

Title: Land east of Warwick Road, Banbury

Date: July 2023

1.0 Introduction

1.1 Preamble

1.1.1 This Technical Note provides additional information that was requested by Oxfordshire County Council (OCC) in the 'Oxfordshire County Council's Response to Consultation on the Following Development Proposal' for the Transport Assessment prepared by Jubb and issued as part of planning application no: 23/00853/OUT.

1.1.2 The comments provided by OCC recommended objection for the following reasons:

- Lack of vehicle tracking exercise at the site access junction
- Personal Injury Collision data provided not being up to date
- Requirement to provide additional Junction Capacity Assessments

1.1.3 These comments were reviewed in a meeting with the Local Highways Authority (LHA) that took place on the 21st of June 2023. Minutes of this meeting were prepared and sent to the LHA, who found them accurate and acceptable.

1.1.4 This Technical Note provides the additional information that was agreed at the meeting.

1.2 Minutes of the Meeting

1.2.1 The Minutes of the Meeting are included as **Appendix A** to this Technical Note.

1.2.2 The main conclusions and additional information requested and agreed with OCC, and which is provided in this Technical Note, are shown below:

- Provision of details on the proposed site access junction in terms of dimensions and measurements.
- Provision of swept path analysis for a refuse vehicle.
- Update of collision data to assess the period 2018-2022 (both inclusive).
- Extend study area of collision data to include Dukes Meadow Drive and the junction with the A423 Southam Road.
- Undertake additional junction capacity analysis for the A423 Southam Road/Dukes Meadow Drive/Noral Way roundabout junction.

2.0 Provision of Additional Details on Proposed Access Junction

2.1 Dimensions and Measurements

2.1.1 The first comment on OCC's response referred to the provision of dimensions and measurements of the ghosting and access. The response stated that this information was to be conditioned. However, it was agreed that Jubb would prepare a drawing showing all the relevant dimensions of the proposed access layout at this stage.

2.1.2 This drawing has been included as **Appendix B** to this Technical Note. This shows that the junction has been designed in accordance with the requirements set out in the DMRB standards.

2.2 Swept Path Analysis

2.2.1 The second comment referred to the provision of a swept path analysis to demonstrate that an 11.6m refuse vehicle could safely access and egress the site from all directions. It was agreed that Jubb would provide this information at this stage.

2.2.2 This drawing has been included as **Appendix C** to this Technical Note. This shows that an OCC refuse vehicle would be able to access and egress the site adequately.

3.0 Provision of Collision Data

3.1 Introduction

3.1.1 The third comment referred to the provision of collision data. The comments stated that the latest available data had not been used in the Transport Assessment. Jubb requested the latest available collision data to OCC, which covers up to June 2023 and the collision data has been adequately updated.

3.1.2 The fourth comment requested the extension of the collision study area to be extended to include Dukes Meadow Drive and the junction of the A423 Southam Road with Dukes Meadow Drive and Noral Way. This area was also requested to OCC and has been included as part of this revised assessment.

3.2 Review of Collision Data

3.2.1 This revised assessment of Personal Injury Collision (PIC) data has been undertaken for the local highway network on a study area agreed with OCC. PIC collision data for more than a five-year period comprising from the 1st of January 2018 to the 20th of June 2023 was obtained from OCC. The study area is shown in **Figure 3.1**, provided by OCC. This has investigated the location and nature of PIC data in the following study area:

- B4100 Warwick Road, between the junction with Second Turn (leading to Shotteswell) to the north and the roundabout junction with Highlands to the south;
- Dukes Meadow Drive, including the junction with the A423 Southam Road and Noral Way;
- Main Street (leading to Hanwell); and
- Access road to Horley.

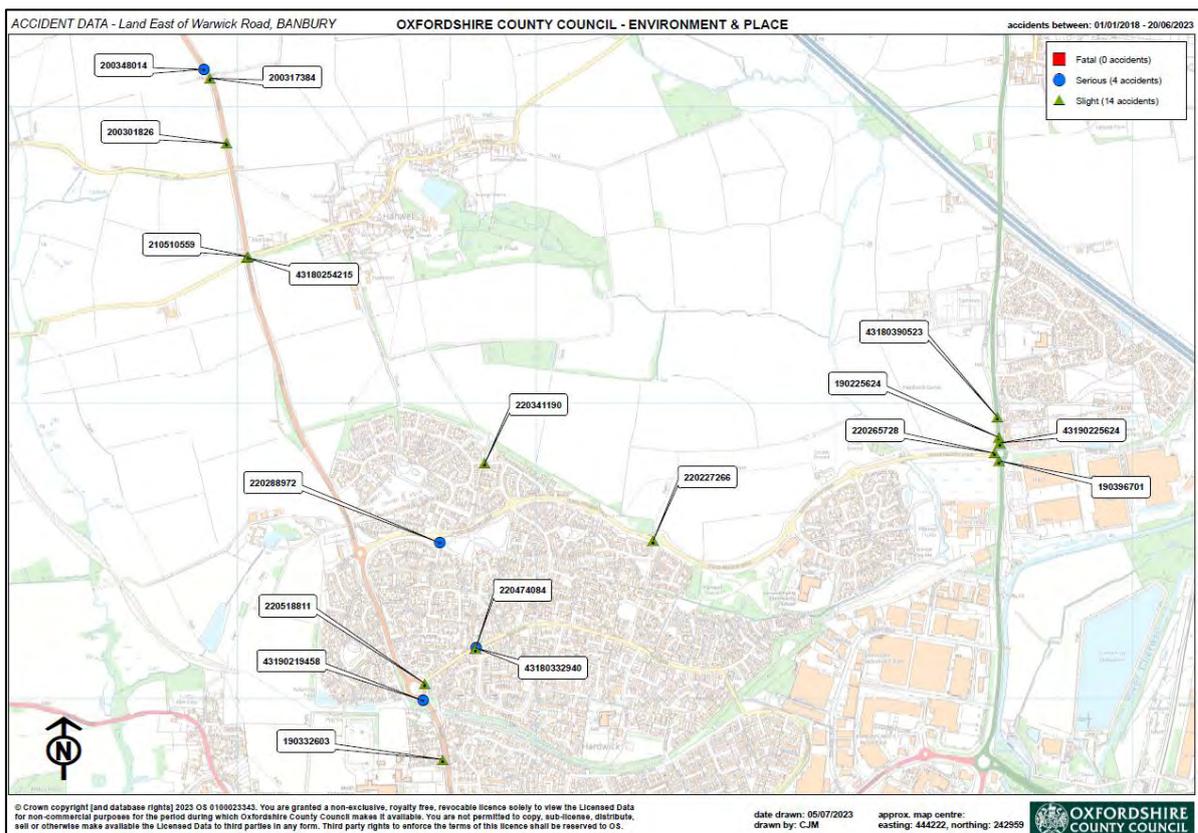


Figure 3.1: PIC Collision Map

3.2.2 A total of 13 collisions have taken place in the study area (the map shows a wider area including a few additional collisions). Three of them were of a serious nature and the remaining ten were of a slight nature. Further details of these collisions are provided following the location of the PICs recorded. The plan and details obtained from OCC are included as **Appendix D** to this Technical Note.

3.2.3 A total of seven collisions took place on the B4100 Warwick Road (shown on a southbound direction):

- Reference 200348014: This collision took place on the 28th of October 2020 at 17:53 hours on a location approximately 330m of the junction with Main Street (leading to Hanwell) in dark and wet/damp conditions. Three vehicles were involved and two people were injured, one of them being of a serious nature.
- Reference 200317384: The second collision happened on the 2nd of October 2020 at 22:19 hours also on a location approximately 320m to the north of the junction with Main Street (leading to Hanwell) in dark and wet/damp conditions. Only one vehicle was involved and a person resulted in a slight injury.
- Reference 200301826: The third collision took place on the 23rd of September 2020 at 08:48 hours on a location some 90m to the north of the junction with Main Street (leading to Hanwell). This again involved a single vehicle and two people resulted in slight injuries.
- Reference 210510559: The fourth collision took place on the 11th of November 2021 at 14:52 hours at the junction of the B4100 Warwick Road with Main Street (leading with Hanwell) and the main access to Horley in wet/damp conditions. Two vehicles were involved and two people resulted in slight injuries.
- Reference 43180254215: The fifth collision took place on the 31st of August 2018 at 13:26 hours at the junction of the B4100 Warwick Road with Main Street (leading with Hanwell) and the main access to Horley in wet/damp conditions. Two vehicles were involved and two people resulted in slight injuries.
- Reference 220518811: The sixth collision took place on the 17th of November 2022 at 16:18 hours at the roundabout junction of the B4100 Warwick Road with Highlands in darkness. Two vehicles were involved and one person resulted in a slight injury.
- Reference 43190219458: The seventh collision took place on the 15th of July 2019 at 15:59 hours at the roundabout junction of the B4100 Warwick Road with Highlands. Three vehicles were involved and an elderly driver resulted in serious injuries.

3.2.4 A total of six collisions took place on Dukes Meadow Drive (on an eastbound direction):

- Reference 220288972: The first collision took place on the 01st of July 2022 at 16:52 hours at the roundabout junction of Dukes Meadow Drive with Usher Drive. A vehicle and a cyclist were involved, with the cyclist resulting in a serious injury.
- Reference 220227266: The second collision took place on the 24th of May 2022 at 08:40 hours at the refuge west of the roundabout junction of Dukes Meadow Drive with Winter Gardens Way. A vehicle and a cyclist were involved, with the cyclist resulting in a slight injury.
- Reference 220265728: The third collision took place on the 17th of June 2022 at 16:17 hours at the roundabout junction of Dukes Meadow Drive with the A423 Southam Road. Two vehicles were involved and one passenger resulted in a slight injury.
- Reference 190396701: The fourth collision took place on the 13th of December 2019 at 16:15 hours at the roundabout junction of Dukes Meadow Drive with the A423 Southam Road in darkness. Two vehicles were involved in a shunt incident and one driver resulted in a slight injury.
- Reference 43190225624: The fifth collision took place on the 21st of July 2019 at 14:19 hours at the roundabout junction of Dukes Meadow Drive with the A423 Southam Road. Two vehicles were involved and one driver resulted in a slight injury.
- Reference 43190225624: The sixth collision took place on the 21st of July 2019 at 14:19 hours at the roundabout junction of Dukes Meadow Drive with the A423 Southam Road. Two vehicles were involved and one driver resulted in a slight injury.

- 3.2.5 Thus, given the overall dispersed nature of accidents, both in terms of geographical location and timescale, it is reasonable to conclude that the highway network surrounding the proposed development site does not include any geometric features that can be specifically linked to recorded collisions.
- 3.2.6 It is worth noting that four of the collisions took place on the B4100 Warwick Road to the north of the site access and where only 0.9% of the vehicle traffic was estimated to travel to and from (which resulted in a single vehicle trip in and out of the site during both AM and PM peak hours). It is also worth noting that the serious collision that happened on Dukes Meadow Drive involving a cyclist took place on the Usher Drive approach to the roundabout junction with Dukes Meadow Drive and where no vehicle trips from the proposed development would likely be travelling to and from.
- 3.2.7 It is therefore concluded that there are no existing highway safety concerns to mitigate.

4.0 Provision of Additional Junction Capacity Assessment

4.1 Introduction

4.1.1 The fifth and final comment and request for additional information referred to the provision of a junction capacity assessment to be undertaken for the Dukes Meadow Drive/ A423 Southam Road/ Noral Way roundabout junction. It was agreed to undertake a vehicle traffic count data for a single weekday at the junction.

4.2 Traffic Count Survey

4.2.1 In order to assess the operating condition of the Dukes Meadow Drive/ A423 Southam Road/ Noral Way roundabout junction at the present condition a traffic count survey was undertaken. The traffic survey was undertaken by an independent traffic survey company and took place on Thursday the 06th of July 2023 (07:00-19:00 hours). The results of this traffic count are shown as **Appendix E** to this report.

4.2.2 **Table 4.1** shows the movement flows for this junction by approach to the junction on an hourly basis.

Hour	Dukes Meadow Drive	A423 Southam Rd (N)	Noral Way	A423 Southam Rd (S)	Total (vehicles)
07:00-08:00	456	601	16	502	1575
08:00-09:00	466	559	8	602	1635
09:00-10:00	288	494	8	535	1325
10:00-11:00	218	439	11	455	1123
11:00-12:00	206	427	16	466	1115
12:00-13:00	223	400	26	492	1141
13:00-14:00	212	426	34	539	1211
14:00-15:00	198	404	51	586	1239
15:00-16:00	221	459	75	767	1522
16:00-17:00	268	468	99	1047	1882
17:00-18:00	248	480	86	1085	1899
18:00-19:00	268	435	33	917	1653

Table 4.1: Hourly Traffic Flows

4.2.3 The peak hour was identified as 16:30-17:30 hours. **Table 4.1** shows the impact from the PM peak hour being significantly higher than that of the AM peak. There are a number of roadworks taking place at present along the M40 to the east of the A423 Southam Road that could have influenced the distribution of vehicle traffic travelling northbound from Banbury during the PM peak hour. The location of these roadworks are shown in **Figure 4.1**.

