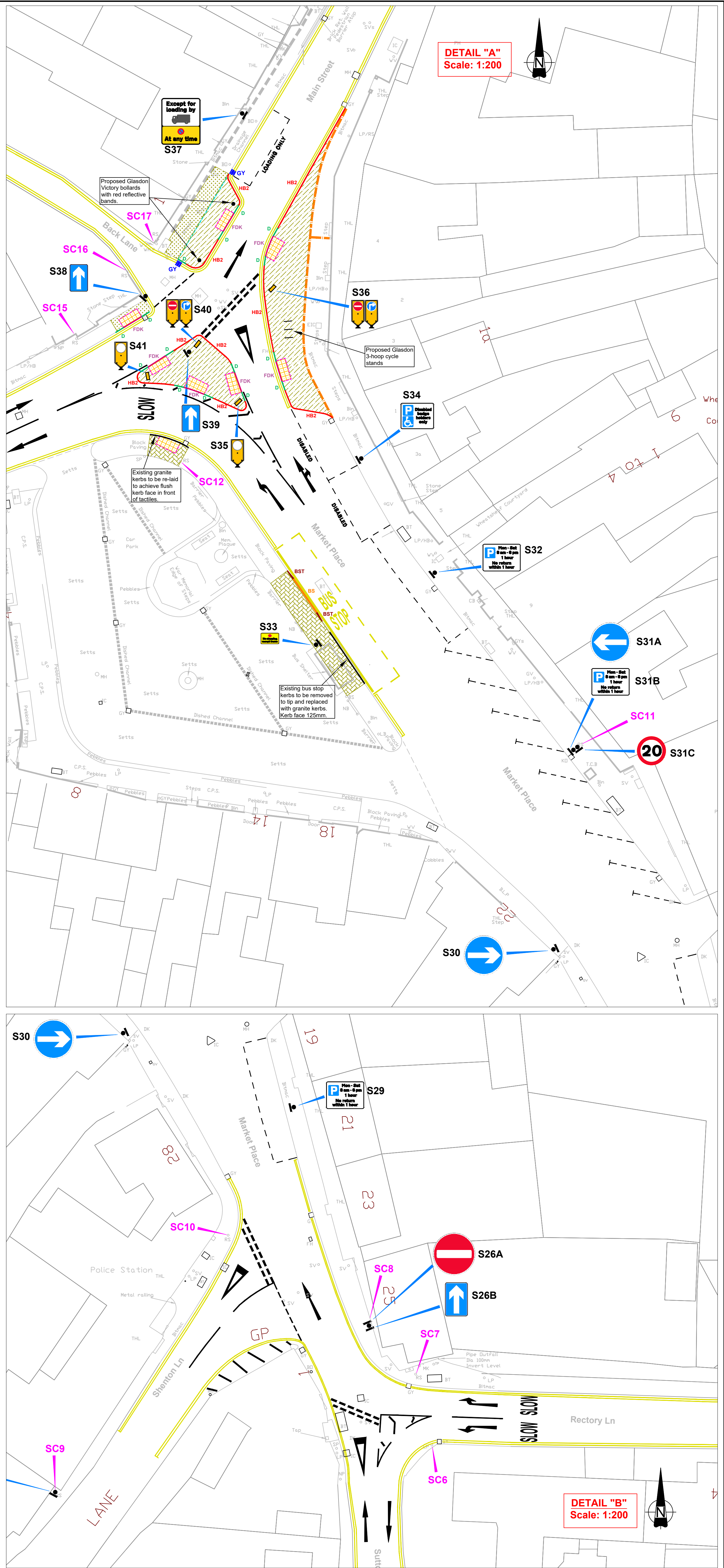
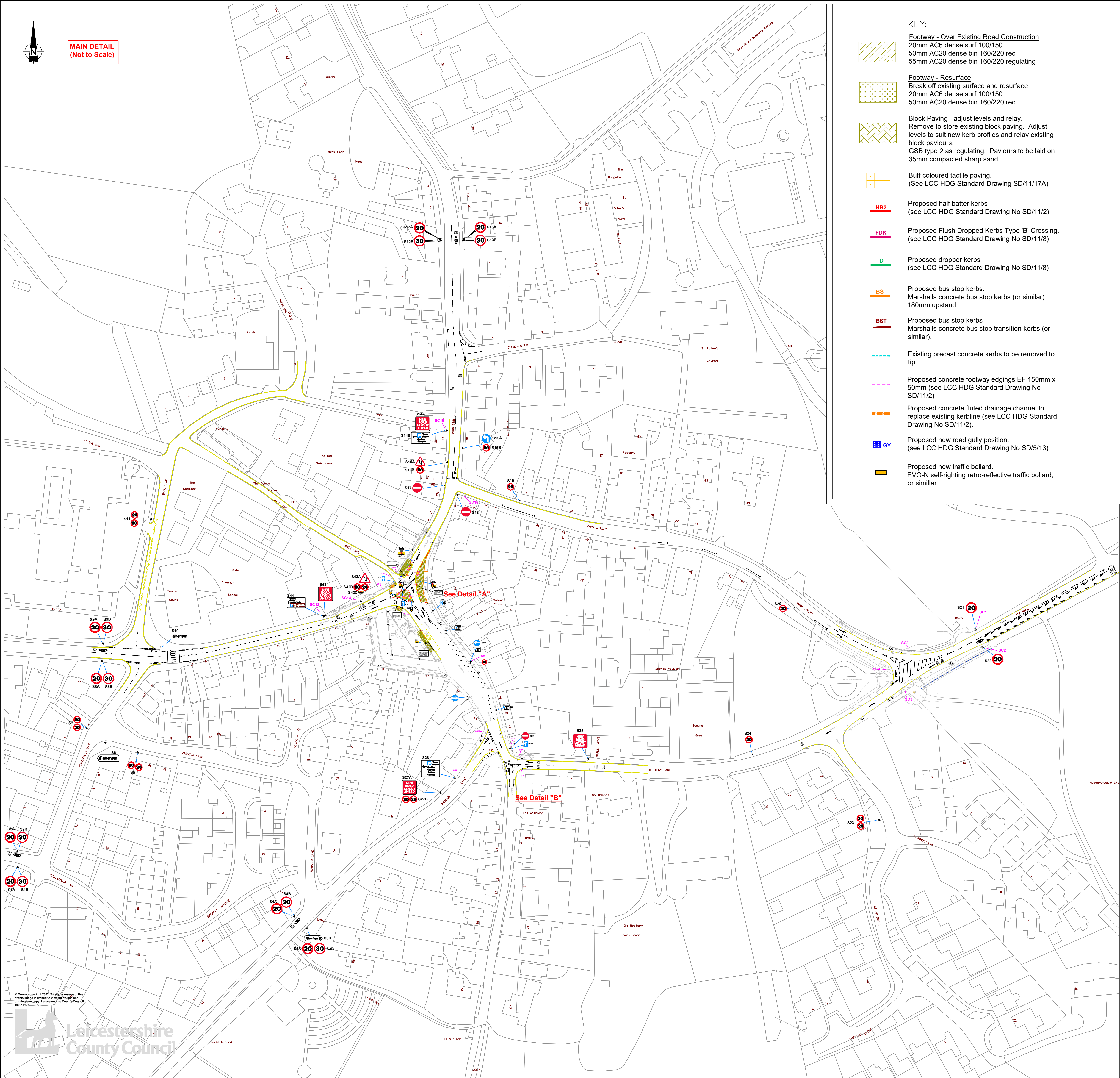
Case Officer
Ben Dutton

Reviewer
DH

Date issued
28 October 2024

APPENDIX B

GENERAL LAYOUT OF PROPOSED ONE-WAY SYSTEM IN CENTRE OF MARKET BOSWORTH



APPENDIX C

SHENTON LANE DEVELOPMENT TRAFFIC FLOWS (24/00831/OUT)