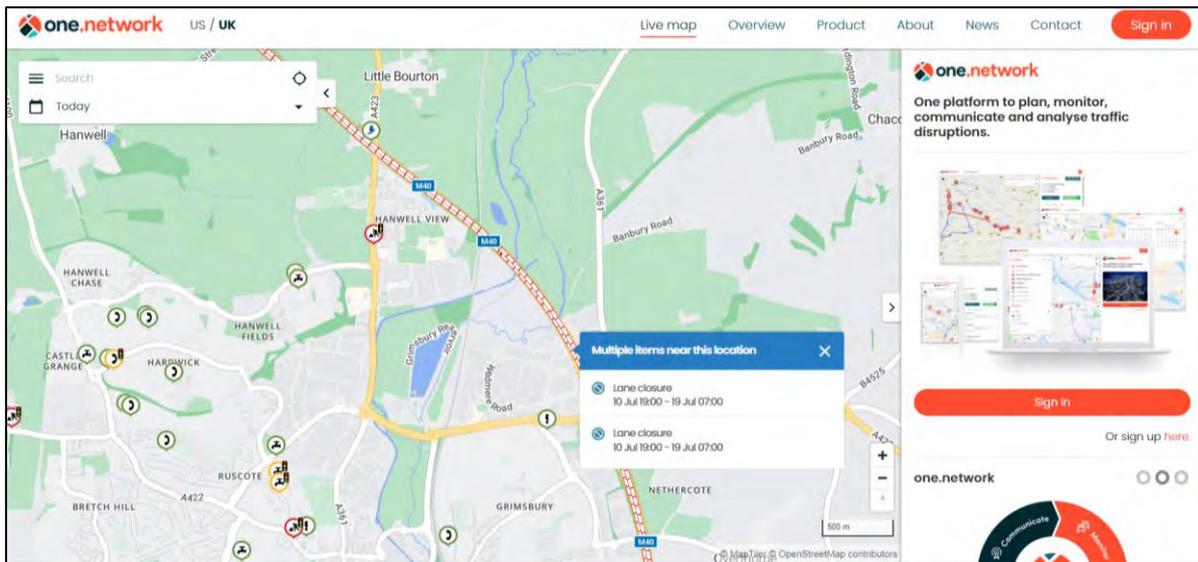


Figure 4.1: Location of Roadworks on M40

4.2.4 Both lanes of the M40 were to be closed between Junction 3 and Junction 15 of the M40 from 19:00 hours. It is likely that the preparation of works and previous lane closures were already having an impact on vehicle traffic capacity on the M40 during the PM peak hour.

4.2.5 An assessment of seasonal vehicle traffic on the M40 to the east of Banbury using the data provided by National Highways (WebTRIS) showed July and August to be the busiest months of the year. July was estimated as having approximately a 9% increase in vehicle traffic when compared to the annual average circulating along the M40 and with an increase of 6% in vehicle traffic travelling northbound on the slip from the Banbury Interchange when compared to the annual average.

4.2.6 All this shows that the results from the junction capacity assessment are based on a worst case scenario when compared to the annual average and are also likely to be affected by the current roadworks on the M40.

4.3 Junction Capacity Assessment

4.3.1 An assessment year of 2028 has been used for this assessment. This is 5-years from the date where the traffic count has been undertaken and it is considered to provide a robust reflection of the future highway conditions.

4.3.2 Assessments have therefore been undertaken for the following scenarios:

- 2023 Base
- 2028 Base (includes traffic growth from TEMPro)
- 2028 Base + Development (includes traffic growth from TEMPro and the proposed development)

- 4.3.3 This assessment has considered the AM and PM peak hours identified in the traffic survey counts and which have been calculated as: weekday morning period (07:30-08:30 hours) and evening peak period (16:30-17:30 hours).
- 4.3.4 The development proposals are not forecast to result in a tangible growth in traffic volume along Dukes Meadow Drive with average increases of less than 2% during both the AM and PM peak hour periods.
- 4.3.5 Comparison of the differing impacts of each of the '2028 Base' and '2028 Base + Development' scenarios allow the performance of the assessed junction to be viewed in the context of background traffic flows, and with the addition of traffic flows generated by the proposed development. Therefore, the material impact of the proposed development on the local highway network can be clearly assessed.
- 4.3.6 The junction performance is summarised in **Table 4.2** with the full ARCADY report included as **Appendix F**.

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2023 Base					
A423 Southam Road (N)	0.9	4.72	0.45	0.4	3.12	0.30
Noral Way	0.0	4.63	0.02	0.1	3.39	0.10
A423 Southam Road (S)	0.9	5.08	0.47	7.2	21.81	0.89
Dukes Meadow Drive	0.7	4.44	0.45	0.3	3.75	0.23
	2028 Base					
A423 Southam Road (N)	1.0	5.05	0.48	0.5	3.22	0.32
Noral Way	0.0	4.79	0.02	0.1	3.48	0.94
A423 Southam Road (S)	1.0	5.33	0.49	11.8	34.47	0.66
Dukes Meadow Drive	0.8	4.71	0.48	0.3	3.92	0.25
	2028 Base + Development					
A423 Southam Road (N)	1.0	5.08	0.48	0.5	3.23	0.32
Noral Way	0.0	4.80	0.02	0.1	3.49	0.94
A423 Southam Road (S)	1.0	5.35	0.49	12.5	36.33	0.66
Dukes Meadow Drive	0.8	4.77	0.48	0.3	3.93	0.25

Table 4.2: Dukes Meadow Drive / Southam Road Roundabout Capacity Assessment

- 4.3.7 The comparison between the '2028 Base' and '2028 Base + Development' scenarios demonstrates that the development proposal is not forecast to lead to any material increase in queueing delay or RFC.
- 4.3.8 The junction operates with ample capacity during the AM peak hour. However, it appears to be close to capacity on the A423 Southam Road (S) approach to the junction during the PM peak hour. Vehicle traffic volumes travelling northbound along the A423 Southam Road were recorded as 25% higher (during both 16:00-17:00 and 17:00-18:00 hour periods) when compared to the vehicle traffic flows travelling in a southbound direction towards Banbury in the AM peak hours (07:00-08:00 and 08:00-09:00 hours).
- 4.3.9 Vehicle traffic flows between Dukes Meadow Drive and the A423 Southam Road (S) also followed these same patterns (with vehicles travelling northwestbound in the PM peak hours recorded as 15% and 40% during the 16:00-17:00 and 17:00-18:00 hour periods respectively). It is therefore considered that the roadworks on the M40 could have influenced the re-distribution of vehicle traffic away from the M40 and onto the A423 Southam Road during the PM peak hour periods. It is likely that the junction tends to operate with additional capacity once the roadworks are completed. Hence, no mitigation works are required at this junction.
- 4.3.10 In any case, the proposed development is not forecast to constitute any discernible impact with a notional increase in queue length and delays predicted at the assessed junction and thus the proposal would not result in a severe impact as defined within the NPPF.

5.0 Conclusion

5.1.1 This Technical Note has provided the additional information that was requested by OCC and agreed at the meeting that took place on the 21st of June 2023 and which are detailed in the Minutes of the Meeting shown in **Appendix A** to this Technical Note.

5.1.2 This Technical Note has provided the following additional information:

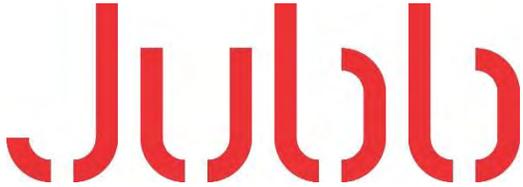
- Provision of details on the proposed site access junction in terms of dimensions and measurements.
- Provision of swept path analysis for a refuse vehicle.
- Update of collision data to assess the period 2018-2022 (both inclusive).
- Extend study area of collision data to include Dukes Meadow Drive and the junction with the A423 Southam Road.
- Undertake additional junction capacity analysis for the A423 Southam Road/Dukes Meadow Drive/Noral Way roundabout junction.

5.1.3 Following the provision of this additional information, it is concluded that the proposed development is appropriate and acceptable in traffic and transport terms. The proposal is compliant with NPPG and NPPF regulations, and with MfS/MfS2. Therefore, it is considered that the proposed development is acceptable and will not cause a 'severe' impact on the local road network.

5.1.4 This additional assessment has shown that no major issues are associated to the proposed development and that the objection should be removed.

Appendix A – Minutes of Meeting

Title: Land east of Warwick Road, Banbury



Meeting Title: 23/00853/OUT - Land east of Warwick Road, Banbury

Present: Rashid Bbosa (Oxfordshire County Council)

Ella Hammond (Vistry Group)

David Murray-Cox (Turley)

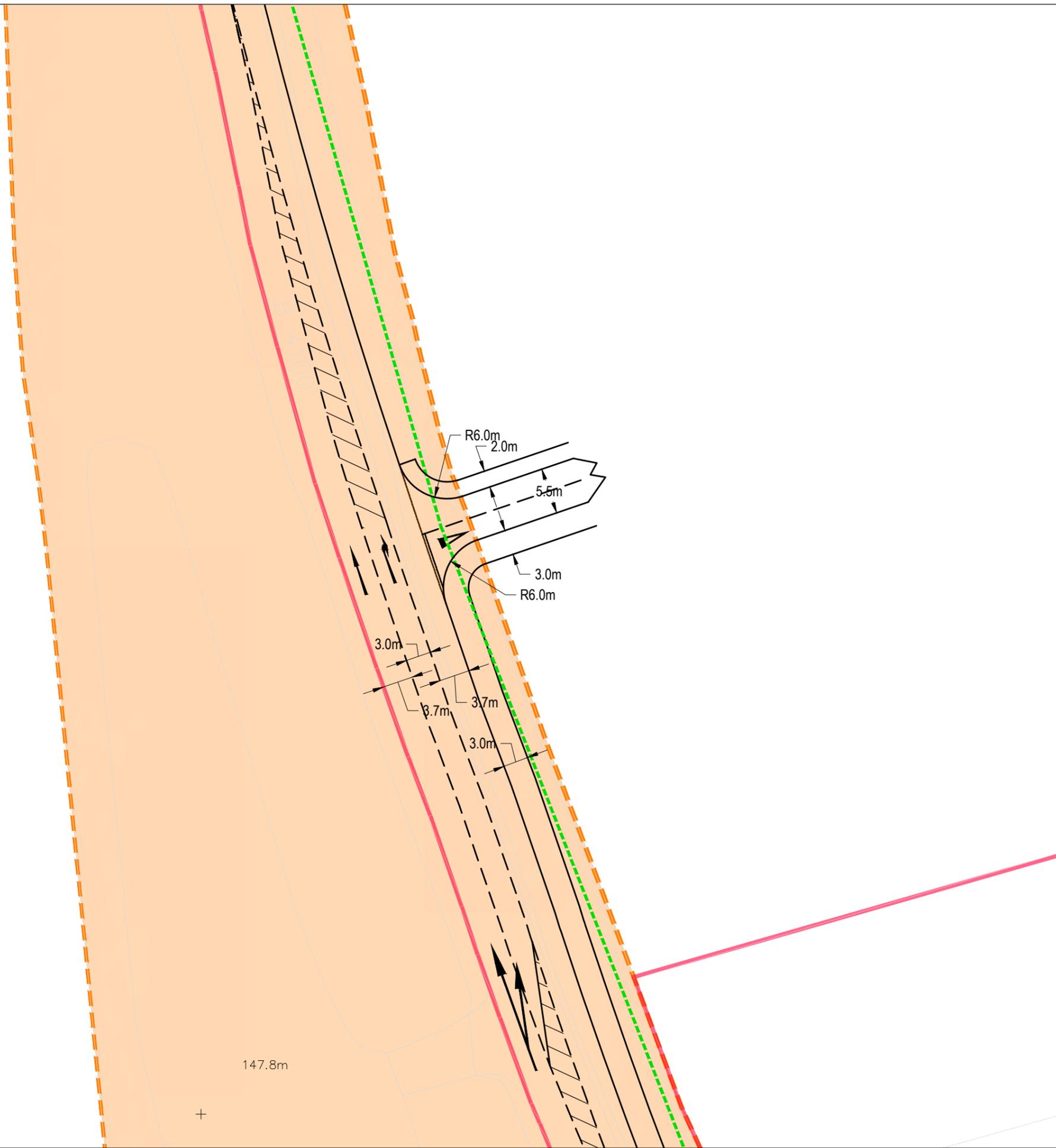
Karen Barnes (Turley)

Rafael Morant (Jubb)

Item.	Description.	Action.
1.	The meeting was arranged to review comments issued by RB for planning application 23/00853/OUT on the 12 th of June 2023. The objective for the meeting was to discuss and agree additional information to be provided to remove the reasons for objection.	
2.	RM stated that, despite the efforts and time chasing for a Pre-Application Advice and engagement with OCC, it was not possible to agree study area and methodology for the Transport Assessment and hence, this was based on what it was considered to be reasonable for the size of the development and consistent with other relevant consented planning applications in the immediate area.	
3.	The first comment on OCC's response referred to the provision of dimensions and measurements of the ghosting and access. The response stated that this information was to be conditioned. However, it was agreed that Jubb would prepare a drawing showing all the relevant dimensions of the access layout at this stage.	RM
4.	The second comment discussed referred to the provision of a swept path analysis to demonstrate that a 11.6m refuse vehicle could safely and easily enter and exit from all directions at the site access. This was stated both as a condition and as the first reason for objection. In any case, it was agreed that Jubb would provide this information at this stage.	RM
5.	The second reason for objection referred to the provision of collision data. The comments stated that the latest available data had not been used in the Transport Assessment. RM stated that it was the latest available data at the time when the report was issued. It was agreed that RB would send the contact details at OCC to obtain the latest data available and which should cover up to December 2022. Jubb will obtain this information and provide an update to the collision data.	RB/RM
6.	The second reason for objection also referred to the extension of the collision study area to include Dukes Meadow Drive and the section of the A423 Southam Road between Dukes Meadow Drive to the north and Hennef Way to the south (with both junctions included). RB agreed that the extended area would only need to include Dukes Meadow Drive and the junction of Dukes Meadow Drive with the A423 Southam Road. The section of Southam Road and the junction with Hennef Way could be removed. Jubb will therefore extend the study area to include Dukes Meadow Drive and the junction of the A423 Southam Road with Dukes Meadow Drive and Noral Way.	RM
7.	The third and final reason for objection referred to the provision of the junction capacity assessments to include the Dukes Meadow Drive/ A423 Southam Road/ Noral Way roundabout and the A423 Southam Road/ Hennef Way/ Ruscombe Avenue junction. RB agreed that the A423	RB/RM

Item.	Description.	Action.
	Southam Road/ Hennef Way/ Ruscote Avenue junction would not be required. RM stated that the latest traffic data available for the Dukes Meadow Drive/ A423 Southam Road/ Noral Way roundabout was from the Hanwell Fields application and asked RB whether he could check the Banbury Strategic Model and advise on the feasibility to use the data included within the model given the time constraints. RB said that he would look into it. Otherwise, RM would look to commission traffic count data. RB stated that if a traffic count was to be commissioned, a single weekday would suffice and would not require a full week of traffic count data.	
8.	RM said that all the additional information agreed at the meeting would be provided in a Transport Technical Note that would be sent to RB for review.	RM
9.	RB stated that if all the information was provided as requested and showed no major issues associated to the proposed development, then the objection would be removed.	RB

Appendix B – Dimensions of Proposed Vehicular Access



KEY

- Site Boundary
- Visibility Splay: 2.4m x 160m (Splays are provided in accordance with recorded vehicle speeds (50mph) and with DMRB standards)
- Extent of Highway Boundary

Rev	Date	Description	By	Apvd
P1	23.06.23	Preliminary issue	DL	RM

PROJECT:
WARWICK ROAD, BANBURY

TITLE:
PROPOSED VEHICULAR ACCESS - DIMENSIONS

CLIENT:
BOVIS HOMES

SCALE@A3:
1:500

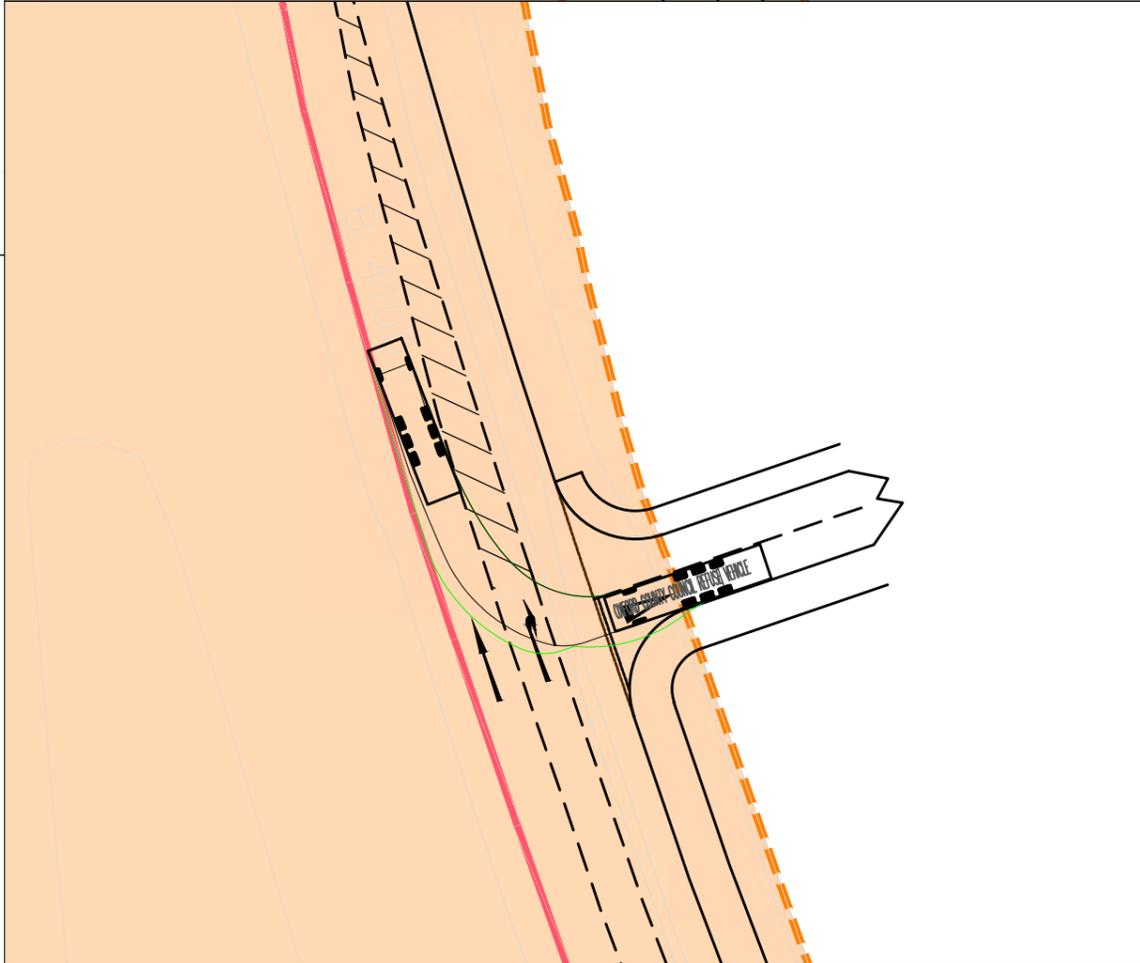
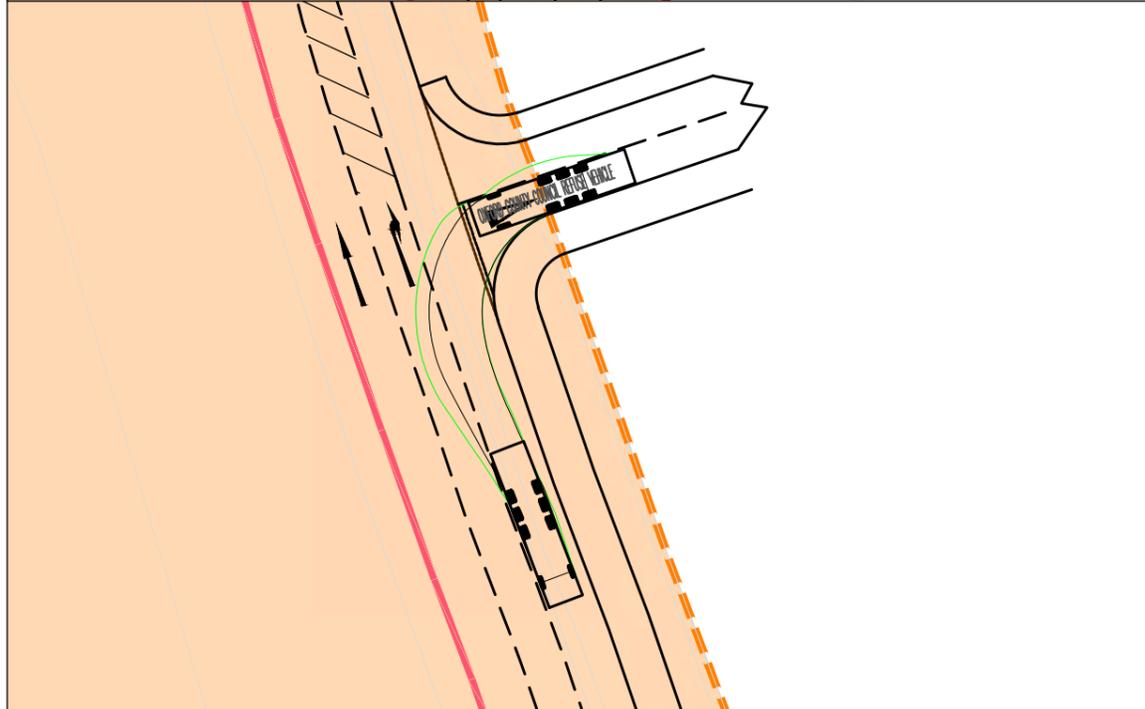
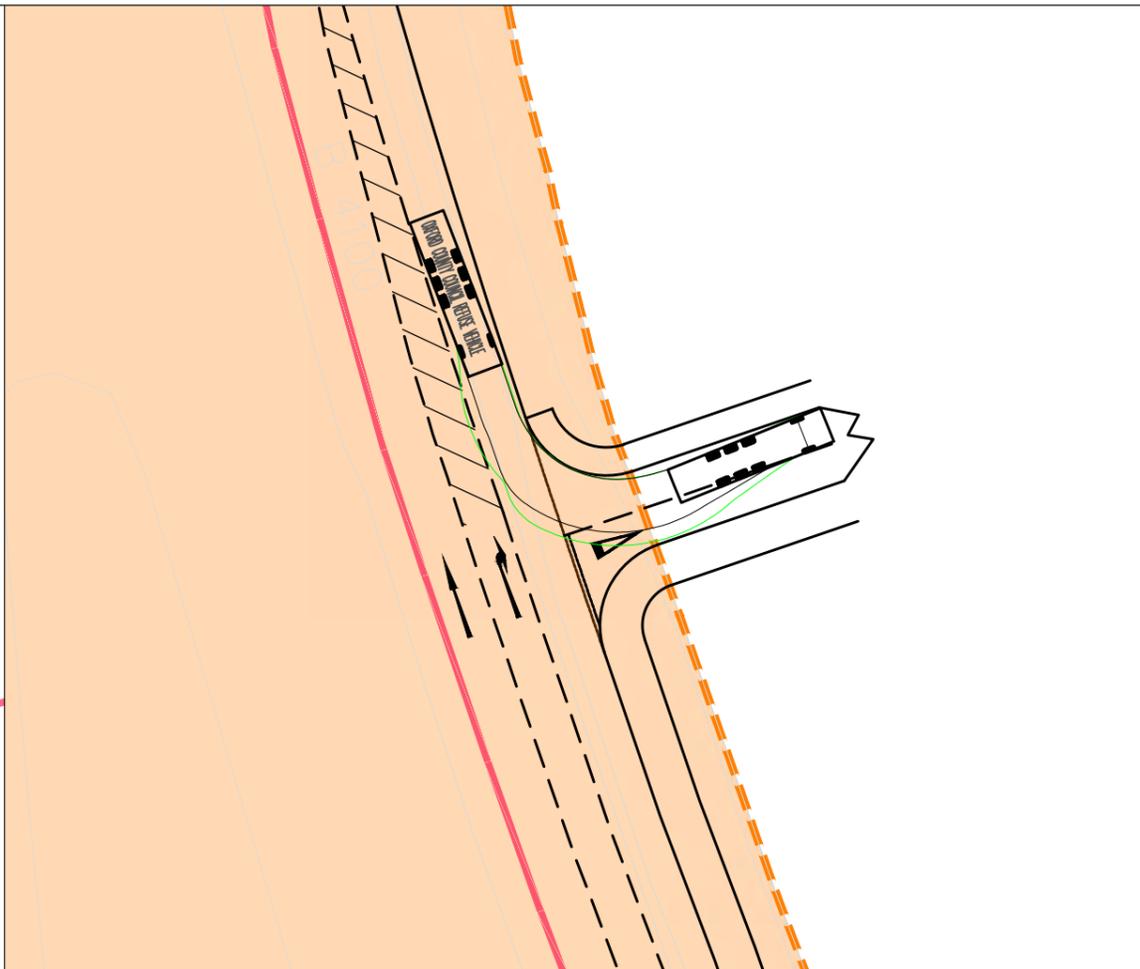
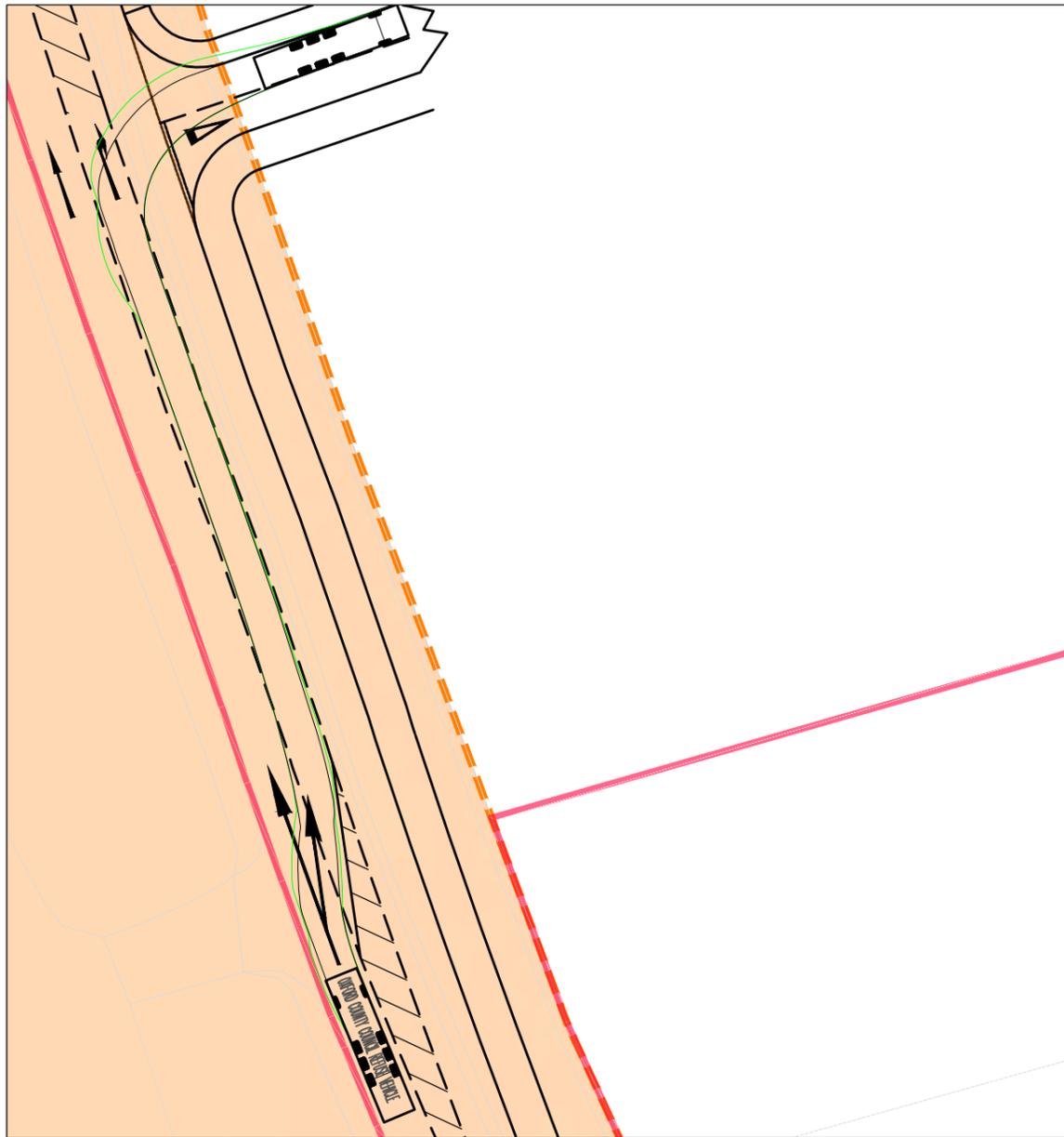
PROJECT REF:
17279