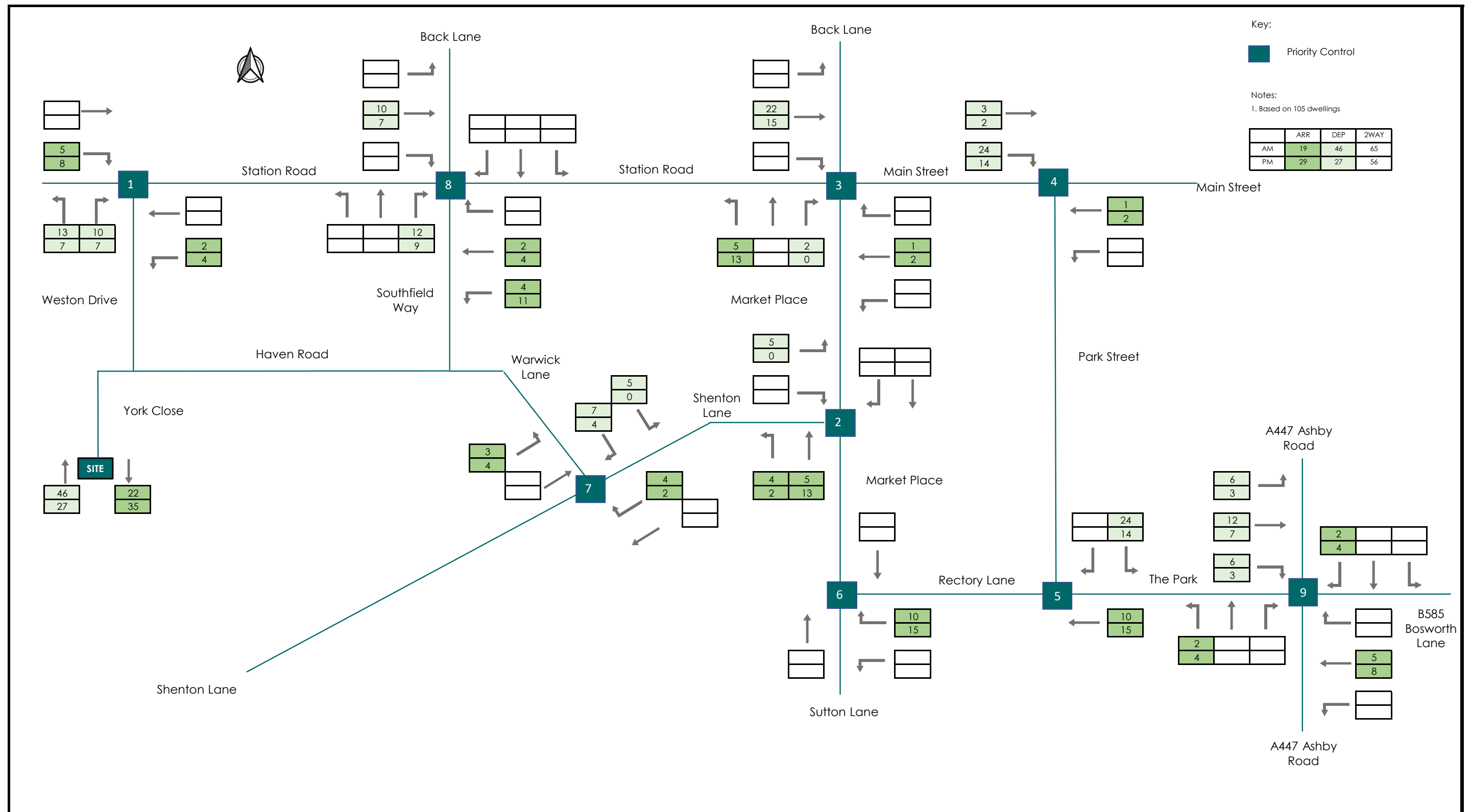
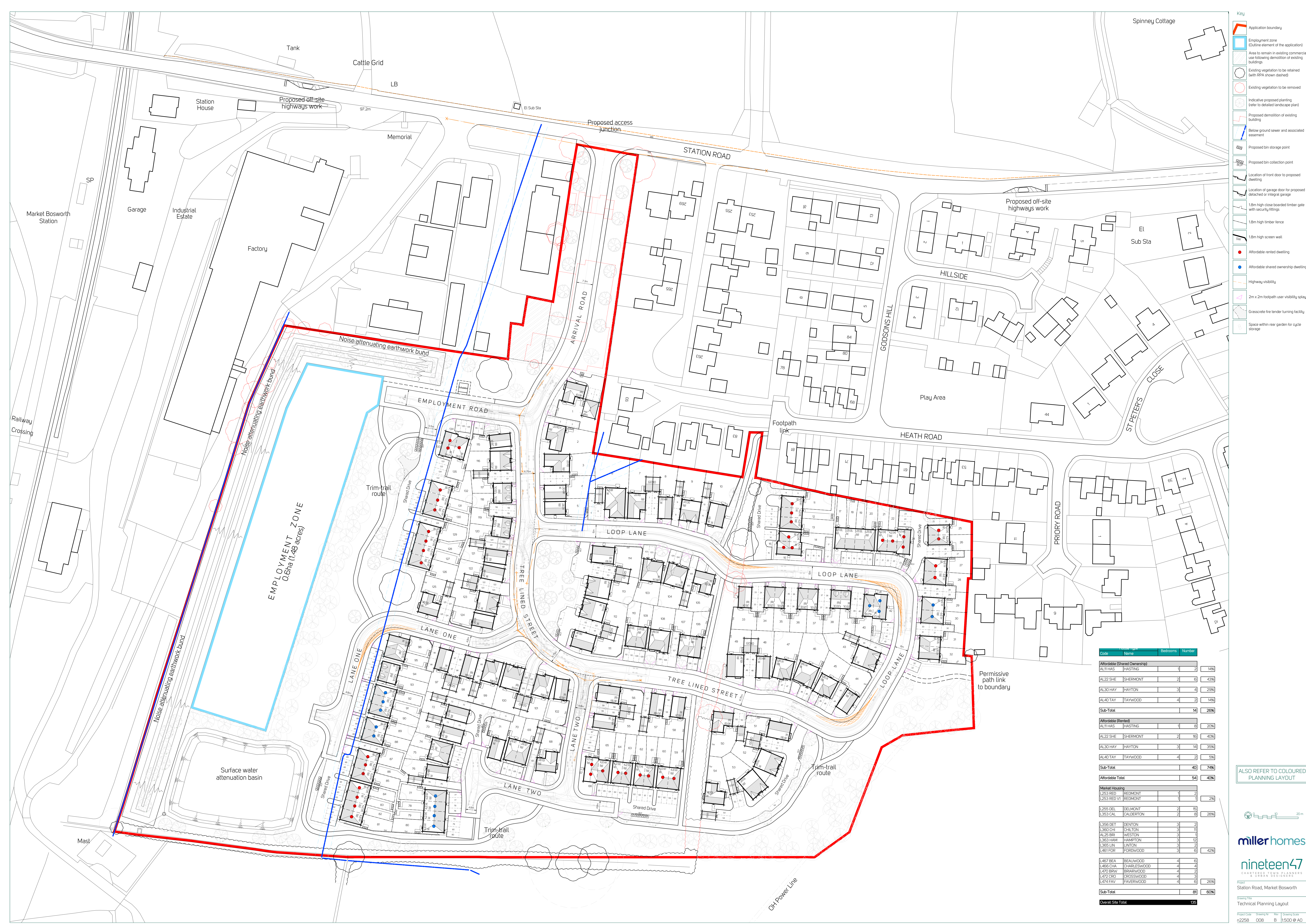


FIGURE B6

**GENERATED TRAFFIC: PROPOSED DEVELOPMENT
AM & PM PEAK HOURS**

APPENDIX D

UPDATED SITE LAYOUT



- Key
- Application boundary
 - Employment zone (Outline element of the application)
 - Area to remain in existing commercial use following demolition of existing buildings
 - Existing vegetation to be retained (with RPA shown dashed)
 - Existing vegetation to be removed
 - Indicative proposed planting (refer to detailed landscape plan)
 - Proposed demolition of existing building
 - Below ground sewer and associated easement
 - Proposed bin storage point
 - Proposed bin collection point
 - Location of front door to proposed dwelling
 - Location of garage door for proposed detached or integral garage
 - 1.8m high close boarded timber gate with security fittings
 - 1.8m high timber fence
 - 1.8m high screen wall
 - Affordable rented dwelling
 - Affordable shared ownership dwelling
 - Highway visibility
 - 2m x 2m footpath user visibility splay
 - Grasscrete fire tender turning facility
 - Space within rear garden for cycle storage

Code	Name	bedrooms	Number
Affordable (Shared Ownership)			
AL11 HAS	HASTING	1	2
AL22 SHE	SHERMONT	2	6
AL30 HAY	HAYTON	3	4
AL40 TAY	TAYWOOD	4	2
Sub-Total		14	26%
Affordable (Rented)			
AL11 HAS	HASTING	1	8
AL22 SHE	SHERMONT	2	16
AL30 HAY	HAYTON	3	14
AL40 TAY	TAYWOOD	4	2
Sub-Total		40	74%
Affordable Total		54	40%
Market Housing			
L253 RED	REDMONT	1	2
L253 RED V1	REDMONT	1	1
L255 DEL	DELMONT	2	16
L353 CAL	CALDERTON	2	8
L356 DET	DENTON	3	2
L360 CHI	CHILTON	3	11
AL25 BRW	WESTON	3	1
L353 HAM	HAMPTON	3	12
L365 LIN	LINTON	3	2
L461 FOR	FORDWOOD	3	6
L467 BEA	BEALWOOD	4	6
L466 CHA	CHARLESWOOD	4	4
L470 BRW	BRARWOOD	4	2
L474 CRO	CROSSWOOD	4	3
L474 FAV	FAVERWOOD	4	6
Sub-Total		81	60%
Overall Site Total		135	