DRAWING No: 005 **REV:** P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

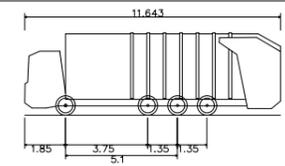


Appendix C – Swept Path Analysis of Refuse Vehicle at Proposed Vehicular Access



KEY

- Site Boundary
- Extent of Highway Boundary



OXFORD COUNTY COUNCIL REFUSE VEHICLE
 Overall Length 11.643m
 Overall Width 2.530m
 Overall Body Height 3.751m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 11.250m

Rev	Date	Description	By	Apvd
P1	23.06.23	Preliminary issue	DL	RM

PROJECT:
WARWICK ROAD, BANBURY

TITLE:
REFUSE VEHICLE - SWEPT PATH ANALYSIS AT PROPOSED SITE ACCESS

CLIENT:
BOVIS HOMES

SCALE@A3:
1:500

PROJECT REF:
17279

DRAWING No:
006

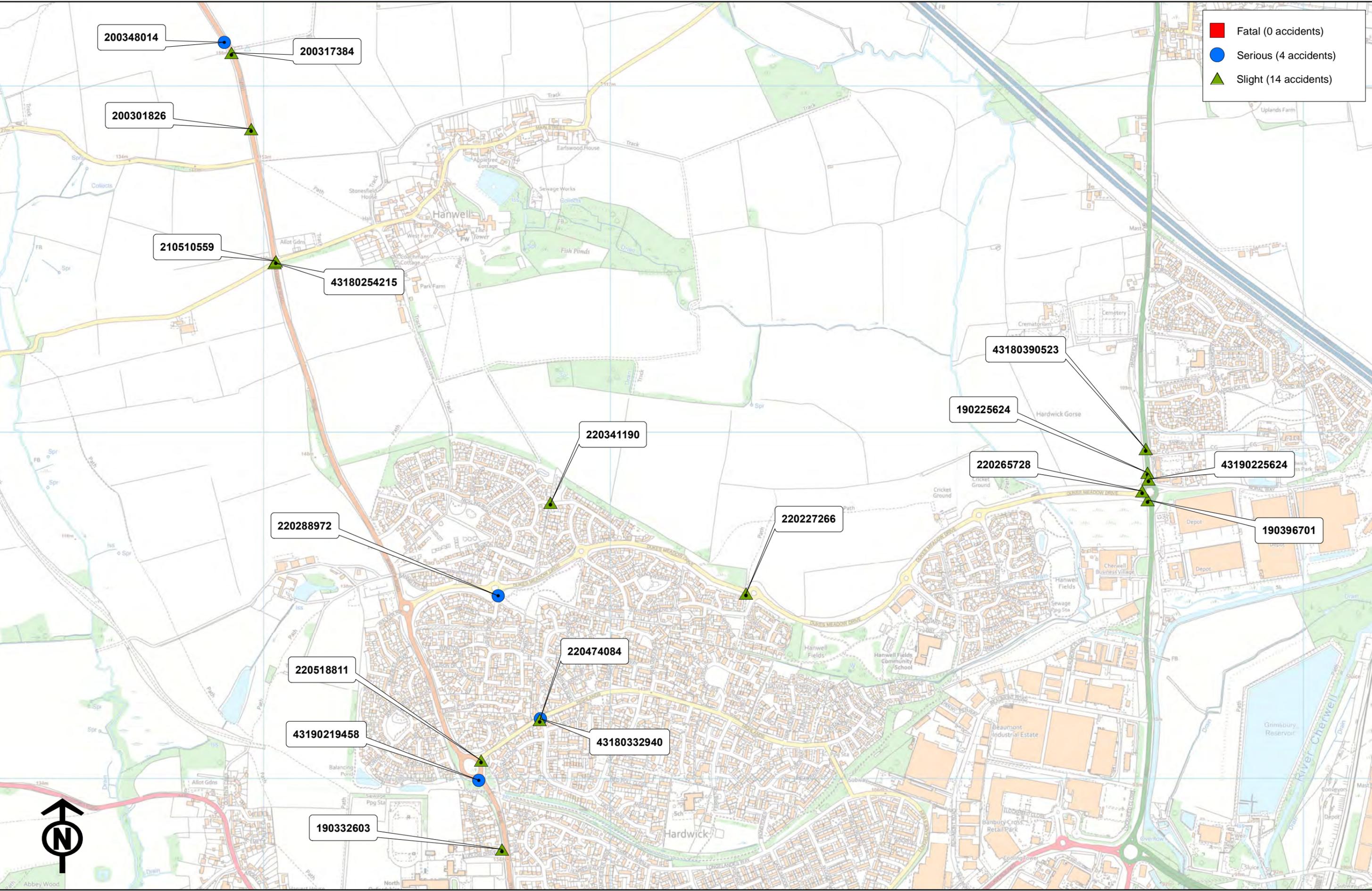
REV:
P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction



Appendix D – PIC Collision Data from OCC

- Fatal (0 accidents)
- Serious (4 accidents)
- ▲ Slight (14 accidents)



Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Friday 31/08/2018 Time 1326 Slight at B4100 WARWICK ROAD XRDS ROAD TO WROXTON AND HANWELL
 E: 443032 N: 243490 Junction Detail: 6 Control 4
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from E to N Turning right
 Vehicle Reference 2 Car Moving from S to N Going ahead other
 Casualty Reference: 1 Age: 54 Female Driver/rider Severity: Slight Injured by vehicle: 2
 Casualty Reference: 2 Age: 90 Male Passenger Severity: Slight Injured by vehicle: 2

Wednesday 31/10/2018 Time 1805 Serious at HIGHLANDS J/W SUSSEX DRIVE BANBURY
 E: 443799 N: 242173 Junction Detail: 3 Control 4
 Fine without high winds Road surface Dry Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from S to SE Turning right
 Vehicle Reference 2 Motorcycle over 500cc Moving from NE to S Going ahead other
 Casualty Reference: 1 Age: 21 Male Driver/rider Severity: Serious Injured by vehicle: 2

Sunday 23/12/2018 Time 0203 Slight at A423 SOUTHAM ROAD AT SIGNALLED CROSSING 100M N OF RBT J/W DUKES MEADOW DRIVE BANBUR
 E: 445547 N: 242952 Junction Detail: 0 Control
 Other Road surface Wet/Damp Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from S to S U-turn
 Casualty Reference: 1 Age: 31 Male Driver/rider Severity: Slight Injured by vehicle: 1

Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Monday 15/07/2019 Time 1559 Serious at B4100 WARWICK ROAD AT RBT J/W HIGHLANDS BANBURY
 E: 443622 N: 241995 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from SE to N Going ahead other
 Casualty Reference: 1 Age: 82 Male Driver/rider Severity: Serious Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from SE to N Going ahead other
 Vehicle Reference 3 Goods 3.5 tonnes mgw and under Moving from SE to N Going ahead other

Saturday 20/07/2019 Time 1419 Slight at A423 SOUTHAM ROAD 40 METRES N OF NORAL WAY BANBURY
 E: 445552 N: 242884 Junction Detail: 0 Control
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Goods 3.5 tonnes mgw and under Moving from W to N Turning left
 Casualty Reference: 1 Age: 28 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from N to S Going ahead other

Sunday 21/07/2019 Time 1419 Slight at A423 SOUTHAM ROAD 20M N OF RBT J/W DUKES MEADOW DRIVE & NORAL WAY BANBURY
 E: 445555 N: 242865 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Goods 3.5 tonnes mgw and under Moving from W to N Turning left
 Casualty Reference: 1 Age: 28 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from N to S Going ahead other

Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Friday 18/10/2019 Time 0830 Slight at LUDLOW RD J/W B4100 WARWICK RD BANBURY
 E: 443689 N: 241796 Junction Detail: 3 Control 4
 Fine without high winds Road surface Wet/Damp Daylight
 Vehicle Reference 1 Car Moving from W to N Turning left
 Vehicle Reference 2 Pedal Cycle Moving from N to S Going ahead other
 Casualty Reference: 1 Age: 15 Male Driver/rider Severity: Slight Injured by vehicle: 2

Friday 13/12/2019 Time 1615 Slight at A423 SOUTHAM RD RBT J/W DUKES MEADOW DRIVE AND NORAL WAY BANBURY
 E: 445553 N: 242805 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Darkness: street lights present and lit
 Vehicle Reference 1 Car Moving from S to N Going ahead other
 Vehicle Reference 2 Car Moving from S to N Going ahead but held up
 Casualty Reference: 1 Age: 32 Female Driver/rider Severity: Slight Injured by vehicle: 2

Wednesday 23/09/2020 Time 0848 Slight at B4100 WARWICK ROAD 92 M NORTH OF HORLEY TURN HANWELL
 E: 442965 N: 243877 Junction Detail: 0 Control
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from N to S Going ahead right bend
 Casualty Reference: 1 Age: 91 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Casualty Reference: 2 Age: 87 Female Passenger Severity: Slight Injured by vehicle: 1

Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Friday 02/10/2020 Time 2219 Slight at B4100 WARWICK ROAD ATBEND APPROX 330M N OF J/W HORLEY TURN HANWELL
 E: 442908 N: 244097 Junction Detail: 0 Control
 Raining without high winds Road surface Wet/Damp Darkness: no street lighting
 Vehicle Reference 1 Car Moving from N to N Going ahead left bend
 Casualty Reference: 1 Age: 21 Female Driver/rider Severity: Slight Injured by vehicle: 1

Wednesday 28/10/2020 Time 1753 Serious at B4100 WARWICK ROAD APPROX 330M N OF HORLEY TURN HANWELL
 E: 442887 N: 244127 Junction Detail: 0 Control
 Fine without high winds Road surface Wet/Damp Darkness: no street lighting
 Vehicle Reference 1 Car Moving from N to S Going ahead other
 Casualty Reference: 1 Age: 26 Male Driver/rider Severity: Serious Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from S to N Going ahead other
 Vehicle Reference 3 Car Moving from S to N Going ahead other
 Casualty Reference: 2 Age: 53 Male Driver/rider Severity: Slight Injured by vehicle: 3

Thursday 11/11/2021 Time 1452 Slight at B4100 WARWICK RD J/W MAIN STREET HANWELL
 E: 443036 N: 243495 Junction Detail: 6 Control 4
 Fine without high winds Road surface Wet/Damp Daylight
 Vehicle Reference 1 Car Moving from E to N Turning right
 Vehicle Reference 2 Car Moving from N to S Going ahead other
 Casualty Reference: 1 Age: 81 Male Driver/rider Severity: Slight Injured by vehicle: 2
 Casualty Reference: 2 Age: 73 Female Passenger Severity: Slight Injured by vehicle: 2

Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Tuesday 24/05/2022 Time 0840 Slight at DUKES MEADOW DRIVE AT REFUGE W OF WINTER GARDENS WAY BANBURY
E: 444393 N: 242535 Junction Detail: 1 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from SE to N Going ahead other
Vehicle Reference 2 Pedal Cycle Moving from S to N Changing lane to left
Casualty Reference: 1 Age: 17 Male Driver/rider Severity: Slight Injured by vehicle: 2

Friday 17/06/2022 Time 1617 Slight at A423 SOUTHAM ROAD RBT J/W DUKES MEADOW DRVIE BANBURY
E: 445537 N: 242831 Junction Detail: 1 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from W to E Going ahead other
Vehicle Reference 2 Car Moving from S to N Going ahead other
Casualty Reference: 1 Age: Female Passenger Severity: Slight Injured by vehicle: 2

Friday 01/07/2022 Time 1652 Serious at USHER DRIVE RBT J/W DUKE MEADOW DRIVE BANBURY
E: 443678 N: 242528 Junction Detail: 1 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Pedal Cycle Moving from E to W Going ahead other
Casualty Reference: 1 Age: 13 Male Driver/rider Severity: Serious Injured by vehicle: 1
Vehicle Reference 2 Car Moving from N to S Going ahead other

Accidents between dates 01/01/2018 and 20/06/2023 (66) months

Selection: Notes:

Selected using Manual Selection

Monday 01/08/2022 Time 1604 Slight at BULLERS STREET AT FOOTPATH CROSSING POINT APPROX 25M E OF J/W BISMORE ROAD BANBURY
 E: 443829 N: 242797 Junction Detail: 0 Control
 Fine without high winds Road surface Dry Daylight
 Vehicle Reference 1 Car Moving from W to E Going ahead other
 Vehicle Reference 2 Pedal Cycle Moving from S to N Going ahead other
 Casualty Reference: 1 Age: 6 Male Driver/rider Severity: Slight Injured by vehicle: 2

Friday 21/10/2022 Time 1500 Slight at HIGHLANDS J/W SUSSEX DRIVE BANBURY
 E: 443798 N: 242171 Junction Detail: 3 Control 4
 Fine without high winds Road surface Wet/Damp Daylight
 Vehicle Reference 1 Car Moving from S to S Turning left
 Vehicle Reference 2 Pedal Cycle Moving from NE to S Going ahead other
 Casualty Reference: 1 Age: 57 Male Driver/rider Severity: Slight Injured by vehicle: 2

Thursday 17/11/2022 Time 1618 Slight at B4100 WARWICK ROAD RBT J/W HIGHLANDS BANBURY
 E: 443628 N: 242053 Junction Detail: 1 Control 4
 Fine without high winds Road surface Dry Darkness: street lights present and lit
 Vehicle Reference 1 90 Moving from SE to N Going ahead other
 Casualty Reference: 1 Age: 10 Male Driver/rider Severity: Slight Injured by vehicle: 1
 Vehicle Reference 2 Car Moving from NE to S Turning left

Appendix E – Traffic Count Survey Data

Banbury, Thursday 6th July 2023

Junction: 1
 Approach: A423 North



TIME	Left to Noral Way					Ahead to A423 (South)					Right to Dukes Meadow Drive				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	4	0	0	4	4.0	111	13	2	126	144.9	11	1	0	12	13.3
07:15 - 07:30	0	0	0	0	0.0	127	8	0	135	145.4	15	1	0	16	17.3
07:30 - 07:45	1	2	0	3	5.6	125	8	2	135	147.4	18	0	0	18	18.0
07:45 - 08:00	3	0	0	3	3.0	122	8	0	130	140.4	19	0	0	19	19.0
Hourly Total	8	2	0	10	12.6	485	37	4	526	578.1	63	2	0	65	67.6
08:00 - 08:15	2	0	0	2	2.0	100	5	2	107	115.5	21	1	0	22	23.3
08:15 - 08:30	0	0	0	0	0.0	102	7	1	110	120.1	15	0	0	15	15.0
08:30 - 08:45	0	0	0	0	0.0	116	10	0	126	139.0	16	0	0	16	16.0
08:45 - 09:00	2	1	0	3	4.3	128	10	1	139	153.0	19	0	0	19	19.0
Hourly Total	4	1	0	5	6.3	446	32	4	482	527.6	71	1	0	72	73.3
09:00 - 09:15	4	1	0	5	6.3	104	5	1	110	117.5	22	1	0	23	24.3
09:15 - 09:30	1	0	0	1	1.0	84	6	1	91	99.8	18	3	0	21	24.9
09:30 - 09:45	1	0	0	1	1.0	97	8	1	106	117.4	20	0	0	20	20.0
09:45 - 10:00	1	0	0	1	1.0	93	8	0	101	111.4	14	0	0	14	14.0
Hourly Total	7	1	0	8	9.3	378	27	3	408	446.1	74	4	0	78	83.2
10:00 - 10:15	2	0	0	2	2.0	88	5	1	94	101.5	16	0	0	16	16.0
10:15 - 10:30	0	0	0	0	0.0	89	6	0	95	102.8	19	0	0	19	19.0
10:30 - 10:45	1	0	0	1	1.0	93	3	1	97	101.9	11	1	0	12	13.3
10:45 - 11:00	1	0	0	1	1.0	78	7	1	86	96.1	16	0	0	16	16.0
Hourly Total	4	0	0	4	4.0	348	21	3	372	402.3	62	1	0	63	64.3
11:00 - 11:15	0	0	0	0	0.0	72	3	2	77	82.9	21	0	0	21	21.0
11:15 - 11:30	1	0	0	1	1.0	85	3	1	89	93.9	15	0	0	15	15.0
11:30 - 11:45	0	0	0	0	0.0	103	6	0	109	116.8	18	0	0	18	18.0
11:45 - 12:00	2	0	0	2	2.0	79	2	0	81	83.6	14	0	0	14	14.0
Hourly Total	3	0	0	3	3.0	339	14	3	356	377.2	68	0	0	68	68.0
12:00 - 12:15	0	1	0	1	2.3	67	3	0	70	73.9	13	1	0	14	15.3
12:15 - 12:30	3	1	0	4	5.3	77	5	0	82	88.5	11	1	0	12	13.3
12:30 - 12:45	1	0	0	1	1.0	82	1	1	84	86.3	19	0	0	19	19.0
12:45 - 13:00	1	0	0	1	1.0	85	5	1	91	98.5	21	0	0	21	21.0
Hourly Total	5	2	0	7	9.6	311	14	2	327	347.2	64	2	0	66	68.6
13:00 - 13:15	0	0	0	0	0.0	91	2	0	93	95.6	17	0	0	17	17.0
13:15 - 13:30	2	0	0	2	2.0	85	0	1	86	87.0	18	0	0	18	18.0
13:30 - 13:45	0	1	0	1	2.3	83	3	2	88	93.9	13	0	0	13	13.0
13:45 - 14:00	1	0	0	1	1.0	86	1	0	87	88.3	20	0	0	20	20.0
Hourly Total	3	1	0	4	5.3	345	6	3	354	364.8	68	0	0	68	68.0
14:00 - 14:15	0	0	0	0	0.0	77	4	0	81	86.2	15	0	0	15	15.0
14:15 - 14:30	0	0	0	0	0.0	90	2	0	92	94.6	15	0	0	15	15.0
14:30 - 14:45	3	1	0	4	5.3	72	1	1	74	76.3	21	0	0	21	21.0
14:45 - 15:00	1	0	0	1	1.0	74	1	1	76	78.3	25	0	0	25	25.0
Hourly Total	4	1	0	5	6.3	313	8	2	323	335.4	76	0	0	76	76.0
15:00 - 15:15	5	0	0	5	5.0	84	0	0	84	84.0	18	0	0	18	18.0
15:15 - 15:30	1	0	0	1	1.0	90	2	1	93	96.6	20	0	0	20	20.0
15:30 - 15:45	1	0	0	1	1.0	93	3	1	97	101.9	16	0	0	16	16.0
15:45 - 16:00	2	0	0	2	2.0	99	1	0	100	101.3	22	0	0	22	22.0
Hourly Total	9	0	0	9	9.0	366	6	2	374	383.8	76	0	0	76	76.0
16:00 - 16:15	1	0	0	1	1.0	94	3	1	98	102.9	24	0	0	24	24.0
16:15 - 16:30	0	1	0	1	2.3	100	3	1	104	108.9	19	0	0	19	19.0
16:30 - 16:45	0	0	0	0	0.0	88	3	2	93	98.9	19	0	0	19	19.0
16:45 - 17:00	1	0	0	1	1.0	86	3	0	89	92.9	18	1	0	19	20.3
Hourly Total	2	1	0	3	4.3	368	12	4	384	403.6	80	1	0	81	82.3
17:00 - 17:15	1	0	0	1	1.0	96	0	1	97	98.0	13	0	0	13	13.0
17:15 - 17:30	1	0	0	1	1.0	104	0	0	104	104.0	17	0	0	17	17.0
17:30 - 17:45	2	1	0	3	4.3	96	2	2	100	104.6	21	0	0	21	21.0
17:45 - 18:00	1	0	0	1	1.0	103	3	1	107	111.9	15	0	0	15	15.0
Hourly Total	5	1	0	6	7.3	399	5	4	408	418.5	66	0	0	66	66.0
18:00 - 18:15	0	0	0	0	0.0	91	4	0	95	100.2	29	0	0	29	29.0
18:15 - 18:30	0	0	0	0	0.0	86	0	1	87	88.0	25	0	0	25	25.0
18:30 - 18:45	0	0	0	0	0.0	95	1	0	96	97.3	16	0	0	16	16.0
18:45 - 19:00	1	0	0	1	1.0	66	2	1	69	72.6	17	0	0	17	17.0
Hourly Total	1	0	0	1	1.0	338	7	2	347	358.1	87	0	0	87	87.0
TOTAL	55	10	0	65	78.0	4436	189	36	4661	4942.7	855	11	0	866	880.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Banbury, Thursday 6th July 2023

Junction: 1
 Approach: Noral Way



TIME	Left to A423 (South)					Ahead to Dukes Meadow Drive					Right to A423 (North)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	2	1	0	3	4.3	0	0	0	0	0.0	1	0	0	1	1.0
07:15 - 07:30	1	2	0	3	5.6	0	0	0	0	0.0	1	0	0	1	1.0
07:30 - 07:45	0	1	0	1	2.3	0	0	0	0	0.0	1	1	0	2	3.3
07:45 - 08:00	2	1	0	3	4.3	0	0	0	0	0.0	2	0	0	2	2.0
Hourly Total	5	5	0	10	16.5	0	0	0	0	0.0	5	1	0	6	7.3
08:00 - 08:15	2	0	0	2	2.0	1	0	0	1	1.0	1	0	0	1	1.0
08:15 - 08:30	0	0	0	0	0.0	0	0	0	0	0.0	1	0	0	1	1.0
08:30 - 08:45	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
08:45 - 09:00	1	0	0	1	1.0	1	0	0	1	1.0	1	0	0	1	1.0
Hourly Total	3	0	0	3	3.0	2	0	0	2	2.0	3	0	0	3	3.0
09:00 - 09:15	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
09:15 - 09:30	1	0	0	1	1.0	1	0	0	1	1.0	0	0	0	0	0.0
09:30 - 09:45	2	0	0	2	2.0	0	0	0	0	0.0	1	0	0	1	1.0
09:45 - 10:00	2	0	0	2	2.0	0	0	0	0	0.0	1	0	0	1	1.0
Hourly Total	5	0	0	5	5.0	1	0	0	1	1.0	2	0	0	2	2.0
10:00 - 10:15	0	0	0	0	0.0	0	0	0	0	0.0	1	0	0	1	1.0
10:15 - 10:30	2	0	0	2	2.0	1	0	0	1	1.0	0	0	0	0	0.0
10:30 - 10:45	0	0	0	0	0.0	0	0	0	0	0.0	2	0	0	2	2.0
10:45 - 11:00	5	0	0	5	5.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	7	0	0	7	7.0	1	0	0	1	1.0	3	0	0	3	3.0
11:00 - 11:15	1	0	0	1	1.0	2	0	0	2	2.0	2	0	0	2	2.0
11:15 - 11:30	0	0	0	0	0.0	1	0	0	1	1.0	2	0	0	2	2.0
11:30 - 11:45	3	1	0	4	5.3	0	0	0	0	0.0	0	0	0	0	0.0
11:45 - 12:00	3	0	0	3	3.0	0	0	0	0	0.0	0	1	0	1	2.3
Hourly Total	7	1	0	8	9.3	3	0	0	3	3.0	4	1	0	5	6.3
12:00 - 12:15	6	1	0	7	8.3	0	0	0	0	0.0	0	0	0	0	0.0
12:15 - 12:30	1	0	0	1	1.0	1	0	0	1	1.0	1	0	0	1	1.0
12:30 - 12:45	4	1	0	5	6.3	0	0	0	0	0.0	0	0	0	0	0.0
12:45 - 13:00	11	0	0	11	11.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	22	2	0	24	26.6	1	0	0	1	1.0	1	0	0	1	1.0
13:00 - 13:15	6	0	0	6	6.0	1	0	0	1	1.0	0	0	0	0	0.0
13:15 - 13:30	8	0	0	8	8.0	0	0	0	0	0.0	3	0	0	3	3.0
13:30 - 13:45	9	1	0	10	11.3	0	0	0	0	0.0	1	1	0	2	3.3
13:45 - 14:00	4	0	0	4	4.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	27	1	0	28	29.3	1	0	0	1	1.0	4	1	0	5	6.3
14:00 - 14:15	12	0	0	12	12.0	3	0	0	3	3.0	1	0	0	1	1.0
14:15 - 14:30	6	0	0	6	6.0	0	0	0	0	0.0	0	0	0	0	0.0
14:30 - 14:45	15	1	0	16	17.3	1	0	0	1	1.0	0	0	0	0	0.0
14:45 - 15:00	8	0	0	8	8.0	2	0	0	2	2.0	2	0	0	2	2.0
Hourly Total	41	1	0	42	43.3	6	0	0	6	6.0	3	0	0	3	3.0
15:00 - 15:15	13	0	0	13	13.0	0	0	0	0	0.0	3	0	0	3	3.0
15:15 - 15:30	19	1	0	20	21.3	1	0	0	1	1.0	2	0	0	2	2.0
15:30 - 15:45	17	0	0	17	17.0	0	0	0	0	0.0	0	0	0	0	0.0
15:45 - 16:00	14	0	0	14	14.0	2	0	0	2	2.0	3	0	0	3	3.0
Hourly Total	63	1	0	64	65.3	3	0	0	3	3.0	8	0	0	8	8.0
16:00 - 16:15	23	3	0	26	29.3	3	0	0	3	3.0	4	0	0	4	4.0
16:15 - 16:30	13	1	0	14	15.3	1	0	0	1	1.0	3	0	0	3	3.0
16:30 - 16:45	17	2	0	19	21.6	1	0	0	1	1.0	4	1	0	5	6.3
16:45 - 17:00	21	0	0	21	21.0	0	0	0	0	0.0	2	0	0	2	2.0
Hourly Total	74	6	0	80	87.6	5	0	0	5	5.0	13	1	0	14	15.3
17:00 - 17:15	30	0	0	30	30.0	5	0	0	5	5.0	2	0	0	2	2.0
17:15 - 17:30	12	1	0	13	14.3	0	0	0	0	0.0	5	0	0	5	5.0
17:30 - 17:45	11	0	0	11	11.0	1	0	0	1	1.0	1	0	0	1	1.0
17:45 - 18:00	12	0	0	12	12.0	2	0	0	2	2.0	4	0	0	4	4.0
Hourly Total	65	1	0	66	67.3	8	0	0	8	8.0	12	0	0	12	12.0
18:00 - 18:15	7	2	0	9	11.6	1	0	0	1	1.0	4	1	0	5	6.3
18:15 - 18:30	7	0	0	7	7.0	1	0	0	1	1.0	3	0	0	3	3.0
18:30 - 18:45	3	0	0	3	3.0	0	0	0	0	0.0	1	0	0	1	1.0
18:45 - 19:00	1	0	0	1	1.0	0	0	0	0	0.0	2	0	0	2	2.0
Hourly Total	18	2	0	20	22.6	2	0	0	2	2.0	10	1	0	11	12.3
TOTAL	337	20	0	357	383.0	33	0	0	33	33.0	68	5	0	73	79.5