ALSO REFER TO COLOURED PLANNING LAYOUT

20 m

millershomes

nineteen47
CHARTERED TOWN PLANNERS
& URBAN DESIGNERS

Project
Station Road, Market Bosworth

Drawn By
Technical Planning Layout

Project Code
n22558

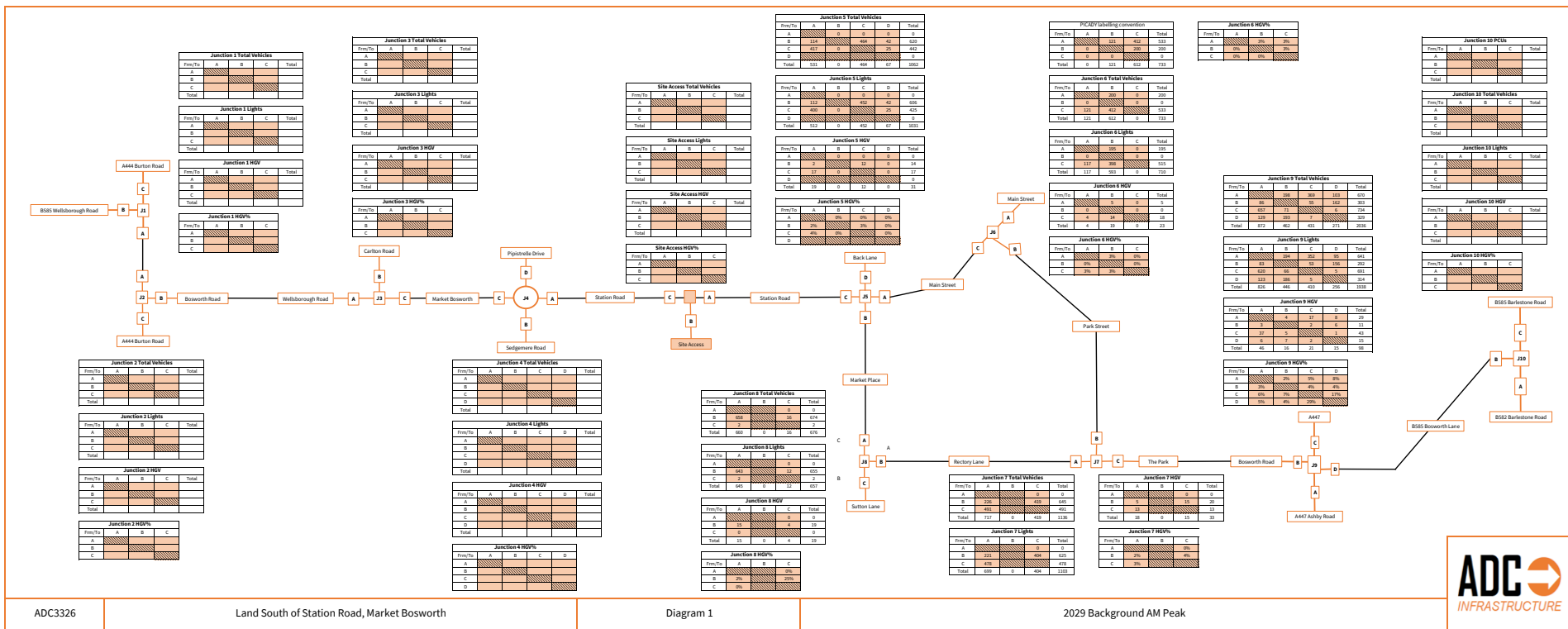
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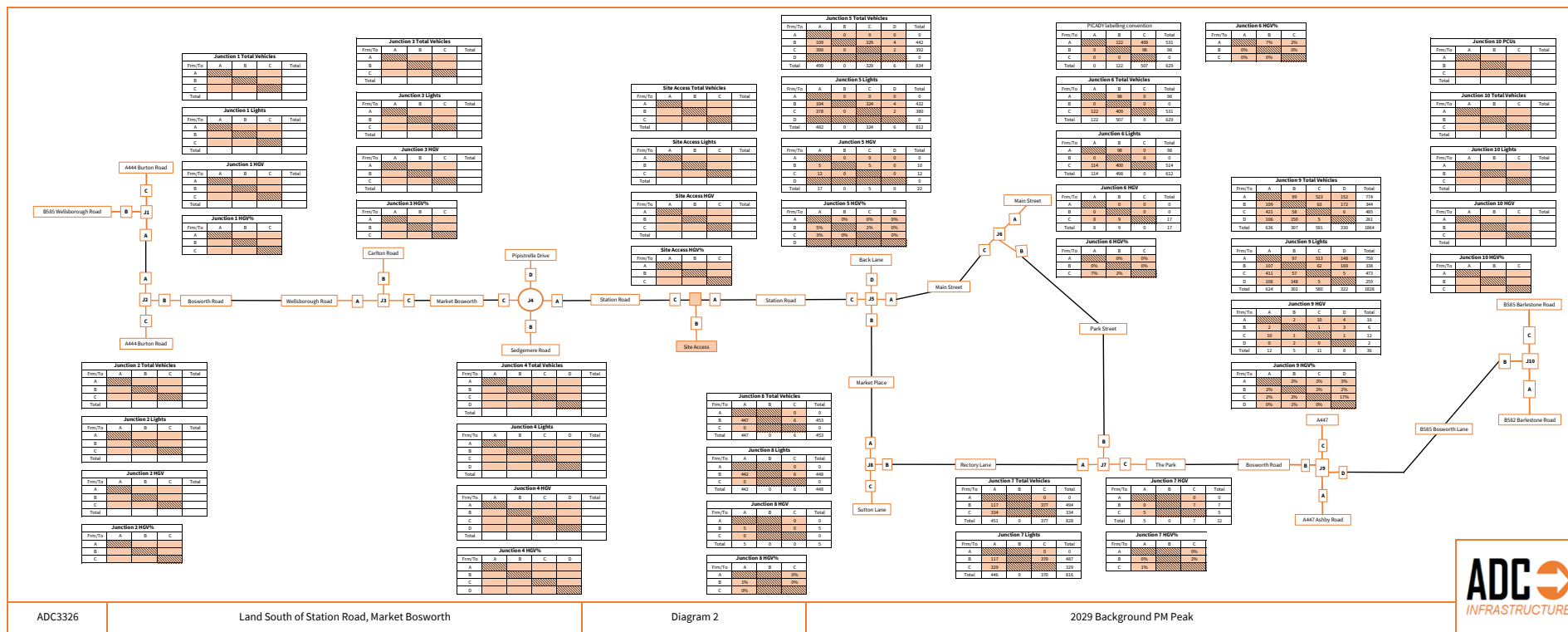
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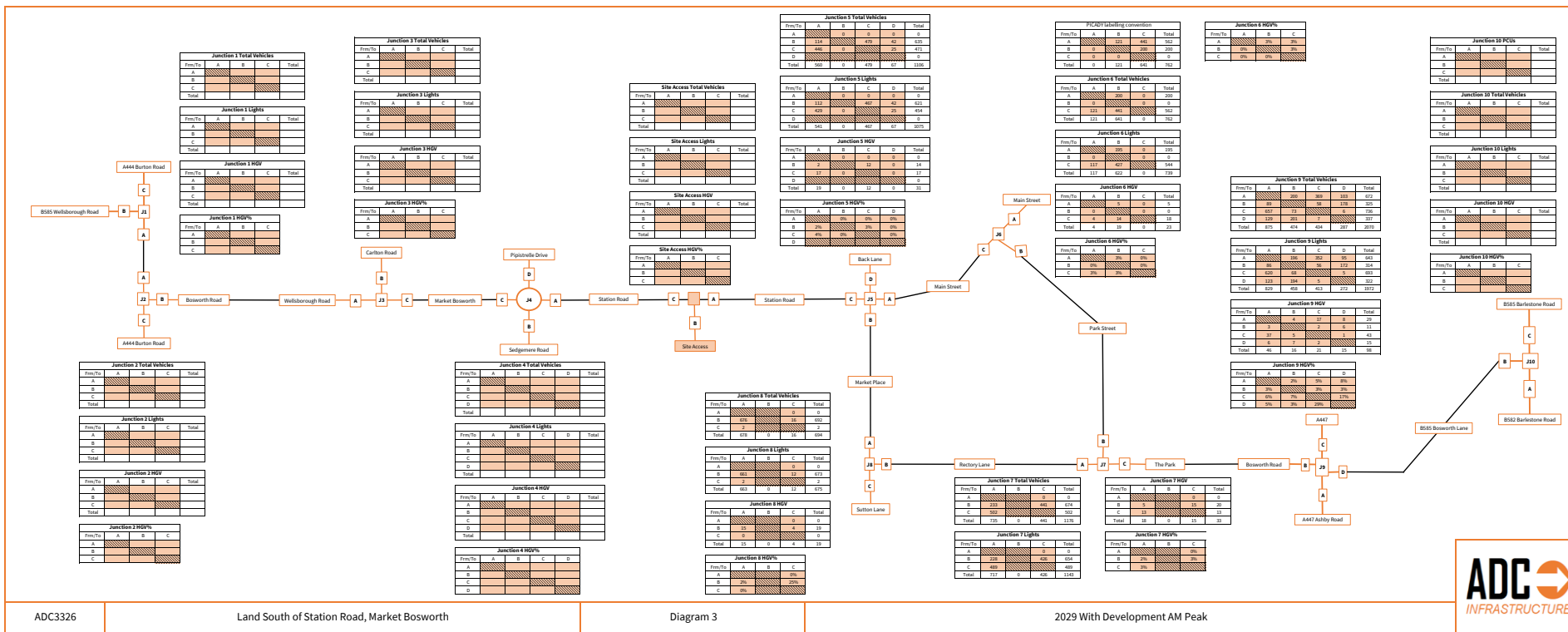
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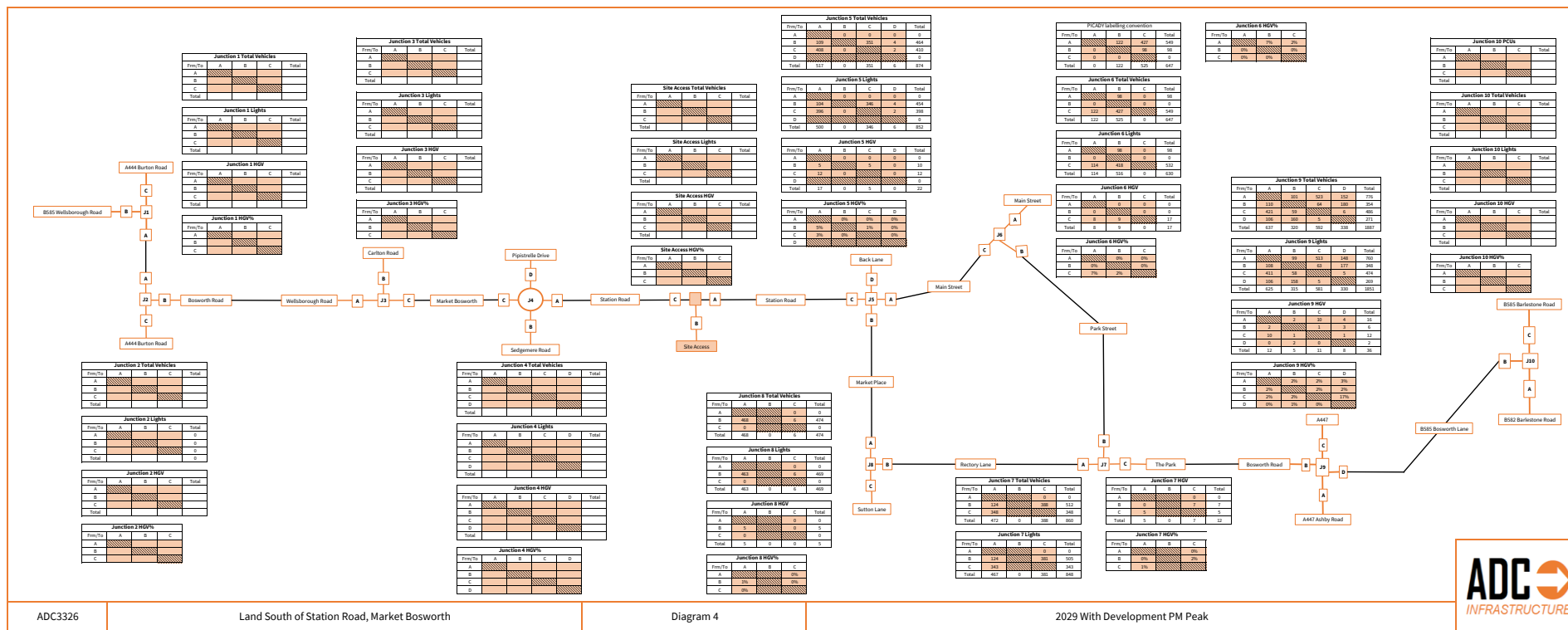
APPENDIX E