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Banbury, Thursday 6th July 2023



Junction: 1
 Approach: A423 South

TIME	Left to Dukas Meadow Drive				Ahead to A423 (North)				Right to Noral Way				U-Turn							
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	22	0	1	23	24.0	83	6	1	90	98.8	3	2	0	5	7.6	0	0	0	0	0.0
07:15 - 07:30	26	0	0	26	26.0	78	2	1	81	84.6	9	0	0	9	9.0	0	0	0	0	0.0
07:30 - 07:45	22	0	0	22	22.0	86	6	0	92	99.8	20	7	0	27	36.1	0	0	0	0	0.0
07:45 - 08:00	27	0	0	27	27.0	62	6	2	70	79.8	28	0	0	28	28.0	2	0	0	2	2.0
Hourly Total	97	0	1	98	99.0	309	20	4	333	363.0	60	9	0	69	80.7	2	0	0	2	2.0
08:00 - 08:15	30	0	0	30	30.0	94	6	0	100	107.8	17	0	0	17	17.0	0	0	0	0	0.0
08:15 - 08:30	34	0	0	34	34.0	80	2	0	82	84.6	24	2	0	26	28.6	0	0	0	0	0.0
08:30 - 08:45	38	0	0	38	38.0	85	8	1	94	105.4	23	0	0	23	23.0	1	0	0	1	1.0
08:45 - 09:00	42	1	0	43	44.3	62	6	2	70	79.8	44	0	0	44	44.0	0	0	0	0	0.0
Hourly Total	144	1	0	145	146.3	321	22	3	346	377.6	108	2	0	110	112.6	1	0	0	1	1.0
09:00 - 09:15	47	1	0	48	49.3	62	5	1	68	75.5	40	1	0	41	42.3	0	0	0	0	0.0
09:15 - 09:30	34	0	0	34	34.0	71	6	1	78	86.8	15	3	0	18	21.9	1	0	0	1	1.0
09:30 - 09:45	40	0	0	40	40.0	62	7	0	69	78.1	11	0	0	11	11.0	1	0	0	1	1.0
09:45 - 10:00	36	1	0	37	38.3	70	5	0	75	81.5	11	3	0	14	17.9	0	0	0	0	0.0
Hourly Total	157	2	0	159	161.6	265	23	2	290	321.9	77	7	0	84	93.1	2	0	0	2	2.0
10:00 - 10:15	28	0	0	28	28.0	68	4	0	72	77.2	6	0	0	6	6.0	0	0	0	0	0.0
10:15 - 10:30	22	0	0	22	22.0	71	7	1	79	89.1	7	0	0	7	7.0	0	1	0	1	1.0
10:30 - 10:45	29	0	1	30	31.0	77	9	0	86	97.7	1	1	0	2	3.3	0	0	0	0	0.0
10:45 - 11:00	27	1	0	28	29.3	83	4	1	88	94.2	4	0	0	4	4.0	2	0	0	2	2.0
Hourly Total	106	1	1	108	110.3	299	24	2	325	358.2	18	1	0	19	20.3	2	1	0	3	4.3
11:00 - 11:15	31	0	0	31	31.0	90	3	1	94	98.9	3	0	0	3	3.0	0	0	0	0	0.0
11:15 - 11:30	28	2	0	30	32.6	78	3	1	82	86.9	0	0	0	0	0.0	0	0	0	0	0.0
11:30 - 11:45	26	0	0	26	26.0	72	6	0	78	85.8	1	1	0	2	3.3	0	0	0	0	0.0
11:45 - 12:00	27	0	0	27	27.0	84	7	0	91	100.1	2	0	0	2	2.0	0	0	0	0	0.0
Hourly Total	112	2	0	114	116.6	324	19	2	345	371.7	6	1	0	7	8.3	0	0	0	0	0.0
12:00 - 12:15	30	0	0	30	30.0	86	2	1	89	92.6	3	0	0	3	3.0	0	0	0	0	0.0
12:15 - 12:30	33	0	0	33	33.0	88	5	2	95	103.5	2	0	0	2	2.0	1	0	0	1	1.0
12:30 - 12:45	29	0	0	29	29.0	91	4	1	96	102.2	0	0	0	0	0.0	0	0	0	0	0.0
12:45 - 13:00	25	0	0	25	25.0	83	3	0	86	89.9	2	0	0	2	2.0	1	0	0	1	1.0
Hourly Total	117	0	0	117	117.0	348	14	4	366	388.2	7	0	0	7	7.0	2	0	0	2	2.0
13:00 - 13:15	41	0	0	41	41.0	78	0	2	80	82.0	1	0	0	1	1.0	1	0	0	1	1.0
13:15 - 13:30	49	1	0	50	51.3	79	3	0	82	85.9	1	0	0	1	1.0	1	0	0	1	1.0
13:30 - 13:45	44	0	0	44	44.0	94	6	1	101	109.8	2	0	0	2	2.0	0	0	0	0	0.0
13:45 - 14:00	39	0	0	39	39.0	90	3	0	93	96.9	1	0	0	1	1.0	2	0	0	2	2.0
Hourly Total	173	1	0	174	175.3	341	12	3	356	374.6	5	0	0	5	5.0	4	0	0	4	4.0
14:00 - 14:15	41	0	0	41	41.0	79	3	1	83	87.9	1	1	0	2	3.3	0	0	0	0	0.0
14:15 - 14:30	56	1	0	57	58.3	84	5	1	90	97.5	0	0	0	0	0.0	0	0	0	0	0.0
14:30 - 14:45	66	1	0	67	68.3	84	5	1	90	97.5	3	0	0	3	3.0	0	0	0	0	0.0
14:45 - 15:00	74	0	0	74	74.0	72	5	0	77	83.5	2	0	0	2	2.0	0	0	0	0	0.0
Hourly Total	237	2	0	239	241.6	319	18	3	340	366.4	6	1	0	7	8.3	0	0	0	0	0.0
15:00 - 15:15	78	0	0	78	78.0	94	6	1	101	109.8	1	1	0	2	3.3	0	0	0	0	0.0
15:15 - 15:30	91	0	0	91	91.0	92	3	0	95	98.9	0	0	0	0	0.0	1	0	0	1	1.0
15:30 - 15:45	78	0	0	78	78.0	106	4	1	111	117.2	3	1	0	4	5.3	0	0	0	0	0.0
15:45 - 16:00	90	1	0	91	92.3	112	2	0	114	116.6	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	337	1	0	338	339.3	404	15	2	421	443.5	5	2	0	7	8.6	1	0	0	1	1.0
16:00 - 16:15	95	2	0	97	99.6	141	7	2	150	161.1	2	2	0	4	6.6	1	0	0	1	1.0
16:15 - 16:30	96	0	0	96	96.0	151	4	0	155	160.2	3	2	0	5	7.6	0	0	0	0	0.0
16:30 - 16:45	97	0	0	97	97.0	175	7	1	183	193.1	2	0	0	2	2.0	0	0	0	0	0.0
16:45 - 17:00	88	0	0	88	88.0	163	2	0	165	167.6	2	2	0	4	6.6	0	0	0	0	0.0
Hourly Total	376	2	0	378	380.6	630	20	3	653	682.0	9	6	0	15	22.8	1	0	0	1	1.0
17:00 - 17:15	126	0	0	126	126.0	164	2	1	167	170.6	6	0	0	6	6.0	1	0	0	1	1.0
17:15 - 17:30	122	0	0	122	122.0	144	3	0	147	150.9	2	0	0	2	2.0	1	0	0	1	1.0
17:30 - 17:45	121	0	0	121	121.0	148	5	1	154	161.5	3	0	0	3	3.0	1	0	0	1	1.0
17:45 - 18:00	98	0	0	98	98.0	128	4	2	134	141.2	2	0	0	2	2.0	0	0	0	0	0.0
Hourly Total	467	0	0	467	467.0	584	14	4	602	624.2	13	0	0	13	13.0	3	0	0	3	3.0
18:00 - 18:15	101	0	0	101	101.0	140	3	2	145	150.9	3	0	0	3	3.0	0	0	0	0	0.0
18:15 - 18:30	97	0	0	97	97.0	149	2	1	152	155.6	3	0	0	3	3.0	0	0	0	0	0.0
18:30 - 18:45	95	0	0	95	95.0	123	2	3	128	133.6	1	2	0	3	5.6	0	0	0	0	0.0
18:45 - 19:00	71	0	0	71	71.0	113	1	3	115	117.3	4	0	0	4	4.0	0	0	0	0	0.0
Hourly Total	364	0	0	364	364.0	525	8	7	540	557.4	11	2	0	13	15.6	0	0	0	0	0.0
TOTAL	2687	12	2	2701	2718.6	4669	209	39	4917	5227.7	325	31	0	356	396.3	18	1	0	19	20.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Banbury, Thursday 6th July 2023

Junction: 1
 Approach: Dukes Meadow Drive



TIME	Left to A423 (North)				Ahead to Noral Way				Right to A423 (South)						
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00-07:15	25	0	0	25	25.0	1	0	0	1	1.0	56	1	0	57	58.3
07:15-07:30	21	0	0	21	21.0	2	0	0	2	2.0	81	1	0	82	83.3
07:30-07:45	31	0	0	31	31.0	1	0	0	1	1.0	95	1	0	96	97.3
07:45-08:00	44	0	0	44	44.0	2	0	0	2	2.0	94	0	0	94	94.0
Hourly Total	121	0	0	121	121.0	6	0	0	6	6.0	326	3	0	329	332.9
08:00-08:15	26	0	0	26	26.0	6	0	0	6	6.0	92	1	0	93	94.3
08:15-08:30	31	2	0	33	35.6	8	0	0	8	8.0	101	0	0	101	101.0
08:30-08:45	20	0	0	20	20.0	2	0	0	2	2.0	77	0	0	77	77.0
08:45-09:00	28	0	0	28	28.0	7	0	0	7	7.0	65	0	0	65	65.0
Hourly Total	105	2	0	107	109.6	23	0	0	23	23.0	335	1	0	336	337.3
09:00-09:15	24	0	0	24	24.0	1	0	0	1	1.0	58	1	0	59	60.3
09:15-09:30	22	0	0	22	22.0	0	0	0	0	0.0	51	0	0	51	51.0
09:30-09:45	22	0	0	22	22.0	1	0	0	1	1.0	41	0	0	41	41.0
09:45-10:00	18	1	0	19	20.3	2	0	0	2	2.0	46	0	0	46	46.0
Hourly Total	86	1	0	87	88.3	4	0	0	4	4.0	196	1	0	197	198.3
10:00-10:15	18	0	0	18	18.0	1	0	0	1	1.0	38	0	0	38	38.0
10:15-10:30	15	0	0	15	15.0	0	0	0	0	0.0	37	1	0	38	39.3
10:30-10:45	12	0	0	12	12.0	2	0	0	2	2.0	41	0	1	42	43.0
10:45-11:00	17	0	0	17	17.0	1	0	0	1	1.0	32	2	0	34	36.6
Hourly Total	62	0	0	62	62.0	4	0	0	4	4.0	148	3	1	152	156.9
11:00-11:15	21	0	0	21	21.0	0	0	0	0	0.0	39	0	0	39	39.0
11:15-11:30	15	0	0	15	15.0	0	0	0	0	0.0	33	0	1	34	35.0
11:30-11:45	11	0	0	11	11.0	2	0	0	2	2.0	35	0	0	35	35.0
11:45-12:00	15	1	0	16	17.3	2	0	0	2	2.0	31	0	0	31	31.0
Hourly Total	62	1	0	63	64.3	4	0	0	4	4.0	138	0	1	139	140.0
12:00-12:15	19	0	0	19	19.0	1	0	0	1	1.0	38	0	0	38	38.0
12:15-12:30	19	0	0	19	19.0	0	0	0	0	0.0	41	0	0	41	41.0
12:30-12:45	16	0	0	16	16.0	4	0	0	4	4.0	36	0	0	36	36.0
12:45-13:00	15	0	0	15	15.0	1	0	0	1	1.0	33	0	0	33	33.0
Hourly Total	69	0	0	69	69.0	6	0	0	6	6.0	148	0	0	148	148.0
13:00-13:15	20	0	0	20	20.0	0	0	0	0	0.0	28	0	0	28	28.0
13:15-13:30	13	0	0	13	13.0	2	0	0	2	2.0	35	0	0	35	35.0
13:30-13:45	11	0	0	11	11.0	3	0	0	3	3.0	39	0	0	39	39.0
13:45-14:00	17	1	0	18	19.3	1	0	0	1	1.0	41	1	0	42	43.3
Hourly Total	61	1	0	62	63.3	6	0	0	6	6.0	143	1	0	144	145.3
14:00-14:15	6	0	0	6	6.0	1	0	0	1	1.0	33	0	0	33	33.0
14:15-14:30	19	0	0	19	19.0	1	0	0	1	1.0	38	0	0	38	38.0
14:30-14:45	12	1	0	13	14.3	0	0	0	0	0.0	41	1	0	42	43.3
14:45-15:00	7	0	0	7	7.0	2	0	0	2	2.0	36	0	0	36	36.0
Hourly Total	44	1	0	45	46.3	4	0	0	4	4.0	148	1	0	149	150.3
15:00-15:15	12	0	0	12	12.0	1	0	0	1	1.0	38	0	0	38	38.0
15:15-15:30	15	0	0	15	15.0	0	0	0	0	0.0	40	0	0	40	40.0
15:30-15:45	11	0	0	11	11.0	2	0	0	2	2.0	41	0	0	41	41.0
15:45-16:00	16	0	0	16	16.0	1	0	0	1	1.0	44	0	0	44	44.0
Hourly Total	54	0	0	54	54.0	4	0	0	4	4.0	163	0	0	163	163.0
16:00-16:15	19	0	1	20	21.0	1	0	0	1	1.0	45	0	1	46	47.0
16:15-16:30	14	1	0	15	16.3	1	0	0	1	1.0	46	0	0	46	46.0
16:30-16:45	14	0	0	14	14.0	1	0	0	1	1.0	50	2	0	52	54.6
16:45-17:00	20	0	0	20	20.0	1	0	0	1	1.0	51	0	0	51	51.0
Hourly Total	67	1	1	69	71.3	4	0	0	4	4.0	192	2	1	195	198.6
17:00-17:15	16	0	0	16	16.0	1	0	0	1	1.0	44	1	0	45	46.3
17:15-17:30	18	0	0	18	18.0	1	0	0	1	1.0	42	0	0	42	42.0
17:30-17:45	16	0	0	16	16.0	0	0	0	0	0.0	43	0	0	43	43.0
17:45-18:00	18	0	0	18	18.0	1	0	0	1	1.0	47	0	0	47	47.0
Hourly Total	68	0	0	68	68.0	3	0	0	3	3.0	176	1	0	177	178.3
18:00-18:15	17	0	0	17	17.0	1	0	0	1	1.0	84	0	0	84	84.0
18:15-18:30	10	1	0	11	12.3	1	0	0	1	1.0	49	0	0	49	49.0
18:30-18:45	12	1	0	13	14.3	0	0	0	0	0.0	44	0	0	44	44.0
18:45-19:00	12	0	0	12	12.0	1	0	0	1	1.0	35	0	0	35	35.0
Hourly Total	51	2	0	53	55.6	3	0	0	3	3.0	212	0	0	212	212.0
TOTAL	850	9	1	860	872.7	71	0	0	71	71.0	2325	13	3	2341	2360.9