2029 TRAFFIC FLOWS (SENSITIVITY)









APPENDIX F

JUNCTION 5 – PICADY OUTPUT

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.0.6896						
© Copyright TRL Limited, 2018						
For sales and distribution information, program advice and maintenance, contact TRL:						
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk						
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution						

Filename: J5 Main Street-Market Place-Station Road (sens).j9

Path: C:\Users\ADC\OneDrive - ADC Infrastructure Limited\ADC Projects\ADC3326 Land South of Station Road, Market Bosworth\Calculations\Junction modelling\J5

Report generation date: 03/12/2024 00:57:45

- »Traffic flows - 2029 Background, AM
- »Traffic flows - 2029 Background, PM
- »Traffic flows - 2029 With Development, AM
- »Traffic flows - 2029 With Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2029 Background						
Stream B-ACD	0.5	11.33	0.35	0.3	10.19	0.26
Stream A-BCD	0.0	0.00	0.00	0.0	0.00	0.00
Stream D-ABC	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-ABD	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2029 With Development						
Stream B-ACD	0.5	11.45	0.35	0.4	10.25	0.26
Stream A-BCD	0.0	0.00	0.00	0.0	0.00	0.00
Stream D-ABC	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-ABD	0.0	0.00	0.00	0.0	0.00	0.00

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	Main Street/Market Place/Station Road/Back Lane
Location	Market Bosworth
Site number	
Date	07/12/2023
Version	v 1
Status	preliminary
Identifier	
Client	Miller Homes
Jobnumber	ADC3326
Enumerator	ADC-TOSHIBA-AIO\ADC
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D3	2029 Background	AM	ONE HOUR	07:45	09:15	15
D4	2029 Background	PM	ONE HOUR	16:45	18:15	15
D5	2029 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2029 With Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2029 Background, 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	Main Street/Market Place/Station Road/Back Lane	Crossroads	One-way from C to A		2.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Main Street		Major
B	Market Place		Minor
C	Station Road		Major
D	Back Lane	Entry only	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	7.40				✓	
C	7.40			0.0	✓	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	3.65	21	53
D	One lane	3.60	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	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
1	A-D	612	-	-	-	-	-	-	0.146	0.209	0.146	-	-	-
1	B-A	544	0.061	0.154	0.154	-	-	-	0.097	0.221	-	0.154	0.154	0.077
1	B-C	700	0.066	0.167	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	544	0.061	0.154	0.154	-	-	-	0.097	0.221	0.097	-	-	-
1	B-D, offside lane	544	0.061	0.154	0.154	-	-	-	0.097	0.221	0.097	-	-	-
1	C-B	574	0.137	0.137	0.196	-	-	-	-	-	-	-	-	-
1	D-A	661	-	-	-	-	-	-	0.158	-	0.063	-	-	-
1	D-B, nearside lane	507	0.091	0.091	0.206	-	-	-	0.144	0.144	0.057	-	-	-
1	D-B, offside lane	507	0.091	0.091	0.206	-	-	-	0.144	0.144	0.057	-	-	-
1	D-C	507	-	0.091	0.206	0.072	0.144	0.144	0.144	0.144	0.057	-	-	-

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)
D3	2029 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	156	100.000
C		✓	442	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	0	0	0
	B	114	0	0	42
	C	417	0	0	25
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	2	0
	B	2	0	3	0
	C	4	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.35	11.33	0.5	B
ABCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	504	0.233	116	0.3	9.256	A
A-BCD	0	547	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	486	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	19			19			
C-A	314			314			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	140	498	0.282	140	0.4	10.046	B
A-BCD	0	538	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	475	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	375			375			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	489	0.351	171	0.5	11.293	B
A-BCD	0	525	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	461	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	28			28			
C-A	459			459			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	489	0.351	172	0.5	11.333	B
A-BCD	0	525	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	461	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	28			28			
C-A	459			459			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	140	498	0.282	141	0.4	10.099	B
A-BCD	0	538	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	475	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	375			375			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	504	0.233	118	0.3	9.330	A
A-BCD	0	547	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	485	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	19			19			
C-A	314			314			

Traffic flows - 2029 Background, 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	Main Street/Market Place/Station Road/Back Lane	Crossroads	One-way from C to A		2.31	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)
D4	2029 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1	100.000
B		✓	113	100.000
C		✓	392	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	0	0	1
	B	109	0	0	4
	C	390	0	0	2
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	5	0	2	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.26	10.19	0.3	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	491	0.173	84	0.2	8.843	A
A-BCD	0	567	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	491	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	294			294			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	485	0.209	101	0.3	9.378	A
A-BCD	0	559	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	482	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	351			351			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	478	0.261	124	0.3	10.173	B
A-BCD	0	547	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	470	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	429			429			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	478	0.261	124	0.3	10.193	B
A-BCD	0	547	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	470	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	429			429			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	485	0.209	102	0.3	9.402	A
A-BCD	0	559	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	482	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	351			351			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	491	0.173	85	0.2	8.888	A
A-BCD	0	567	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	491	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	294			294			

Traffic flows - 2029 With 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	Main Street/Market Place/Station Road/Back Lane	Crossroads	One-way from C to A		2.80	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)
D5	2029 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	156	100.000
C		✓	471	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	0	0	0	0	
	114	0	0	42	
	446	0	0	25	
	0	0	0	0	

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	0	8	2	0	
	2	0	3	0	
	4	0	0	0	
	0	0	0	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.35	11.45	0.5	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	502	0.234	116	0.3	9.308	A
A-BCD	0	544	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	482	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	19			19			
C-A	336			336			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	140	495	0.283	140	0.4	10.120	B
A-BCD	0	534	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	471	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	401			401			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	486	0.353	171	0.5	11.407	B
A-BCD	0	520	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	456	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	28			28			
C-A	491			491			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	486	0.353	172	0.5	11.447	B
A-BCD	0	520	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	456	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	28			28			
C-A	491			491			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	140	495	0.283	141	0.4	10.172	B
A-BCD	0	534	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	471	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	401			401			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	117	502	0.234	118	0.3	9.385	A
A-BCD	0	544	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	482	0.000	0	0.0	0.000	A
C-ABD	0	568	0.000	0	0.0	0.000	A
C-D	19			19			
C-A	336			336			

Traffic flows - 2029 With 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	Main Street/Market Place/Station Road/Back Lane	Crossroads	One-way from C to A		2.24	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)
D6	2029 With Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	113	100.000
C		✓	410	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	109	0	0	4
	C	408	0	0	2
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	5	0	2	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.26	10.25	0.4	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	489	0.174	84	0.2	8.871	A
A-BCD	0	565	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	489	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	307			307			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	484	0.210	101	0.3	9.412	A
A-BCD	0	556	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	480	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	367			367			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	476	0.262	124	0.3	10.228	B
A-BCD	0	544	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	467	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	449			449			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	476	0.262	124	0.4	10.248	B
A-BCD	0	544	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	467	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	449			449			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	102	484	0.210	102	0.3	9.442	A
A-BCD	0	556	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	480	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	367			367			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	489	0.174	85	0.2	8.918	A
A-BCD	0	565	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	0	489	0.000	0	0.0	0.000	A
C-ABD	0	570	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	307			307			

APPENDIX G

JUNCTION 6 – PICADY OUTPUT

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.0.6896						
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Filename: J6 - Main Street-Park Street (sens).j9

Path: C:\Users\ADC\OneDrive - ADC Infrastructure Limited\ADC Projects\ADC3326 Land South of Station Road, Market Bosworth\Calculations\Junction modelling\J6

Report generation date: 03/12/2024 00:00:56

»Traffic flows - 2029 Background, AM

»Traffic flows - 2029 Background, PM

»Traffic flows - 2029 WD, AM

»Traffic flows - 2029 WD, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2029 Background						
Stream B-AC	0.8	12.46	0.43	0.3	8.62	0.21
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2029 WD						
Stream B-AC	0.8	12.83	0.44	0.3	8.73	0.21
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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	
Location	
Site number	
Date	18/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-TOSHIBA-AIO\ADC
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D3	2029 Background	AM	ONE HOUR	07:45	09:15	15
D4	2029 Background	PM	ONE HOUR	16:45	18:15	15
D5	2029 WD	AM	ONE HOUR	07:45	09:15	15
D6	2029 WD	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2029 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Main Street/Park Street	T-Junction	Two-way		3.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Main Street (S)		Major
B	Main Street (N)		Minor
C	Park Street		Major

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)
C	5.70			0.0	✓	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	2.96	0	60

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	505	0.093	0.236	0.148	0.336
1	B-C	659	0.102	0.259	-	-
1	C-B	574	0.225	0.225	-	-

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)
D3	2029 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	200	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	121	412
	B	0	0	200
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	3	3
	B	0	0	3
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.43	12.46	0.8	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	151	550	0.274	149	0.4	8.937	A
C-AB	0	481	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	91			91			
A-C	310			310			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	533	0.337	179	0.5	10.160	B
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	109			109			
A-C	370			370			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	220	509	0.433	219	0.7	12.379	B
C-AB	0	438	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	133			133			
A-C	454			454			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	220	509	0.433	220	0.8	12.459	B
C-AB	0	438	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	133			133			
A-C	454			454			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	533	0.337	181	0.5	10.247	B
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	109			109			
A-C	370			370			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	151	550	0.274	151	0.4	9.028	A
C-AB	0	481	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	91			91			
A-C	310			310			