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Appendix F – Junction Capacity Assessment – Dukes Meadow Drive / A423 Southam Road / Noral Way Roundabout Junction

<h1>Junctions 10</h1>
<h2>ARCADY 10 - Roundabout Module</h2>
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
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Filename: A423, Noral Way, Southam Road, Dukes Meadow Drive - Roundabout - DL.j10
Path: S:\PROJECT FOLDER\17279 Warwick Road, Banbury\Calculations\Transport\Modelling
Report generation date: 12/07/2023 16:01:58

- »2023, AM
- »2023, PM
- »2028, AM
- »2028, PM
- »2028 + Proposed Development, AM
- »2028 + Proposed Development, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023										
2 - Noral Way	D1	0.0	4.63	0.02	A	D2	0.1	3.39	0.10	A
3 - Southam Road (S)		0.9	5.08	0.47	A		7.2	21.81	0.89	C
4 - Dukes Meadow Drive		0.7	4.44	0.42	A		0.3	3.75	0.23	A
1 - A423		0.9	4.72	0.45	A		0.4	3.12	0.30	A
2028										
2 - Noral Way	D3	0.0	4.79	0.02	A	D4	0.1	3.48	0.10	A
3 - Southam Road (S)		1.0	5.33	0.49	A		11.8	34.47	0.94	D
4 - Dukes Meadow Drive		0.8	4.71	0.45	A		0.3	3.92	0.25	A
1 - A423		1.0	5.05	0.48	A		0.5	3.22	0.32	A
2028 + Proposed Development										
2 - Noral Way	D7	0.0	4.80	0.02	A	D8	0.1	3.49	0.10	A
3 - Southam Road (S)		1.0	5.35	0.49	A		12.5	36.33	0.94	E
4 - Dukes Meadow Drive		0.8	4.77	0.46	A		0.3	3.93	0.25	A
1 - A423		1.0	5.08	0.48	A		0.5	3.23	0.32	A

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.

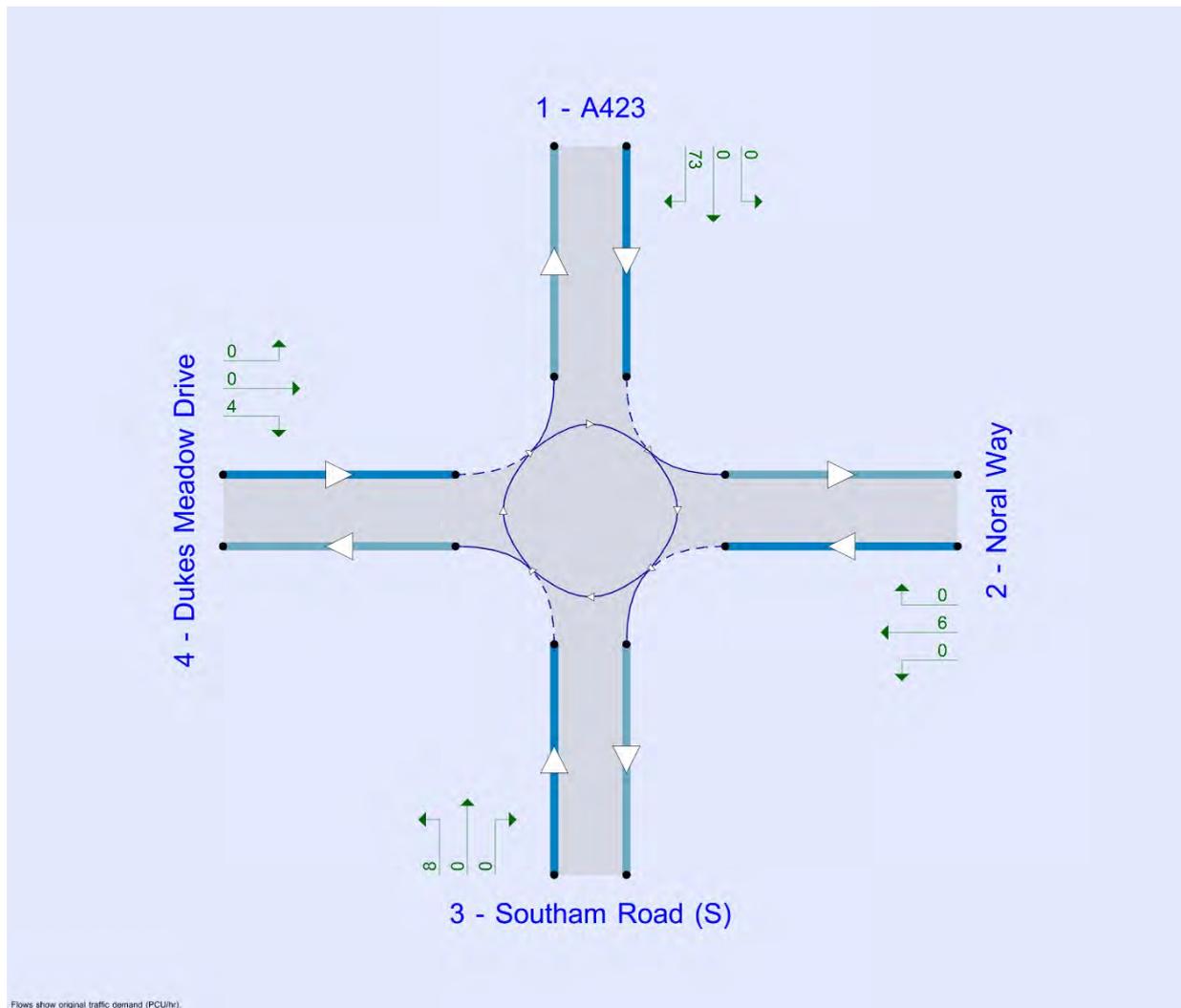
File summary

File Description

Title	
Location	
Site number	
Date	12/07/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JUBB\DaisyLloyd
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	ONE HOUR	07:15	08:45	15	✓
D2	2023	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028	AM	ONE HOUR	07:15	08:45	15	✓
D4	2028	PM	ONE HOUR	16:15	17:45	15	✓
D5	Proposed Development	AM	ONE HOUR	07:15	08:45	15	
D6	Proposed Development	PM	ONE HOUR	16:15	17:45	15	
D7	2028 + Proposed Development	AM	ONE HOUR	07:15	08:45	15	✓
D8	2028 + Proposed Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	4.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.75	A

Arms

Arms

Arm	Name	Description	No give-way line
2	Noral Way		
3	Southam Road (S)		
4	Dukes Meadow Drive		
1	A423		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
2 - Noral Way	3.40	6.85	24.8	23.7	49.1	49.0		
3 - Southam Road (S)	3.20	6.85	9.9	24.2	49.1	35.0		
4 - Dukes Meadow Drive	3.30	7.00	35.8	21.9	49.1	47.0		
1 - A423	4.50	6.75	42.7	20.9	49.1	47.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
2 - Noral Way	0.586	1651
3 - Southam Road (S)	0.565	1465
4 - Dukes Meadow Drive	0.605	1742
1 - A423	0.622	1836

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	17	100.000

3 - Southam Road (S)		ONE HOUR	✓	597	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	541	100.000
1 - A423		ONE HOUR	✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	9	1	7
	3 - Southam Road (S)	110	2	113	372
	4 - Dukes Meadow Drive	17	387	0	137
	1 - A423	11	523	75	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	43	0	17
	3 - Southam Road (S)	17	0	0	6
	4 - Dukes Meadow Drive	0	1	0	1
	1 - A423	25	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.02	4.63	0.0	A	16	23
3 - Southam Road (S)	0.47	5.08	0.9	A	548	822
4 - Dukes Meadow Drive	0.42	4.44	0.7	A	496	745
1 - A423	0.45	4.72	0.9	A	559	838

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	13	3	740	1217	0.011	13	103	0.0	0.0	3.826	A
3 - Southam Road (S)	449	112	62	1430	0.314	448	691	0.0	0.5	3.899	A
4 - Dukes Meadow Drive	407	102	368	1519	0.268	406	142	0.0	0.4	3.261	A
1 - A423	458	115	387	1596	0.287	457	387	0.0	0.4	3.362	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	15	4	886	1132	0.014	15	124	0.0	0.0	4.128	A
3 - Southam Road (S)	537	134	75	1423	0.377	536	827	0.5	0.6	4.325	A
4 - Dukes Meadow Drive	486	122	441	1475	0.330	486	170	0.4	0.5	3.672	A
1 - A423	547	137	463	1548	0.354	547	463	0.4	0.6	3.827	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	19	5	1085	1015	0.018	19	152	0.0	0.0	4.625	A
3 - Southam Road (S)	657	164	91	1413	0.465	656	1012	0.6	0.9	5.061	A
4 - Dukes Meadow Drive	596	149	540	1415	0.421	595	208	0.5	0.7	4.425	A
1 - A423	671	168	567	1484	0.452	669	567	0.6	0.9	4.702	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way											
3 - Southam Road (S)											
4 - Dukes Meadow Drive											
1 - A423											

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	19	5	1087	1014	0.018	19	152	0.0	0.0	4.630	A
3 - Southam Road (S)	657	164	91	1413	0.465	657	1014	0.9	0.9	5.076	A
4 - Dukes Meadow Drive	596	149	541	1415	0.421	596	208	0.7	0.7	4.437	A
1 - A423	671	168	568	1483	0.452	671	568	0.9	0.9	4.718	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	15	4	889	1130	0.014	15	124	0.0	0.0	4.136	A
3 - Southam Road (S)	537	134	75	1423	0.377	538	830	0.9	0.7	4.342	A
4 - Dukes Meadow Drive	486	122	442	1474	0.330	487	170	0.7	0.5	3.685	A
1 - A423	547	137	465	1547	0.354	549	465	0.9	0.6	3.844	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	13	3	744	1215	0.011	13	104	0.0	0.0	3.833	A
3 - Southam Road (S)	449	112	63	1430	0.314	450	694	0.7	0.5	3.920	A
4 - Dukes Meadow Drive	407	102	370	1518	0.268	408	142	0.5	0.4	3.278	A
1 - A423	458	115	389	1594	0.288	459	389	0.6	0.4	3.380	A

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	13.96	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.96	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	108	100.000
3 - Southam Road (S)		ONE HOUR	✓	1134	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	266	100.000
1 - A423		ONE HOUR	✓	466	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	87	6	15
	3 - Southam Road (S)	17	2	433	682
	4 - Dukes Meadow Drive	4	194	0	68
	1 - A423	3	394	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	4	0	7
	3 - Southam Road (S)	14	0	0	2
	4 - Dukes Meadow Drive	0	2	0	0
	1 - A423	0	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.10	3.39	0.1	A	99	149
3 - Southam Road (S)	0.89	21.81	7.2	C	1041	1561
4 - Dukes Meadow Drive	0.23	3.75	0.3	A	244	366
1 - A423	0.30	3.12	0.4	A	428	641