Traffic flows - 2029 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Main Street/Park Street	T-Junction	Two-way		1.31	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)
D4	2029 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	531	100.000
B		✓	98	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	122	409
	B	0	0	98
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	7	2
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	8.62	0.3	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	568	0.130	73	0.1	7.267	A
C-AB	0	481	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	92			92			
A-C	308			308			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	550	0.160	88	0.2	7.786	A
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	110			110			
A-C	368			368			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	526	0.205	108	0.3	8.606	A
C-AB	0	438	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	134			134			
A-C	450			450			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	526	0.205	108	0.3	8.617	A
C-AB	0	438	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	134			134			
A-C	450			450			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	550	0.160	88	0.2	7.799	A
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	110			110			
A-C	368			368			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	568	0.130	74	0.2	7.289	A
C-AB	0	481	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	92			92			
A-C	308			308			

Traffic flows - 2029 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Main Street/Park Street	T-Junction	Two-way		3.37	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)
D5	2029 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	562	100.000
B		✓	200	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	121	441
	B	0	0	200
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	3	3
	B	0	0	3
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.44	12.83	0.8	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	151	545	0.276	149	0.4	9.063	A
C-AB	0	476	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	91			91			
A-C	332			332			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	526	0.342	179	0.5	10.356	B
C-AB	0	457	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	109			109			
A-C	396			396			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	220	501	0.440	219	0.8	12.738	B
C-AB	0	430	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	133			133			
A-C	486			486			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	220	501	0.440	220	0.8	12.826	B
C-AB	0	430	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	133			133			
A-C	486			486			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	526	0.342	181	0.5	10.448	B
C-AB	0	457	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	109			109			
A-C	396			396			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	151	545	0.276	151	0.4	9.159	A
C-AB	0	476	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	91			91			
A-C	332			332			

Traffic flows - 2029 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Main Street/Park Street	T-Junction	Two-way		1.29	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)
D6	2029 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	549	100.000
B		✓	98	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	122	427
	B	0	0	98
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	7	2
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	8.73	0.3	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	564	0.131	73	0.1	7.320	A
C-AB	0	478	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	92			92			
A-C	321			321			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	546	0.161	88	0.2	7.858	A
C-AB	0	459	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	110			110			
A-C	384			384			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	520	0.207	108	0.3	8.716	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	134			134			
A-C	470			470			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	520	0.207	108	0.3	8.726	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	134			134			
A-C	470			470			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	546	0.161	88	0.2	7.873	A
C-AB	0	459	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	110			110			
A-C	384			384			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	564	0.131	74	0.2	7.342	A
C-AB	0	478	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	92			92			
A-C	321			321			

APPENDIX H

JUNCTION 7 – PICADY OUTPUT

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.0.6896						
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Filename: J7 (sens).j9

Path: C:\Users\ADC\OneDrive - ADC Infrastructure Limited\ADC Projects\ADC3326 Land South of Station Road, Market Bosworth\Calculations\Junction modelling\J7

Report generation date: 04/12/2024 10:12:00

»Traffic flows - 2029 Background, AM

»Traffic flows - 2029 Background, PM

»Traffic flows - 2029 WD, AM

»Traffic flows - 2029 WD, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2029 Background						
Stream B-AC	1.4	20.64	0.59	0.4	11.20	0.29
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2029 WD						
Stream B-AC	1.5	21.75	0.61	0.4	11.54	0.30
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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	J5 - The Park/Rectory Lane/Park Street
Location	Market Bosworth
Site number	
Date	19/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-TOSHIBA-AIO\ADC
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D5	2029 Background	AM	ONE HOUR	07:45	09:15	15
D6	2029 Background	PM	ONE HOUR	16:45	18:15	15
D7	2029 WD	AM	ONE HOUR	07:45	09:15	15
D8	2029 WD	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2029 Background, 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	T-Junction	One-way from C to A		6.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Rectory Lane		Major
B	Park Street		Minor
C	The Park		Major

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)
C	6.20			0.0	✓	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	2.77	69	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	488	0.064	0.162	0.102	0.232
1	B-C	609	0.067	0.170	-	-
1	C-B	574	0.160	0.160	-	-

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)
D5	2029 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	226	100.000
C		✓	491	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	0	0
	B	226	0	0
	C	491	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	2	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.59	20.64	1.4	C
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	170	440	0.386	168	0.6	13.090	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	370			370			
A-B	0			0			
A-C	0			0			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	203	433	0.469	202	0.9	15.529	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	441			441			
A-B	0			0			
A-C	0			0			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	249	423	0.589	247	1.4	20.220	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	541			541			
A-B	0			0			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	249	423	0.589	249	1.4	20.640	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	541			541			
A-B	0			0			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	203	433	0.469	205	0.9	15.930	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	441			441			
A-B	0			0			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	170	440	0.386	171	0.6	13.431	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	370			370			
A-B	0			0			
A-C	0			0			

Traffic flows - 2029 Background, 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	T-Junction	One-way from C to A		2.89	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)
D6	2029 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	117	100.000
C		✓	334	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	0
	B	117	0	0
	C	334	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.29	11.20	0.4	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	462	0.191	87	0.2	9.578	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	251			251			
A-B	0			0			
A-C	0			0			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	457	0.230	105	0.3	10.216	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	300			300			
A-B	0			0			
A-C	0			0			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	450	0.286	128	0.4	11.175	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	368			368			
A-B	0			0			
A-C	0			0			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	450	0.286	129	0.4	11.204	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	368			368			
A-B	0			0			
A-C	0			0			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	457	0.230	106	0.3	10.252	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	300			300			
A-B	0			0			
A-C	0			0			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	462	0.191	88	0.2	9.638	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	251			251			
A-B	0			0			
A-C	0			0			

Traffic flows - 2029 WD, 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	T-Junction	One-way from C to A		6.85	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)
D7	2029 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	233	100.000
C		✓	502	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	0
	B	233	0	0
	C	502	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.61	21.75	1.5	C
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	439	0.399	173	0.6	13.375	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	378			378			
A-B	0			0			
A-C	0			0			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	209	432	0.485	208	0.9	16.020	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	451			451			
A-B	0			0			
A-C	0			0			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	421	0.609	254	1.5	21.232	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	553			553			
A-B	0			0			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	421	0.609	256	1.5	21.745	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	553			553			
A-B	0			0			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	209	432	0.485	212	1.0	16.495	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	451			451			
A-B	0			0			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	439	0.399	177	0.7	13.753	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	378			378			
A-B	0			0			
A-C	0			0			

Traffic flows - 2029 WD, 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	T-Junction	One-way from C to A		3.01	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)
D8	2029 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	124	100.000
C		✓	348	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	0
	B	124	0	0
	C	348	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.30	11.54	0.4	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	93	461	0.203	92	0.3	9.739	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	262			262			
A-B	0			0			
A-C	0			0			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	456	0.245	111	0.3	10.439	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	313			313			
A-B	0			0			
A-C	0			0			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	449	0.304	136	0.4	11.506	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	383			383			
A-B	0			0			
A-C	0			0			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	449	0.304	137	0.4	11.538	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	383			383			
A-B	0			0			
A-C	0			0			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	456	0.245	112	0.3	10.481	B
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	313			313			
A-B	0			0			
A-C	0			0			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	93	461	0.203	94	0.3	9.807	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	262			262			
A-B	0			0			
A-C	0			0			

APPENDIX I

JUNCTION 8 – PICADY OUTPUT

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.0.6896						
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Filename: J8 - DIRECT (sens).j9

Path: C:\Users\ADC\OneDrive - ADC Infrastructure Limited\ADC Projects\ADC3326 Land South of Station Road, Market Bosworth\Calculations\Junction modelling\J8

Report generation date: 03/12/2024 11:05:34

»Traffic flows - 2029 Background, AM

»Traffic flows - 2029 Background, PM

»Traffic flows - 2029 WD, AM

»Traffic flows - 2029 WD, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2029 Background						
Stream B-AC	0.0	5.99	0.00	0.0	0.00	0.00
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2029 WD						
Stream B-AC	0.0	6.00	0.00	0.0	5.87	0.00
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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	J6 - Market Place/Rectory Lane
Location	Market Bosworth
Site number	
Date	19/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-TOSHIBA-AIO\ADC
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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 period length (min)	Time segment length (min)
D3	2029 Background	AM	DIRECT	07:45	08:45	60	15
D4	2029 Background	PM	DIRECT	16:30	17:30	60	15
D5	2029 WD	AM	DIRECT	07:45	08:45	60	15
D6	2029 WD	PM	DIRECT	16:30	17:30	60	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2029 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Rectory Lane		Major
B	Sutton Lane		Minor
C	Market Place		Major

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)
C	5.40			0.0	✓	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	3.20	50	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	511	0.095	0.241	0.152	0.345
1	B-C	645	0.102	0.257	-	-
1	C-B	574	0.228	0.228	-	-

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 period length (min)	Time segment length (min)
D3	2029 Background	AM	DIRECT	07:45	08:45	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000

Origin-Destination Data

Demand (Veh/hr)

07:45 - 08:00

	To			
From		A	B	C
	A	0	4	164
	B	0	0	1
	C	0	0	0

Demand (Veh/hr)

08:00 - 08:15

	To			
From		A	B	C
	A	0	4	165
	B	0	0	0
	C	0	0	0

Demand (Veh/hr)

08:15 - 08:30

	To			
From		A	B	C
	A	0	4	165
	B	0	0	0
	C	0	0	0

Demand (Veh/hr)