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	81	20	495	1361	0.060	81	18	0.0	0.1	2.929	A
3 - Southam Road (S)	854	213	68	1427	0.598	848	508	0.0	1.5	6.241	A
4 - Dukes Meadow Drive	200	50	535	1418	0.141	200	380	0.0	0.2	2.996	A
1 - A423	351	88	163	1735	0.202	350	572	0.0	0.3	2.645	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	97	24	592	1304	0.074	97	22	0.1	0.1	3.106	A
3 - Southam Road (S)	1019	255	81	1419	0.718	1015	608	1.5	2.5	8.944	A
4 - Dukes Meadow Drive	239	60	641	1354	0.177	239	455	0.2	0.2	3.275	A
1 - A423	419	105	195	1715	0.244	419	685	0.3	0.3	2.827	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	119	30	725	1226	0.097	119	26	0.1	0.1	3.385	A
3 - Southam Road (S)	1249	312	99	1409	0.886	1232	745	2.5	6.7	19.018	C
4 - Dukes Meadow Drive	293	73	778	1271	0.230	293	553	0.2	0.3	3.732	A
1 - A423	513	128	238	1688	0.304	513	832	0.3	0.4	3.117	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	119	30	726	1226	0.097	119	26	0.1	0.1	3.386	A
3 - Southam Road (S)	1249	312	99	1409	0.886	1247	745	6.7	7.2	21.815	C
4 - Dukes Meadow Drive	293	73	787	1266	0.231	293	559	0.3	0.3	3.753	A
1 - A423	513	128	239	1688	0.304	513	841	0.4	0.4	3.120	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	97	24	593	1304	0.074	97	22	0.1	0.1	3.108	A
3 - Southam Road (S)	1019	255	81	1419	0.718	1037	609	7.2	2.7	9.980	A
4 - Dukes Meadow Drive	239	60	655	1346	0.178	239	464	0.3	0.2	3.304	A
1 - A423	419	105	196	1715	0.244	419	699	0.4	0.3	2.833	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	81	20	497	1360	0.060	81	18	0.1	0.1	2.932	A
3 - Southam Road (S)	854	213	68	1427	0.598	858	510	2.7	1.5	6.471	A
4 - Dukes Meadow Drive	200	50	542	1414	0.142	200	384	0.2	0.2	3.011	A
1 - A423	351	88	164	1735	0.202	351	579	0.3	0.3	2.650	A

2028, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	5.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.03	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	17	100.000
3 - Southam Road (S)		ONE HOUR	✓	627	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	569	100.000
1 - A423		ONE HOUR	✓	641	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	9	1	7
	3 - Southam Road (S)	115	2	119	391
	4 - Dukes Meadow Drive	18	407	0	144
	1 - A423	11	551	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	43	0	17
	3 - Southam Road (S)	17	0	0	6
	4 - Dukes Meadow Drive	0	1	0	1
	1 - A423	25	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.02	4.79	0.0	A	16	23
3 - Southam Road (S)	0.49	5.33	1.0	A	575	863
4 - Dukes Meadow Drive	0.45	4.71	0.8	A	522	783
1 - A423	0.48	5.05	1.0	A	588	882

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	13	3	779	1194	0.011	13	108	0.0	0.0	3.900	A
3 - Southam Road (S)	472	118	65	1428	0.331	470	727	0.0	0.5	3.996	A
4 - Dukes Meadow Drive	428	107	386	1508	0.284	427	149	0.0	0.4	3.357	A
1 - A423	483	121	406	1583	0.305	481	406	0.0	0.5	3.470	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	15	4	933	1104	0.014	15	129	0.0	0.0	4.232	A
3 - Southam Road (S)	564	141	78	1421	0.397	563	870	0.5	0.7	4.469	A
4 - Dukes Meadow Drive	512	128	462	1462	0.350	511	179	0.4	0.5	3.820	A
1 - A423	576	144	487	1534	0.376	576	487	0.5	0.6	3.999	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	19	5	1142	982	0.019	19	158	0.0	0.0	4.785	A
3 - Southam Road (S)	690	173	96	1411	0.489	689	1065	0.7	1.0	5.306	A
4 - Dukes Meadow Drive	626	157	566	1399	0.448	625	219	0.5	0.8	4.689	A
1 - A423	706	176	596	1466	0.481	704	596	0.6	1.0	5.025	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	19	5	1144	981	0.019	19	159	0.0	0.0	4.791	A
3 - Southam Road (S)	690	173	96	1411	0.489	690	1067	1.0	1.0	5.325	A
4 - Dukes Meadow Drive	626	157	567	1399	0.448	626	219	0.8	0.8	4.706	A
1 - A423	706	176	597	1465	0.482	706	597	1.0	1.0	5.047	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	15	4	936	1102	0.014	15	130	0.0	0.0	4.241	A
3 - Southam Road (S)	564	141	78	1421	0.397	565	873	1.0	0.7	4.492	A
4 - Dukes Meadow Drive	512	128	464	1461	0.350	513	179	0.8	0.5	3.835	A
1 - A423	576	144	488	1533	0.376	578	488	1.0	0.6	4.019	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	13	3	783	1192	0.011	13	109	0.0	0.0	3.908	A
3 - Southam Road (S)	472	118	66	1428	0.331	473	731	0.7	0.5	4.020	A
4 - Dukes Meadow Drive	428	107	388	1507	0.284	429	150	0.5	0.4	3.373	A
1 - A423	483	121	409	1582	0.305	483	409	0.6	0.5	3.492	A

2028, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	21.28	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.28	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	114	100.000
3 - Southam Road (S)		ONE HOUR	✓	1197	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	281	100.000
1 - A423		ONE HOUR	✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	92	6	16
	3 - Southam Road (S)	18	2	457	720
	4 - Dukes Meadow Drive	4	205	0	72
	1 - A423	3	416	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	4	0	7
	3 - Southam Road (S)	14	0	0	2
	4 - Dukes Meadow Drive	0	2	0	0
	1 - A423	0	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.10	3.48	0.1	A	105	157
3 - Southam Road (S)	0.94	34.47	11.8	D	1098	1648
4 - Dukes Meadow Drive	0.25	3.92	0.3	A	258	387
1 - A423	0.32	3.22	0.5	A	451	677

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	86	21	522	1345	0.064	86	19	0.0	0.1	2.978	A
3 - Southam Road (S)	901	225	71	1425	0.633	894	537	0.0	1.7	6.799	A
4 - Dukes Meadow Drive	212	53	565	1400	0.151	211	401	0.0	0.2	3.069	A
1 - A423	370	93	172	1729	0.214	369	604	0.0	0.3	2.692	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	102	26	625	1285	0.080	102	22	0.1	0.1	3.171	A
3 - Southam Road (S)	1076	269	85	1417	0.760	1071	642	1.7	3.1	10.382	B
4 - Dukes Meadow Drive	253	63	676	1333	0.190	252	480	0.2	0.2	3.380	A
1 - A423	442	111	206	1708	0.259	442	723	0.3	0.4	2.894	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	126	31	765	1203	0.104	125	27	0.1	0.1	3.481	A
3 - Southam Road (S)	1318	329	104	1406	0.937	1289	786	3.1	10.2	26.442	D
4 - Dukes Meadow Drive	309	77	815	1249	0.248	309	579	0.2	0.3	3.883	A
1 - A423	542	135	251	1680	0.322	541	872	0.4	0.5	3.217	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	126	31	766	1202	0.104	126	27	0.1	0.1	3.483	A
3 - Southam Road (S)	1318	329	105	1406	0.937	1311	787	10.2	11.8	34.475	D
4 - Dukes Meadow Drive	309	77	828	1241	0.249	309	588	0.3	0.3	3.921	A
1 - A423	542	135	252	1680	0.323	542	886	0.5	0.5	3.221	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	102	26	627	1284	0.080	103	23	0.1	0.1	3.177	A
3 - Southam Road (S)	1076	269	86	1417	0.760	1110	644	11.8	3.4	13.077	B
4 - Dukes Meadow Drive	253	63	701	1318	0.192	253	495	0.3	0.2	3.429	A
1 - A423	442	111	207	1708	0.259	443	747	0.5	0.4	2.901	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	86	21	524	1344	0.064	86	19	0.1	0.1	2.983	A
3 - Southam Road (S)	901	225	72	1425	0.633	907	539	3.4	1.8	7.142	A
4 - Dukes Meadow Drive	212	53	573	1395	0.152	212	406	0.2	0.2	3.088	A
1 - A423	370	93	173	1729	0.214	371	612	0.4	0.3	2.701	A

2028 + Proposed Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	5.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2028 + Proposed Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	18	100.000
3 - Southam Road (S)		ONE HOUR	✓	630	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	578	100.000
1 - A423		ONE HOUR	✓	641	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	9	1	8
	3 - Southam Road (S)	115	2	122	391
	4 - Dukes Meadow Drive	18	415	0	145
	1 - A423	11	551	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	43	0	17
	3 - Southam Road (S)	17	0	0	6
	4 - Dukes Meadow Drive	0	1	0	1
	1 - A423	25	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.02	4.80	0.0	A	17	25
3 - Southam Road (S)	0.49	5.35	1.0	A	578	867
4 - Dukes Meadow Drive	0.46	4.77	0.8	A	530	796
1 - A423	0.48	5.08	1.0	A	588	882

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	14	3	785	1191	0.011	13	108	0.0	0.0	3.894	A
3 - Southam Road (S)	474	119	66	1428	0.332	472	733	0.0	0.5	4.006	A
4 - Dukes Meadow Drive	435	109	387	1508	0.289	434	151	0.0	0.4	3.380	A
1 - A423	483	121	412	1580	0.305	481	408	0.0	0.5	3.482	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	16	4	940	1100	0.015	16	129	0.0	0.0	4.230	A
3 - Southam Road (S)	566	142	79	1420	0.399	566	877	0.5	0.7	4.485	A
4 - Dukes Meadow Drive	520	130	463	1461	0.356	519	181	0.4	0.6	3.854	A
1 - A423	576	144	494	1529	0.377	576	488	0.5	0.6	4.017	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	20	5	1151	977	0.020	20	158	0.0	0.0	4.791	A
3 - Southam Road (S)	694	173	97	1410	0.492	692	1074	0.7	1.0	5.333	A
4 - Dukes Meadow Drive	636	159	567	1399	0.455	635	222	0.6	0.8	4.754	A
1 - A423	706	176	604	1460	0.483	704	598	0.6	1.0	5.061	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	20	5	1153	975	0.020	20	159	0.0	0.0	4.797	A
3 - Southam Road (S)	694	173	97	1410	0.492	694	1076	1.0	1.0	5.353	A
4 - Dukes Meadow Drive	636	159	568	1398	0.455	636	222	0.8	0.8	4.771	A
1 - A423	706	176	606	1460	0.484	706	599	1.0	1.0	5.084	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	16	4	943	1098	0.015	16	130	0.0	0.0	4.237	A
3 - Southam Road (S)	566	142	79	1420	0.399	568	880	1.0	0.7	4.508	A
4 - Dukes Meadow Drive	520	130	465	1460	0.356	521	182	0.8	0.6	3.873	A
1 - A423	576	144	496	1528	0.377	578	490	1.0	0.6	4.038	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	14	3	789	1189	0.011	14	109	0.0	0.0	3.902	A
3 - Southam Road (S)	474	119	66	1427	0.332	475	737	0.7	0.5	4.030	A
4 - Dukes Meadow Drive	435	109	389	1506	0.289	436	152	0.6	0.4	3.398	A
1 - A423	483	121	415	1578	0.306	483	410	0.6	0.5	3.504	A

2028 + Proposed Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - Dukes Meadow Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	1 - A423 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		2, 3, 4, 1	22.34	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	22.34	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2028 + Proposed Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
2 - Noral Way		ONE HOUR	✓	114	100.000
3 - Southam Road (S)		ONE HOUR	✓	1203	100.000
4 - Dukes Meadow Drive		ONE HOUR	✓	285	100.000
1 - A423		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	92	6	16
	3 - Southam Road (S)	18	0	465	720
	4 - Dukes Meadow Drive	4	209	0	72
	1 - A423	3	416	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		2 - Noral Way	3 - Southam Road (S)	4 - Dukes Meadow Drive	1 - A423
From	2 - Noral Way	0	4	0	7
	3 - Southam Road (S)	14	0	0	2
	4 - Dukes Meadow Drive	0	2	0	0
	1 - A423	0	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
2 - Noral Way	0.10	3.49	0.1	A	105	157
3 - Southam Road (S)	0.94	36.33	12.5	E	1104	1656
4 - Dukes Meadow Drive	0.25	3.93	0.3	A	262	392
1 - A423	0.32	3.23	0.5	A	452	679

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	86	21	525	1344	0.064	86	19	0.0	0.1	2.981	A
3 - Southam Road (S)	906	226	72	1424	0.636	899	538	0.0	1.7	6.858	A
4 - Dukes Meadow Drive	215	54	563	1401	0.153	214	407	0.0	0.2	3.075	A
1 - A423	371	93	173	1729	0.215	370	604	0.0	0.3	2.696	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	102	26	628	1283	0.080	102	22	0.1	0.1	3.176	A
3 - Southam Road (S)	1081	270	86	1416	0.764	1076	644	1.7	3.1	10.550	B
4 - Dukes Meadow Drive	256	64	674	1334	0.192	256	488	0.2	0.2	3.388	A
1 - A423	443	111	207	1707	0.260	443	723	0.3	0.4	2.899	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	126	31	769	1201	0.105	125	27	0.1	0.1	3.488	A
3 - Southam Road (S)	1325	331	106	1405	0.943	1294	789	3.1	10.7	27.397	D
4 - Dukes Meadow Drive	314	78	812	1251	0.251	313	588	0.2	0.3	3.894	A
1 - A423	543	136	254	1679	0.323	542	871	0.4	0.5	3.224	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	126	31	770	1200	0.105	126	27	0.1	0.1	3.489	A
3 - Southam Road (S)	1325	331	106	1405	0.943	1317	789	10.7	12.5	36.328	E
4 - Dukes Meadow Drive	314	78	826	1242	0.253	314	597	0.3	0.3	3.933	A
1 - A423	543	136	254	1678	0.323	543	885	0.5	0.5	3.228	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	102	26	629	1282	0.080	103	23	0.1	0.1	3.181	A
3 - Southam Road (S)	1081	270	86	1416	0.764	1118	645	12.5	3.4	13.566	B
4 - Dukes Meadow Drive	256	64	700	1318	0.194	257	504	0.3	0.2	3.440	A
1 - A423	443	111	208	1707	0.260	444	748	0.5	0.4	2.903	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
2 - Noral Way	86	21	527	1342	0.064	86	19	0.1	0.1	2.986	A
3 - Southam Road (S)	906	226	72	1424	0.636	912	540	3.4	1.8	7.220	A
4 - Dukes Meadow Drive	215	54	572	1396	0.154	215	413	0.2	0.2	3.094	A
1 - A423	371	93	174	1728	0.215	371	612	0.4	0.3	2.704	A