08:30 - 08:45

	To			
From		A	B	C
	A	0	4	164
	B	0	0	1
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	25	2
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	5.99	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	1	602	0.002	0.99	0.0	5.989	A
C-AB	0	535	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	164			164			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	602	0.000	0.01	0.0	0.000	A
C-AB	0	534	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	165			165			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	527	0.000	0	0.0	0.000	A
C-AB	0	534	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	165			165			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	1	602	0.002	0.99	0.0	5.989	A
C-AB	0	535	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	164			164			

Traffic flows - 2029 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.00	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 period length (min)	Time segment length (min)
D4	2029 Background	PM	DIRECT	16:30	17:30	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000

Origin-Destination Data

Demand (Veh/hr)

16:30 - 16:45

	To			
From		A	B	C
	A	0	2	111
	B	0	0	0
	C	0	0	0

Demand (Veh/hr)

16:45 - 17:00

	To			
From		A	B	C
	A	0	1	112
	B	0	0	0
	C	0	0	0

Demand (Veh/hr)

17:00 - 17:15

	To			
		A	B	C
	A	0	1	112
	B	0	0	0
From	C	0	0	0

Demand (Veh/hr)

17:15 - 17:30

	To			
		A	B	C
	A	0	2	112
	B	0	0	0
From	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	1
	B	0	0	0
From	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	542	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	2			2			
A-C	111			111			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	542	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	1			1			
A-C	112			112			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	542	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	1			1			
A-C	112			112			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	542	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	2			2			
A-C	112			112			

Traffic flows - 2029 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.02	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 period length (min)	Time segment length (min)
D5	2029 WD	AM	DIRECT	07:45	08:45	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000

Origin-Destination Data

Demand (Veh/hr)

07:45 - 08:00	From	To			
			A	B	C
		A	0	4	168
		B	0	0	1
		C	0	0	0

Demand (Veh/hr)

08:00 - 08:15	From	To			
			A	B	C
		A	0	4	170
		B	0	0	0
		C	0	0	0

Demand (Veh/hr)

08:15 - 08:30

	To			
		A	B	C
	A	0	4	170
	B	0	0	0
From	C	0	0	0

Demand (Veh/hr)

08:30 - 08:45

	To			
		A	B	C
	A	0	4	168
	B	0	0	1
From	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	25	2
	B	0	0	0
From	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	6.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	1	601	0.002	0.99	0.0	5.999	A
C-AB	0	534	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	168			168			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	600	0.000	0.01	0.0	0.000	A
C-AB	0	533	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	170			170			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	526	0.000	0	0.0	0.000	A
C-AB	0	533	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	170			170			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	1	601	0.002	0.99	0.0	5.999	A
C-AB	0	534	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	4			4			
A-C	168			168			

Traffic flows - 2029 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.02	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 period length (min)	Time segment length (min)
D6	2029 WD	PM	DIRECT	16:30	17:30	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		✓	100.000
B		✓	100.000
C		✓	100.000

Origin-Destination Data

Demand (Veh/hr)

16:30 - 16:45	From	To			
			A	B	C
		A	0	2	116
		B	0	0	0
		C	0	0	0

Demand (Veh/hr)

16:45 - 17:00	From	To			
			A	B	C
		A	0	1	117
		B	0	0	0
		C	0	0	0

Demand (Veh/hr)

17:00 - 17:15

	To			
		A	B	C
	A	0	1	117
	B	0	0	0
From	C	0	0	0

Demand (Veh/hr)

17:15 - 17:30

	To			
		A	B	C
	A	0	0	118
	B	0	0	2
From	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	1
	B	0	0	0
From	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	5.87	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	541	0.000	0	0.0	0.000	A
C-AB	0	547	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	2			2			
A-C	116			116			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	540	0.000	0	0.0	0.000	A
C-AB	0	547	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	1			1			
A-C	117			117			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	540	0.000	0	0.0	0.000	A
C-AB	0	547	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	1			1			
A-C	117			117			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	2	615	0.003	2	0.0	5.873	A
C-AB	0	547	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	118			118			

APPENDIX J

JUNCTION 9 – PICADY OUTPUT

Market Bosworth

Wednesday 15th November 2023

Junction: 7

Approach: A447 North

TIME	Left to Bosworth Lane				Ahead to A447 (S)				Right to Bosworth Road			
	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:30 - 07:45	1	1	2	3.3	153	10	163	176.0	10	0	10	10.0
07:45 - 08:00	4	0	4	4.0	153	8	161	171.4	10	1	11	12.3
08:00 - 08:15	0	0	0	0.0	145	9	154	165.7	27	3	30	33.9
08:15 - 08:30	0	0	0	0.0	147	9	156	167.7	15	1	16	17.3
08:30 - 08:45	3	0	3	3.0	102	2	104	106.6	17	0	17	17.0
08:45 - 09:00	1	0	1	1.0	130	7	137	146.1	15	0	15	15.0
Hourly Total	4	0	4	4.0	524	27	551	586.1	74	4	78	83.2
09:00 - 09:15	0	0	0	0.0	66	7	73	82.1	17	0	17	17.0
09:15 - 09:30	1	0	1	1.0	53	9	62	73.3	8	0	8	8.0
Hourly Total	1	0	1	1.0	119	16	135	155.8	25	0	25	25.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3

[illegible]

16:30 - 16:45	3	1	4	5.3	97	5	102	108.5	18	18	18.0
16:45 - 17:00	2	0	2	2.0	101	2	103	105.6	17	0	17
17:00 - 17:15	0	0	0	0.0	76	0	76	76.0	7	1	8
17:15 - 17:30	0	0	0	0.0	121	3	124	127.9	9	0	9
17:30 - 17:45	0	0	0	0.0	118	1	119	120.3	7	0	7
17:45 - 18:00	1	0	1	1.0	106	1	107	108.3	15	0	15
Hourly Total	2	0	2	2.0	421	5	426	432.5	38	1	39
18:00 - 18:15	2	0	2	2.0	77	0	77	77.0	8	1	9
18:15 - 18:30	0	0	0	0.0	68	0	68	70.3	3	0	3
Hourly Total	2	0	2	2.0	145	1	146	147.3	17	1	18

[illegible]

Approach: Bosworth Lane

TIME	Left to A447 (S)				Ahead to Bosworth Road				Right to A447 (N)			
	LIGHT	HEAVY	TOTAL	PCUS	LIGHT	HEAVY	TOTAL	PCUS	LIGHT	HEAVY	TOTAL	PCUS
07:30 - 07:45	35	0	35	35.0	29	2	31	33.6	1	0	1	1.0
07:45 - 08:00	24	1	25	26.3	38	3	41	44.9	2	0	2	2.0
08:00 - 08:15	28	3	31	34.9	57	0	57	57.0	1	0	1	1.0
08:15 - 08:30	32	2	34	36.6	36	2	38	40.6	1	2	3	3.6
08:30 - 08:45	21	1	21	22.3	26	3	29	32.9	0	0	0	0.0
08:45 - 09:00	26	1	27	28.3	22	1	23	24.3	0	0	0	0.0
Hourly Total	106	7	113	122.1	141	6	147	156.8	2	2	4	6.6
09:00 - 09:15	20	3	23	26.9	20	1	21	22.3	0	0	0	0.0
09:15 - 09:30	27	0	27	27.0	19	0	19	19.0	0	0	0	0.0
Hourly Total	47	3	50	53.9	39	1	40	41.3	0	0	0	0.0

[illegible]

16:30 - 16:45	22	0	22	22.0	31	0	31	31.3	3	0	3	3.0
16:45 - 17:00	33	0	33	33.0	42	1	43	44.0	1	0	1	1.0
17:00 - 17:15	26	0	26	26.0	29	0	29	29.0	0	0	0	0.0
17:15 - 17:30	21	0	21	21.0	33	1	34	35.3	1	0	1	1.0
17:30 - 17:45	34	0	34	34.0	31	0	31	31.3	0	0	0	0.0
17:45 - 18:00	27	0	27	27.0	35	0	35	35.0	0	0	0	0.0
Hourly Total	108	0	108	108.0	128	2	130	132.6	4	0	4	4.0
18:00 - 18:15	21	1	22	23.3	22	0	22	22.0	3	0	3	3.0
18:15 - 18:30	1	0	1	1.0	30	0	30	30.0	1	0	1	1.0
Hourly Total	10	1	11	11.3	90	0	90	90.0	4	0	4	4.0

[illegible]

Approach: A447 (S)

	Left to Bosworth Road					Ahead to A447 (N)					Right to Bosworth Lane				
TIME	LIGHT	HEAVY	TOTAL	PCUs		LIGHT	HEAVY	TOTAL	PCUs		LIGHT	HEAVY	TOTAL	PCUs	
07:30 -07:45	23	2	25	27.6		88	2	90	92.6		17	4	21	26.2	
07:45 -08:00	56	0	56	56.0		80	5	85	91.5		33	1	34	35.3	
08:00 -08:15	57	2	59	61.6		91	5	96	102.5		16	0	16	16.0	
08:15 -08:30	49	0	49	49.0		78	4	82	87.2		26	3	29	29.9	
08:30 -08:45	39	1	40	41.3		86		86	97.8		30	2	32	34.6	
08:45 -09:00	23	1	24	25.3		64	4	68	73.2		19	1	20	21.3	
Hourly Total	168	4	172	177.2		319	19	338	362.7		91	6	97	104.8	
09:00 -09:15	13	0	13	13.0		64	5	69	75.5		19	2	21	23.3	
09:15 -09:30	14	1	15	16.3		57	6	63	70.8		12	0	12	12.0	
Hourly Total	27	1	28	28.3		121	11	132	146.3		31	2	33	35.6	

[illegible]

16:30 - 16:45	21	0	21	21.0	129	3	132	135.9	30	1	31	32.3
16:45 - 17:00	20	1	21	22.3	118	5	123	129.5	38	1	39	40.3
17:00 - 17:15	18	0	18	18.0	113	2	115	117.6	42	1	43	44.3
17:15 - 17:30	31	1	32	33.3	134	0	134	134.0	33	1	34	35.3
17:30 - 17:45	19	0	19	19.0	118	2	120	122.6	35	1	36	37.3
17:45 - 18:00	26	0	26	26.0	110	3	113	116.9	25	0	25	25.0
Hourly Total	94	1	95	96.3	475	7	482	491.1	125	3	128	131.9
18:00 - 18:15	17	0	17	17.0	83	0	83	83.0	21	1	22	23.3
18:15 - 18:30	11	0	11	11.0	74	1	75	76.3	26	0	26	26.0
Hourly Total	28	0	28	28.0	157	1	158	159.3	47	1	48	49.3

[illegible]

Approach: Bosworth Road

TIME	Left to A447 (T)				Ahead to Bosworth Total				Right to A447 (S)			
	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs	LIGHT	HEAVY	TOTAL	PCUs
07:30 - 07:45	8	1	9	10.3	36	1	37	38.3	18	1	19	20.3
07:45 - 08:00	10	1	11	12.3	34	0	34	34.0	18	0	18	18.0
08:00 - 08:15	11	0	11	11.0	35	3	38	41.8	18	18	36	36.0
08:15 - 08:30	16	1	17	16.0	34	3	37	38.6	29	22	51	51.0
08:30 - 08:45	13	2	15	17.6	29	6	35	42.9	28	4	32	37.2
08:45 - 09:00	9	1	10	11.3	40	1	41	42.3	27	1	28	29.3
Hourly Total	49	3	52	55.9	138	12	150	165.6	93	7	100	109.1
09:00 - 09:15	14	0	14	14.0	35	1	36	37.3	22	0	22	22.0
09:15 - 09:30	10	0	10	10.0	17	2	19	21.6	15	1	16	17.3
Hourly Total	20	0	20	24.0	52	3	55	58.9	37	1	38	39.3

[illegible]

16:30 - 16:45	15	0	15	15.0	29	0	29	29.0	35		36	37.3
16:45 - 17:00	15	0	15	15.0	38	0	38	38.0	31	0	31	31.0
17:00 - 17:15	15	1	16	17.3	43	1	44	44.5	22	0	22	22.0
17:15 - 17:30	12	0	12	12.0	31	2	33	35.6	12	1	13	14.3
17:30 - 17:45	16	1	17	18.3	25	4	29	34.2	19	0	19	19.0
17:45 - 18:00	13	1	14	15.3	29	3	31	31.3	20	0	20	20.0
Hourly Total	56	3	59	62.9	128	8	136	146.4	73	1	74	75.3
18:00 - 18:15	11	0	11	11.0	28	0	28	28.0	16	1	17	18.3
18:15 - 18:30	11	0	11	11.0	22	1	23	24.3	18	0	18	18.0
Hourly Total	22	0	22	22.0	60	1	61	62.3	34	1	35	36.3

[illegible]

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
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Filename: J9 A447-B585 (sens - incl Shenton Lane).j9

Path: C:\Users\ADC\OneDrive - ADC Infrastructure Limited\ADC Projects\ADC3326 Land South of Station Road, Market Bosworth\Calculations\Junction modelling\J9

Report generation date: 03/12/2024 12:30:24

- »Traffic flows - 2029 Background, AM
- »Traffic flows - 2029 Background, PM
- »Traffic flows - 2029 With Development, AM
- »Traffic flows - 2029 With Development, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	Network Residual Capacity
	Traffic flows - 2029 Background							
Stream B-CD	0.8	17.37	0.43	2 % [Stream D-AB]	1.0	20.40	0.51	5 % [Stream B-AD]
Stream B-AD	0.9	24.47	0.48		1.2	25.86	0.54	
Stream A-BCD	0.2	9.07	0.19		0.3	8.11	0.26	
Stream D-AB	1.9	30.33	0.66		0.7	13.58	0.41	
Stream D-B C	0.7	26.73	0.43		0.3	14.52	0.24	
Stream C-ABD	0.2	7.79	0.13		0.1	7.82	0.11	
	Traffic flows - 2029 With Development							
Stream B-CD	1.1	22.35	0.53	0 % [Stream D-AB]	1.2	22.12	0.54	4 % [Stream B-AD]
Stream B-AD	1.2	30.00	0.55		1.2	27.56	0.56	
Stream A-BCD	0.3	9.27	0.21		0.3	8.12	0.26	
Stream D-AB	2.2	35.05	0.70		0.7	14.27	0.43	
Stream D-B C	0.9	30.66	0.47		0.3	14.93	0.26	
Stream C-ABD	0.2	7.99	0.14		0.1	7.84	0.11	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	A447/B585
Location	Market Bosworth
Site number	
Date	07/12/2023
Version	v 1
Status	preliminary
Identifier	
Client	Miller Homes
Jobnumber	ADC3326
Enumerator	ADC-TOSHIBA-AIO\ADC
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	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 period length (min)	Time segment length (min)
D3	2029 Background	AM	FLAT	07:45	09:15	90	15
D4	2029 Background	PM	FLAT	16:45	18:15	90	15
D5	2029 With Development	AM	FLAT	07:45	09:15	90	15
D6	2029 With Development	PM	FLAT	16:45	18:15	90	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2029 Background, 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	A447/B585	Crossroads	Two-way		8.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Stream D-AB

Arms

Arms

Arm	Name	Description	Arm type
A	A447 Ashby Road (S)		Major
B	Bosworth Road		Minor
C	A447 (N)		Major
D	Bosworth Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	7.00		✓	3.10	205.0	✓	13.00
C	7.00		✓	3.10	230.0	✓	16.00

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	8.70	4.80	3.40	3.20		2.00	250	215
D	One lane plus flare	10.00	10.00	7.00	4.80	3.70	✓	2.00	130	180

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	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
1	A-D	761	-	-	-	-	-	-	0.282	0.403	0.282	-	-	-
1	B-A	740	0.129	0.326	0.326	-	-	-	0.205	0.465	-	0.326	0.326	0.163
1	B-C	829	0.122	0.307	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	740	0.129	0.326	0.326	-	-	-	0.205	0.465	0.205	-	-	-
1	B-D, offside lane	740	0.129	0.326	0.326	-	-	-	0.205	0.465	0.205	-	-	-
1	C-B	776	0.288	0.288	0.411	-	-	-	-	-	-	-	-	-
1	D-A	809	-	-	-	-	-	-	0.300	-	0.119	-	-	-
1	D-B, nearside lane	673	0.186	0.186	0.423	-	-	-	0.296	0.296	0.117	-	-	-
1	D-B, offside lane	673	0.186	0.186	0.423	-	-	-	0.296	0.296	0.117	-	-	-
1	D-C	673	-	0.186	0.423	0.148	0.296	0.296	0.296	0.296	0.117	-	-	-

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 period length (min)	Time segment length (min)
D3	2029 Background	AM	FLAT	07:45	09:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	642	100.000
B		✓	292	100.000
C		✓	734	100.000
D		✓	329	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	198	349	95
	B	83	0	53	156
	C	657	71	0	6
	D	129	193	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	2	5	8
	B	4	0	4	4
	C	6	7	0	17
	D	5	4	29	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.43	17.37	0.8	C
B-AD	0.48	24.47	0.9	C
A-BCD	0.19	9.07	0.2	A
A-B				
A-C				
D-AB	0.66	30.33	1.9	D
D-BC	0.43	26.73	0.7	D
C-ABD	0.13	7.79	0.2	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	156	368	0.423	153	0.7	16.501	C
B-AD	136	287	0.475	133	0.9	22.898	C
A-BCD	95	492	0.193	94	0.2	9.026	A
A-B	198			198			
A-C	349			349			
D-AB	229	350	0.654	222	1.7	26.822	D
D-BC	100	241	0.416	97	0.7	24.704	C
C-ABD	71	533	0.133	70	0.2	7.766	A
C-D	6			6			
C-A	657			657			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	157	364	0.430	157	0.7	17.316	C
B-AD	135	283	0.479	135	0.9	24.375	C
A-BCD	95	492	0.193	95	0.2	9.066	A
A-B	198			198			
A-C	349			349			
D-AB	229	348	0.659	229	1.8	30.014	D
D-BC	100	235	0.425	100	0.7	26.561	D
C-ABD	71	533	0.133	71	0.2	7.792	A
C-D	6			6			
C-A	657			657			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	157	364	0.431	157	0.7	17.350	C
B-AD	135	282	0.479	135	0.9	24.438	C
A-BCD	95	492	0.193	95	0.2	9.066	A
A-B	198			198			
A-C	349			349			
D-AB	229	348	0.659	229	1.9	30.215	D
D-BC	100	235	0.426	100	0.7	26.669	D
C-ABD	71	533	0.133	71	0.2	7.792	A
C-D	6			6			
C-A	657			657			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	157	364	0.431	157	0.7	17.363	C
B-AD	135	282	0.479	135	0.9	24.458	C
A-BCD	95	492	0.193	95	0.2	9.066	A
A-B	198			198			
A-C	349			349			
D-AB	229	348	0.659	229	1.9	30.280	D
D-BC	100	235	0.426	100	0.7	26.701	D
C-ABD	71	533	0.133	71	0.2	7.792	A
C-D	6			6			
C-A	657			657			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	157	364	0.431	157	0.8	17.364	C
B-AD	135	282	0.479	135	0.9	24.467	C
A-BCD	95	492	0.193	95	0.2	9.066	A
A-B	198			198			
A-C	349			349			
D-AB	229	347	0.659	229	1.9	30.314	D
D-BC	100	235	0.426	100	0.7	26.716	D
C-ABD	71	533	0.133	71	0.2	7.792	A
C-D	6			6			
C-A	657			657			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	157	364	0.431	157	0.8	17.366	C
B-AD	135	282	0.479	135	0.9	24.471	C
A-BCD	95	492	0.193	95	0.2	9.066	A
A-B	198			198			
A-C	349			349			
D-AB	229	347	0.659	229	1.9	30.334	D
D-BC	100	235	0.426	100	0.7	26.727	D
C-ABD	71	533	0.133	71	0.2	7.792	A
C-D	6			6			
C-A	657			657			

Traffic flows - 2029 Background, 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	A447/B585	Crossroads	Two-way		7.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Stream B-AD

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2029 Background	PM	FLAT	16:45	18:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	774	100.000
B		✓	344	100.000
C		✓	485	100.000
D		✓	261	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	99	523	152
	B	109	0	63	172
	C	421	58	0	6
	D	106	150	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	2	2	3
	B	2	0	2	2
	C	2	2	0	17
	D	0	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.51	20.40	1.0	C
B-AD	0.54	25.86	1.2	D
A-BCD	0.26	8.11	0.3	A
A-B				
A-C				
D-AB	0.41	13.58	0.7	B
D-BC	0.24	14.52	0.3	B
C-ABD	0.11	7.82	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	181	363	0.498	177	1.0	18.984	C
B-AD	163	305	0.535	159	1.1	23.980	C
A-BCD	152	596	0.255	151	0.3	8.063	A
A-B	99			99			
A-C	523			523			
D-AB	182	449	0.406	180	0.7	13.251	B
D-BC	79	328	0.240	77	0.3	14.298	B
C-ABD	58	519	0.112	58	0.1	7.791	A
C-D	6			6			
C-A	421			421			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	182	358	0.507	182	1.0	20.308	C
B-AD	162	301	0.538	162	1.1	25.752	D
A-BCD	152	596	0.255	152	0.3	8.114	A
A-B	99			99			
A-C	523			523			
D-AB	182	448	0.408	182	0.7	13.569	B
D-BC	79	327	0.241	79	0.3	14.511	B
C-ABD	58	519	0.112	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	182	358	0.507	182	1.0	20.370	C
B-AD	162	301	0.538	162	1.1	25.820	D
A-BCD	152	596	0.255	152	0.3	8.114	A
A-B	99			99			
A-C	523			523			
D-AB	182	448	0.408	182	0.7	13.572	B
D-BC	79	327	0.241	79	0.3	14.515	B
C-ABD	58	519	0.112	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	182	358	0.507	182	1.0	20.387	C
B-AD	162	301	0.538	162	1.1	25.839	D
A-BCD	152	596	0.255	152	0.3	8.114	A
A-B	99			99			
A-C	523			523			
D-AB	182	448	0.408	182	0.7	13.575	B
D-BC	79	327	0.241	79	0.3	14.515	B
C-ABD	58	519	0.112	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	182	358	0.508	182	1.0	20.397	C
B-AD	162	301	0.538	162	1.2	25.851	D
A-BCD	152	596	0.255	152	0.3	8.114	A
A-B	99			99			
A-C	523			523			
D-AB	182	448	0.408	182	0.7	13.575	B
D-BC	79	327	0.241	79	0.3	14.515	B
C-ABD	58	519	0.112	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	182	358	0.508	182	1.0	20.400	C
B-AD	162	301	0.538	162	1.2	25.857	D
A-BCD	152	596	0.255	152	0.3	8.114	A
A-B	99			99			
A-C	523			523			
D-AB	182	448	0.408	182	0.7	13.575	B
D-BC	79	327	0.241	79	0.3	14.515	B
C-ABD	58	519	0.112	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

Traffic flows - 2029 With 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	A447/B585	Crossroads	Two-way		10.19	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	Stream D-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2029 With Development	AM	FLAT	07:45	09:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	672	100.000
B		✓	325	100.000
C		✓	736	100.000
D		✓	337	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	200	369	103
	B	89	0	58	178
	C	657	73	0	6
	D	129	201	7	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	2	5	8
	B	3	0	3	3
	C	6	7	0	17
	D	5	3	29	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.53	22.35	1.1	C
B-AD	0.55	30.00	1.2	D
A-BCD	0.21	9.27	0.3	A
A-B				
A-C				
D-AB	0.70	35.05	2.2	E
D-BC	0.47	30.66	0.9	D
C-ABD	0.14	7.99	0.2	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	179	347	0.514	174	1.0	20.373	C
B-AD	146	271	0.540	142	1.1	27.029	D
A-BCD	103	491	0.210	102	0.3	9.217	A
A-B	200			200			
A-C	369			369			
D-AB	233	339	0.688	225	2.0	29.868	D
D-BC	104	229	0.453	101	0.8	27.446	D
C-ABD	73	524	0.139	72	0.2	7.962	A
C-D	6			6			
C-A	657			657			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	180	342	0.527	180	1.1	22.150	C
B-AD	145	265	0.546	145	1.2	29.737	D
A-BCD	103	491	0.210	103	0.3	9.272	A
A-B	200			200			
A-C	369			369			
D-AB	233	336	0.695	233	2.1	34.442	D
D-BC	104	222	0.467	103	0.8	30.304	D
C-ABD	73	523	0.139	73	0.2	7.992	A
C-D	6			6			
C-A	657			657			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	180	341	0.528	180	1.1	22.290	C
B-AD	145	265	0.547	145	1.2	29.912	D
A-BCD	103	491	0.210	103	0.3	9.272	A
A-B	200			200			
A-C	369			369			
D-AB	233	336	0.695	233	2.2	34.821	D
D-BC	104	221	0.468	103	0.9	30.533	D
C-ABD	73	523	0.139	73	0.2	7.992	A
C-D	6			6			
C-A	657			657			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	180	341	0.528	180	1.1	22.323	C
B-AD	145	265	0.547	145	1.2	29.962	D
A-BCD	103	491	0.210	103	0.3	9.272	A
A-B	200			200			
A-C	369			369			
D-AB	233	336	0.695	233	2.2	34.840	D
D-BC	104	221	0.468	103	0.9	30.605	D
C-ABD	73	523	0.139	73	0.2	7.992	A
C-D	6			6			
C-A	657			657			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	180	341	0.528	180	1.1	22.338	C
B-AD	145	265	0.547	145	1.2	29.988	D
A-BCD	103	491	0.210	103	0.3	9.272	A
A-B	200			200			
A-C	369			369			
D-AB	233	336	0.695	233	2.2	35.014	E
D-BC	104	221	0.469	103	0.9	30.639	D
C-ABD	73	523	0.139	73	0.2	7.992	A
C-D	6			6			
C-A	657			657			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	180	341	0.528	180	1.1	22.347	C
B-AD	145	265	0.547	145	1.2	30.003	D
A-BCD	103	491	0.210	103	0.3	9.272	A
A-B	200			200			
A-C	369			369			
D-AB	233	336	0.695	233	2.2	35.052	E
D-BC	104	221	0.469	103	0.9	30.658	D
C-ABD	73	523	0.139	73	0.2	7.992	A
C-D	6			6			
C-A	657			657			

Traffic flows - 2029 With 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	A447/B585	Crossroads	Two-way		7.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	4	Stream B-AD

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2029 With Development	PM	FLAT	16:45	18:15	90	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	776	100.000
B		✓	354	100.000
C		✓	486	100.000
D		✓	271	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	101	523	152
	B	110	0	64	180
	C	421	59	0	6
	D	106	160	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	2	2	3
	B	2	0	2	2
	C	2	2	0	17
	D	0	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-CD	0.54	22.12	1.2	C
B-AD	0.56	27.56	1.2	D
A-BCD	0.26	8.12	0.3	A
A-B				
A-C				
D-AB	0.43	14.27	0.7	B
D-BC	0.26	14.93	0.3	B
C-ABD	0.11	7.84	0.1	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	188	357	0.526	184	1.1	20.289	C
B-AD	166	300	0.554	161	1.2	25.251	D
A-BCD	152	595	0.255	151	0.3	8.070	A
A-B	101			101			
A-C	523			523			
D-AB	187	441	0.425	185	0.7	13.887	B
D-BC	84	326	0.256	82	0.3	14.676	B
C-ABD	59	519	0.114	58	0.1	7.816	A
C-D	6			6			
C-A	421			421			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	189	352	0.537	189	1.1	21.985	C
B-AD	165	296	0.558	165	1.2	27.410	D
A-BCD	152	595	0.255	152	0.3	8.122	A
A-B	101			101			
A-C	523			523			
D-AB	188	440	0.426	187	0.7	14.260	B
D-BC	83	325	0.257	83	0.3	14.922	B
C-ABD	59	518	0.114	59	0.1	7.842	A
C-D	6			6			
C-A	421			421			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	189	352	0.538	189	1.1	22.076	C
B-AD	165	295	0.558	165	1.2	27.507	D
A-BCD	152	595	0.255	152	0.3	8.122	A
A-B	101			101			
A-C	523			523			
D-AB	188	440	0.426	188	0.7	14.267	B
D-BC	83	325	0.257	83	0.3	14.926	B
C-ABD	59	518	0.114	59	0.1	7.843	A
C-D	6			6			
C-A	421			421			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	189	352	0.538	189	1.1	22.101	C
B-AD	165	295	0.558	165	1.2	27.538	D
A-BCD	152	595	0.255	152	0.3	8.122	A
A-B	101			101			
A-C	523			523			
D-AB	188	440	0.426	188	0.7	14.267	B
D-BC	83	325	0.257	83	0.3	14.926	B
C-ABD	59	518	0.114	59	0.1	7.843	A
C-D	6			6			
C-A	421			421			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	189	352	0.538	189	1.1	22.112	C
B-AD	165	295	0.558	165	1.2	27.551	D
A-BCD	152	595	0.255	152	0.3	8.122	A
A-B	101			101			
A-C	523			523			
D-AB	188	440	0.426	188	0.7	14.270	B
D-BC	83	325	0.257	83	0.3	14.927	B
C-ABD	59	518	0.114	59	0.1	7.843	A
C-D	6			6			
C-A	421			421			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-CD	189	352	0.538	189	1.2	22.119	C
B-AD	165	295	0.558	165	1.2	27.557	D
A-BCD	152	595	0.255	152	0.3	8.122	A
A-B	101			101			
A-C	523			523			
D-AB	188	440	0.426	188	0.7	14.270	B
D-BC	83	325	0.257	83	0.3	14.927	B
C-ABD	59	518	0.114	59	0.1	7.843	A
C-D	6			6			
C-A	421			421			